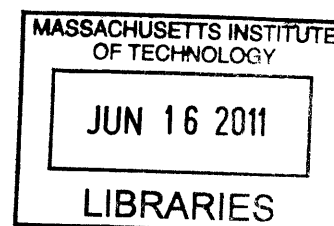


**Accounting for Taste:  
Regulating Food Labeling in the “Affluent Society,” 1945–1995**

by

Xaq Zachary Frohlich  
B.A. History with Special Honors  
University of Texas at Austin, 2002



**ARCHIVES**

Submitted to the Program in Science, Technology and Society  
in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in History, Anthropology, and Science, Technology and Society  
at the Massachusetts Institute of Technology

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**Abstract**

This dissertation traces a transformation in the U.S. Food and Drug Administration’s governance of food markets during the second half of the 20th century. In response to new correlations between diet and risk of disease, anxieties about (over)abundant food supplies, and changing notions of personal versus collective responsibility in an affluent society, the FDA changed how it regulated food labeling. Following WWII, the agency developed a set of standard recipes with fixed common name labels (such as “peanut butter” or “tomato soup”), or “standards of identity,” for all mass-produced foods. However, the appearance of new diet foods and public health concerns undermined this system. Beginning in the 1970s, the FDA shifted its policies. Rather than rely on standardized identities, the agency required companies to provide informative labels such as the ingredients panel, nutrition labels, and various science-based health claims. Agency officials believed that such information would enable consumers to make responsible health decisions through market purchases.

Food labeling is explored as a regulatory assemblage that draws together a variety of political, legal, corporate, and technoscientific interests and practices. The five chapters are organized chronologically. The first two describe how a shift in focus among nutrition scientists from concern for the undernourished to a concern with overeating led to the introduction onto the market of engineered foods capitalizing off popular interest in diet and health. A middle chapter describes a series of institutional scandals that generated the political animus to change the FDA’s system, and registered a broader “shock of recognition” that Americans’ views about food and food politics had changed. The final two chapters describe the introduction of “Nutrition Information” labeling in the 1970s and the mandatory “Nutrition Facts” panel in the 1990s. By looking at the regulation of labels as a kind of public-private infrastructure for information, the turn to compositional labeling can be understood not merely as a shift in representation—from whole foods to foods as nutrients—but more broadly as a retooling of food markets to embed notions about personal responsibility for health into the ways that food was designed, marketed, and consumed.

Thesis Supervisor: Deborah K. Fitzgerald

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Anyone who knows me knows that I am a social creature, and I have been very fortunate to be able to draw from the rich intellectual and personal support of many incredible people while working on this dissertation.

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The life-force of our PhD Program are the graduate students, past and present, whose conversations at the Graduate Student Writing Workshop, weekly happy hours, and participation in courses have provided the intellectual fodder for much of this dissertation and my growth as an intellectual. For this I thank Shane Hamilton, Jenny Smith, Meg Hiesinger, Anne Pollock, Peter Shulman, Etienne Benson, Anita Chan, Anya Zilberstein, Candis Callison, Kieran Downes, Richa Kumar, Jamie Pietruska, Laurel Braitman, Marie Burks, Alex Chan, Peter Doshi, Shreeharsh Kelkar, Shekhar Krishnan, Lisa Messeri, Canay Ozden, Michael Rossi, Caterina Scaramelli, Tom Schilling, Ryan Shapiro, Shira Shmueli, David Singerman, Ellan Spero, Alma Steingart, Michaela Thompson, Nate Deshmukh Towery, Ben Wilson, and Rebecca Woods. I especially want to thank Nick Buchanan, Chihyung Jeon, Sophia Roosth, Sara Wylie, and Teasel Muir-Harmony for making the program feel like a professional home and place where I could always depend on people to lend me a hand when needed.

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reading seminar and general exam with David on “Technologies of Representation” inspired in me a deep interest in semiotics and the consideration of interfaces and the self in STS theory. Harriet’s course “People and Other Animals” was one of the most enlightening, and I am to this day still very grateful to her for making me attentive to the hazards of *reductio ad absurdum* and the need for more measured critique and analysis.

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I have enjoyed and benefited from many new professional friendships over the course of this PhD., including those with Josep Lluís Barona Vilar, José Ramón Bertomeu Sánchez, Mar Cuenca Lorente, Ana Delgado, Martin Giraudeau, Ximo Guillem-Llobat, Barbara Hahn, Daniela Helbig, Ben Hurlbut, Anne Murcott, Tolu Odumosu, Vincenzo Pavone, Katie Proctor, David Schleifer, Pep Simon Castel, Janet Vertesi, and Alex Wellerstein. Beyond these, I owe two special thanks. The first is to Franck Cochoy, whose work on marketing, feedback on my writings over the years, and personal networks on the sociology of packaging have been extraordinarily helpful in developing this project on nutrition labeling. The second goes to Fernando González Botija, whose extraordinary kindness and good will (“buena amistad”) literally opened doors for me in Spain and helped me with my professional transition there.

This dissertation is very much an exercise in what anthropologists call “studying up,” and I am thus indebted to those gatekeepers and experts who provided access to the archives and informants that I relied on to make sense of specialized legal and scientific languages and practices. My principal thanks here go to Peter Barton Hutt, whose Harvard Law course was an invaluable introduction to food and drug law, and whose generosity in opening up to me his substantial personal archives helped make this dissertation possible. I thank Henry Blackburn for his help with the Ancel Keys papers, his insights into the field of cardiovascular disease epidemiology, and with getting access to certain critical American Heart Association documents. I am grateful to Suzanne Junod at the FDA History Office for directing me to the many relevant

archival materials that her office has rescued and preserved over the years. And I thank Donna Porter for putting me in contact with most of my informants who worked at the FDA in the 1990s, and for insights and advice on the project drawn from her extensive experience working on nutrition policy at the Congressional Research Service of the Library of Congress. All errors and inaccuracies, however, should be attributed to the author.

To these professional thanks, I add a few key personal acknowledgements. During my dissertation I faced a special challenge and thus incurred special personal debts. While everyone mentioned above showed amazing support and kindness through this (and, indeed, I could not speak more positively about our PhD Program and its amazing sense of community), I owe the following three people, Inés Benlloch, David Jones, and Chihyung Jeon, a special thanks for keeping me tuned in to my research and moving forward despite what I will call, with great understatement, a particularly distracting episode in my life. My wife I thank below, but I want to thank David and Chihyung here for their conversations and intellectual musings during this period, as it was these exchanges that pulled me back into the excitement of academic work and intellectual research. They cannot imagine how valuable this is to a person facing personal hardship, and I am eternally grateful to them for it.

I further thank my amazing family, my mom, dad, Jackie, and siblings Tom, Penny, Molly, Chovy, Honus, and Violet, for giving me unconditional support over the years, and for cultivating in me my love of learning and the pursuit of knowledge. I thank Will, Linda, and Richard for making Washington, DC, one of my principle research sites, a second home during the PhD. And I also thank Juan, Isabel, and my cat Abby for making Valencia my new hometown and new family.

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## Table of Contents

Abstract.....	3
Acknowledgments.....	5
A Note on Sources.....	11
Introduction – Regulating a New Health Food Economy.....	13
Chapter 1 – The Fat of the Land: Making Food Risks Legible in an Affluent Society, 1945–1960.....	71
Chapter 2 – Faux Food Fight: The FDA's “Standards of Identity” and the New Diet Foods, 1960–1968.....	118
Chapter 3 – Transitions: Hunger, Affluence, and the Politics of Institutional Accountability, 1968–1972.....	194
Chapter 4 – Nutrition and Neoliberal Governmentality: The FDA's Turn to “Nutrition Information” Labeling, 1972–1984.....	264
Chapter 5 – Drawing Nutrition Facts Together: The FDA “Nutrition Facts” Label, 1984–1995.....	343
Conclusion – The Right Tool for the Job?: The Informational Turn in Food Markets.....	424
Bibliography.....	456





## A Note on Sources

This dissertation is based in large part upon archival research and oral history interviews. The archival materials are drawn from university archives, private archives, and government archives. The papers of Ancel B. Keys, in the care of Henry Blackburn are housed in the Division of Epidemiology & Community Health of the University of Minnesota School of Public Health in Minneapolis, Minnesota. Additional materials relating to the field of cardiovascular disease epidemiology can be found online at, “Preventing Heart Attack and Stroke: A History of Cardiovascular Disease Epidemiology” (last visited April 28, 2011):

<http://www.epi.umn.edu/cvdepi/index.html>. Other papers consulted include those of Paul Dudley White, D. Mark Hegsted and Jean Mayers, held at the Center for History of Medicine at Harvard University’s Countway Library of Medicine in Boston, MA; of William Darby and Franklin C. Bing at the Eskind Biomedical Library Historical Collections at Vanderbilt University in Nashville, Tennessee; and those of Esther Peterson at the Schlesinger Library Manuscripts Collections of the Radcliffe Institute for Advanced Study in Cambridge, MA.

Of the private archives, the papers of the Center for Science in the Public Interest (CSPI) are kept at their headquarters in DC; the committee and subcommittee files of the Food and Nutrition Board in the Biology & Agriculture Division of the National Academy of Sciences (NAS) are located in DC; documents obtained from the American Heart Association (AHA) archives in Dallas, TX; and the extensive personal archives of Peter Barton Hutt are housed in the library of his law firm Covington & Burling LLP in DC.

Government papers include public comments filed with the FDA at its Docket Management Office in Bethesda, MD, and materials gathered from affiliates of the National Archives and Records Administration (NARA) system – the Record Group 88 files for the FDA at the National Archives II at College Park, MD; the “White House Conference on Food, Nutrition, and Health” series at the Nixon Library in Yorba Linda, CA; and the US Department of Agriculture’s National Agricultural Library Special Collections in Beltsville, MD.

In 2009, I conducted interviews with the following nutrition scientists, former FDA staff, and others involved in the introduction of nutrition labels in the 1970s and 1990s. Interviews conducted over the telephone are marked with an asterisk. (See the Works Cited for further information.)

Burkey Belser, president of design firm Greenfeld-Belser Ltd.\*  
Henry Blackburn, cardiovascular epidemiologist (University of Minnesota).  
Johanna Dwyer, senior nutrition scientist (NIH Office of Dietary Supplements).\*  
Robert Earl, former American Dietetic Association rep. (Nutrition Labeling Coalition).\*  
Peter Greenwald, director of the National Cancer Institute Center for Cancer Prevention (NIH).  
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Regina Hildwine, senior director of food labeling and standards (GMA).\*  
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Donna Porter, research specialist at the Congressional Research Service (Library of Congress).  
F. Edward Scarbrough, formerly director of FDA CFSAN Office of Nutrition.\*  
Virginia L. Wilkening, former staff member at FDA CFSAN.\*



## **Introduction**

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### **Regulating a New Health Food Economy**

*The universal participation in eating and daily experience of all men with foods and the intimacy of food to human culture makes all mankind “expert” in and highly opinionated concerning foods and nutrition. Consequently, overmuch folklore persists to bias even some of our more sophisticated beliefs and information relative to nutrition and health and disease.*

— William Darby, 1968.<sup>1</sup>

*Even when one has to make the mundane decision about which kind of sliced ham to choose, you benefit from dozens of measurement instruments that equip you to become a consumer—from labels, trademarks, barcodes, weight and measurement chains, indexes, prices, consumer journals, conversations with fellow shoppers, advertisements, and so on.*

— Bruno Latour, *Reassembling the Social*, 2005.<sup>2</sup>

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<sup>1</sup> William Darby's “Outline Notes on Introductory Chapter for Handbook of Nutrition,” for the AMA Council on Foods and Nutrition Handbook on Nutrition, found in, Manila Folder - “Council on Foods and Nutrition (AMA): Handbook on Nutrition, 1961-1968,” Personal Papers of William Darby at the Eskin Biomedical Library Archives of Vanderbilt University.

<sup>2</sup> Latour, Bruno, *Reassembling the Social: An introduction to actor-network-theory*. Oxford University Press, USA, 2005, p. 210.

This dissertation traces a transformation in the U.S. Food and Drug Administration's governance of food markets during the second half of the 20th century. In response to broad concerns with new understandings of diet and risk, anxieties about (over)abundant food supplies, and changing notions of personal versus collective responsibility in an affluent society, the FDA changed how it regulated food through labels. Following WWII, the agency developed a set of standard recipes with fixed common name labels (such as "peanut butter" or "tomato soup"), or "standards of identity," for all mass-produced foods. Public health concerns with overeating and the appearance of new diet foods capitalizing off the popular interest in the relationship between diet and health, however, undermined this system. Beginning in the 1970s, the FDA shifted its policies. Rather than rely on standardized identities, the agency required companies to provide consumers nutritional information through new labels (e.g. the Ingredients panel, Nutrition Facts label, and science-based health claims). This information would enable consumers to make responsible health decisions through market purchases. It was a new kind of governance for a new kind of food market.<sup>3</sup> Studying this transformation in the FDA's policies on food labeling, health claims, and advertising, I explore more general questions about the changing relationships between the state, industry, experts, and citizens (as consumers) in the production of knowledge about goods: how do we know what we know about food and its relation to health? In what ways has that knowledge changed with the industrialization of food production and the increasing reliance on standardized informational tools like food labels?

The turn to nutrition labeling should be understood in the context of two converging movements. On the one hand, it reflects the arrival beginning in the 19th century of a new

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<sup>3</sup> As one FDA former official explains it: before World War II (when the 1938 Act legislating food standards was passed), most foods Americans ate were by and large standard, whole foods; by 1973 (the year the first nutrition label was introduced), snack foods, diet foods, and engineered foods had dramatically diversified the food market and strained the regulatory system. Hutt, Peter Barton, senior counsel of Covington & Burling, former FDA Chief General Counsel, personal interview at his Harvard Law School office, Cambridge, Massachusetts, Jan. 16, 2008.

understanding of food within a chemical, molecular paradigm. This nutritional paradigm of food fits within a broader scientific movement of measurement, with the idea of the human body as metabolic motor and food as a resource to be measured and rationed through an almost utilitarian kind calculation.<sup>4</sup> This dissertation examines one subcurrent of this movement, nutrition science, and more specifically the so-called “diet-heart thesis” that emerged in the 1950s. In this sense, the dissertation picks up after the vitamins revolution in the first half of the twentieth century, with the appearance of a “negative nutrition,” with nutrition scientists seeking to make sense of diseases associated with overeating.<sup>5</sup> The introduction of nutrition labeling in the 1970s, continued this tradition in measurement, inscription, and calculation, bringing it to entirely new platforms and into everyday contexts. Regulatory disputes over health labels, and especially those of the low-fat and low-calorie foods that this project focuses on, resonated with broader cultural concerns about “diseases of civilization,”<sup>6</sup> the nature of the modern food consumer, and how he, she, (or it) fit into a modern society struggling to managing its burgeoning population’s health.

The nutrition label also signaled a new kind of shopper-citizen-eater and what has been described as a new kind of health ethic or “healthism” – “the preoccupation with personal health as a primary focus for the definition and achievement of well-being” attained “through the modification of life styles, with or without therapeutic help.”<sup>7</sup> The popularization of this way of

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<sup>4</sup> Rabinbach, A. *The human motor: energy, fatigue, and the origins of modernity*. Univ of California Pr on Demand, 1992.

<sup>5</sup> Levenstein, H. A. *Paradox of Plenty: A Social History of Eating in Modern America*. University of California Press, 2003.

<sup>6</sup> Rosenberg, C. E. “Pathologies of progress: the idea of civilization as risk.” *Bulletin of the History of Medicine* 72, no. 4 (1998): 714–30.

<sup>7</sup> Crawford, R. “Healthism and the medicalization of everyday life.” *International Journal of Health Services: Planning, Administration, Evaluation* 10, no. 3 (1980): 368.

While at times I will describe this new food lifestyle as a kind of “biosociality,” the kind of dieting and consumption (food as biological identity) that I explore in this dissertation is generally a more diffuse kind of social activity than the patient groups or risk afflicted communities that anthropologists have studied when using the term.

knowing food was not limited to scientific texts, medical advice, or public health campaigns, but emerged from new modes of food consumption. New diet foods began to appear in the marketplace as early as the 1920s, which specifically embodied this “newer knowledge of nutrition.”<sup>8</sup> In part, the use of “vitamins,” “nonnutritive sweeteners,” and “low saturated fats,” in place of other “food additives,” can be seen as an extension of an already ongoing chemical transformation of the food supply. Industrialization was increasingly converting the products of farm, dairy, and garden into mass market “food,” which entailed the literal reformulation of foodstuff through mechanical and chemical processes. This “de-naturing” of food—removing food from its “natural” contexts or “authentic” significations, reformulating it as nutritive (and nonnutritive) substances—challenged (and arguably transformed) the intuitive or commonsense notions of food that informed the regulation of food markets. Yet, to some extent the tail wagged the dog. The new markets for healthy eating would also reconfigured industrial production. Advertising was not only a means by which producers could attempt to create demand for their products, but, in so far as it began to draw upon scientific ideas about diet and health, was also a medium that helped to popularize scientific and technical knowledge and ways of thinking about food. Labels, a site which sat at this intersection of production and consumption, was a place where producers, consumers, experts, and the state negotiated these changing significances of food.

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Rabinow, P. “From Sociobiology to Biosociality.” In *The science studies reader*. M. Biagioli. Routledge, 1999, pp. 407-416. Petryna, A. *Life exposed: biological citizens after Chernobyl*. Princeton Univ Pr, 2002. Dumit, J. “Drugs for life.” *Molecular Interventions* 2, no. 3 (2002): 124. While there are biosocial groups that form around nutritional accounting practices, such as Weight Watchers, I am more interested in the generalized manner in which nutrition labeling and advertising has transformed social and political organizations around and arguments about food.

<sup>8</sup> “Newer knowledge of nutrition” is a reference to Johns Hopkins University biochemist Elmer V. McCollum’s important textbook, first published in 1918. McCollum, E. V, and N. Simmonds. *The newer knowledge of nutrition*. The Macmillan Co., 1918. See also, Levenstein, H. A. *Revolution at the table: the transformation of the American diet*. Univ of California Pr, 2003.

This brings us to the second important movement, a late twentieth-century change in food politics and the politics of the consumer. The shift from a focus on undernourishment and food scarcity to problems associated with over-consumption had dramatic political consequences since classical governance traditionally focused on improving health by increasing food supply. Changes in understandings of diet and health triggered a series of institutional and cultural transformations in the way that society dealt with the everyday management of food risk and responsibility. In particular, I describe an informational turn in regulation and food politics. Regulation routinely constructs the public as a particular kind of thing deserving a particular kind of protection. Regulating through food labels reflects both legally inflected norms about assumed risk and informed consent, such as the legal tradition of *caveat emptor*, “buyer beware,” and socially mediated constructions about identity formation and lifestyle politics.<sup>9</sup> Relying on food labels to regulate consumer behavior was a tactic that businesses and governments settled upon because of a particular political sensibility about the proper role of government, to frame consumption through representations of food instead of directly intervening in markets. This study of the nutrition label, however, shows that regulating through product disclosure is a kind of intervention because labels are performative, an articulation of the thing which, through its articulation, makes it so.<sup>10</sup> Labeling both reflects the interests of issue politics, and also engenders them.

The particular politics that labeling engendered was a faith that markets, if properly retooled, could be used to solve public health concerns. The turn to labeling, happening as it did

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<sup>9</sup> Giddens, Anthony. *Modernity and self-identity: self and society in the late modern age*. Stanford University Press, 1991.

<sup>10</sup> Here I am using economic sociologists’ notion of performative, which is the sense used in linguistics when talking of performative utterances. For more on this distinction between performativity versus misrepresentation, see Timothy Mitchell, “The Properties of Markets,” in MacKenzie, D. A, F. Muniesa, and L. Siu. *Do economists make markets?: on the performativity of economics*. Princeton Univ Pr, 2007.



in the early 1970s, fits within a broader political shift, a neoliberal turn in governance. In this light, nutrition labeling should be understood as part of a “moralization of markets,” a shift to market-embedded morality which Ronen Shamir calls the “age of responsabilization.”<sup>11</sup> Embracing lifestyle politics, of which nutrition labeling was only one example, was seen by many to be a way that governments could democratically yield to its citizens’ new consumer lifestyles. In this “neoliberal epistemology,” regulatory tools such as informative labels become an “enabling praxis.” They use a language of self-care to convert socially interested concerns such as public health into an economic language of self-interest and new markets for food.<sup>12</sup> However, this shift, expressed in this dissertation through the change from the FDA hearings on food standards to its promulgation of rules on nutrition labels, reconceptualizes the government “as one source of authority among many, [...] as if [it] operate[s] within a ‘market of authorities,’ placing governments on a par with private sources of authority and changing the role of governments from regulators to ‘facilitators’.”<sup>13</sup> In this sense, the story told here adds the example of the FDA's turn to food labeling to other studies of new political forms that have emerged in the late 20th century which blend public/private realms and unsettle modern “regimes of living.”<sup>14</sup>

Looking at one regulatory tool, nutrition labeling, this dissertation attempts to bridge two modes of scholarship – cultural studies of food, with its focus on contextualizing, individualizing, and culturally embedding food habits, and studies of food politics and

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<sup>11</sup> Shamir, R. “The age of responsabilization: on market-embedded morality.” *Economy and Society* 37, no. 1 (2008): 1–19.

<sup>12</sup> Sassatelli, R. *Consumer culture: History, theory and politics*. Sage Publications Ltd, 2007, p. 187.

<sup>13</sup> Shamir, “The Age of responsabilization” (2008), p. 6.

<sup>14</sup> Beck, U. *Risk Society: Towards a New Modernity*. Sage, 1992. Ong, A. *Global assemblages: technology, politics, and ethics as anthropological problems*. Wiley-Blackwell, 2005.

regulation, focused on institutions and processes of change.<sup>15</sup> It focuses on the material and legal practices in food labeling by regulatory and industry organizations to show how they build an infrastructure to coordinate and discipline the public and private representations of food in mass markets. By thinking of food labeling as a kind of built infrastructure, I seek to foreground two aspects of labels as market tools: first, that labels work as a market coordinating device between different parties—producers, consumers, regulators—where meaning about a product is explored but also constrained; and second, that the nutrition label can best be understood as a regulatory “assemblage,” a “product of multiple determinations that are not reducible to a single logic.”<sup>16</sup> This history spans fifty years and accounts for the role of both individuals and organizations, and events and processes in transforming and modernizing America’s “foodscapes.” Following the story of the label, how it evolves as a mixture and embodiment of these changing alliances and interests, offers a way to explain how broad historical changes in the marketplace have transformed the label's principle architect, the FDA, while also considering how institutions inform and shape those markets.

A further motivation for using this methodological approach is to foreground how food’s materiality is central to the cultural meaning making that surrounds it. Food studies scholars regularly claim “food is cultural,”<sup>17</sup> providing example after example of regional foodways,

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<sup>15</sup> In some part the problem of explanation follows disciplinary divides and tendencies. Where historians see a series of people and events, sociologists see institutions and processes. Making sense (and use) of the past requires some reconciliation of both. On the one hand, past events are partly a (mere) consequence of chance, where “the right person at the right time” is the only difference between one outcome and another. This speaks as much to the importance of individual personalities, as to the role of contingency in understanding the past and its legacy for the present. On the other hand, over time people’s individual mark on enduring policies like food labeling become less important than the multitude of individuals and more permanent structures like institutions.

For a more formal articulation of this bricolage approach to narrating micro and macro history, see Galison on “mesoscopic history,” Galison, Peter Louis. *Image and Logic: A Material Culture of Microphysics*. 1st ed. University Of Chicago Press, 1997, pp. 61. With its focus on governmental institutions and “states of knowledge,” this dissertation also fits within the recent co-productionist turn in STS. Jasanoff, S. *States of knowledge: the co-production of science and social order*. Psychology Press, 2004.

<sup>16</sup> Ong, A. *Global assemblages*, 2005, p. 12.

<sup>17</sup> Montanari, M. *Food is culture*. Columbia Univ Pr, 2006.

emphasizing their local idiosyncrasies and their importance to maintaining cultural identity. As such, food tastes and habits have been widely studied as a manifestation of cultural values and difference. Meanwhile scientific knowledge about diet and nutrition purports to be universal and acultural. The dissertation seeks to resolve this apparent contradiction by looking at the material practices and tactics scientists and regulators used to give form to global truths about food,<sup>18</sup> and by embedding the sciences of diet in particular cultural moments and ethical and political views about responsibility for health. It follows calls in science studies for greater attention to the role of scale in making sense of twentieth-century science and society,<sup>19</sup> and it adds to a growing area of interest in exploring how science, technology, and law have shaped, even literally built our modern world.<sup>20</sup>

It is commonly said that there is “no accounting for taste,” rather taste is subjective or expressive. Food labeling, on the one hand, extends this argument by how it facilitates the creation of new food markets, new modes of “conspicuous consumption,” new tastes. In so far as consumers are “attached” to the goods proposed to them, a matter discussed below, labels and

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<sup>18</sup> The call to arms for this analytic turn is perhaps best stated by Bruno Latour when he argues, “The capitalism of Karl Marx or Fernand Braudel is not the total capitalism of the Marxists. [...] In following it step by step, one never crosses the mysterious lines that divide the local from the global.” Latour, B. *We have never been modern*. Harvard Univ Pr, 1993, p. 121. Instead, Latour argues, scholars should focus on the construction of scale or the means by which “immutable mobiles” cross space without changing. Thus, for example, “A supermarket [...] has preformatted you to be a consumer, but only a generic one.” Food labels work as a “source of competence” or “plug-ins circulating to which [the active consumer] can *subscribe*, and [...] can download on the spot to *become* locally and provisionally competent.” Latour, *Reassembling the Social*, 2005, pp. 210-211.

<sup>19</sup> Galison, Peter Louis. *Image and Logic*, 1997; Latour, *Reassembling the Social*, 2005. Jasanoff, Sheila, and Marybeth Long Martello. *Earthly politics: local and global in environmental governance*. MIT Press, 2004.

<sup>20</sup> The “human-built” world, Hughes, T. P. *Human-built world: how to think about technology and culture*. University of Chicago Press, 2004; the “soundscapes” of modernity, Thompson, E. A. *The soundscape of modernity: architectural acoustics and the culture of listening in America, 1900-1933*. The MIT Press, 2004; modern American notions of “mobility” and “liberty,” Welke, Barbara Young. *Recasting American liberty: gender, race, law, and the railroad revolution, 1865-1920*. Cambridge University Press, 2001; and metropolises and urban life, Cronon, W. *Nature's metropolis: Chicago and the Great West*. WW Norton & Company, 1992. An important inspiration for this project was “A sack’s journey” in Cronon’s study of commodity flows from Chicago’s hinterlands into the city.

advertisements are producers' tool to unleash consumer desire.<sup>21</sup> However, labels are also a space where public institutions such as the FDA seek to impose a rational order on consumption, to account for what is legitimate or illegitimate product information, and whether that information serves a public interest. Annemarie Mol has described this tension as the contradictory embodied normativity of the consumer-citizen who, as citizen, is defined to be willing to serve the "common good," while as consumer is supposed to seek self-indulgent "pleasure."<sup>22</sup> To understand this tension it is necessary to situate this consumer-citizen, its appearance in the last half century, within several different areas of study – the forms and rationalities of regulatory institutions, the use of shifting epistemologies of diet, responsibility and health, and the role of the state in market-making and constituting the citizen as consumer. By following these concerns about regulation, food epistemologies, and emerging economies, the history of nutrition label becomes an institutional study in accounting for taste.

### **How Regulatory Institutions Think**

Food labels sit at the intersection of formal and informal worlds of social organization. They circulate in a heterogeneous world of commerce moving through nonstandard, private spaces. But as products of institutional work, they can be understood as "publicly standardized ideas (collective representations)" that "constitute social order."<sup>23</sup> In this respect, food labeling embodies a particular way, as Mary Douglas puts it, that "institutions think." "Labels stabilize the flux of social life and even create to some extent the realities to which they apply."<sup>24</sup> They

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<sup>21</sup> Callon, M., C. Méadel, and V. Rabeharisoa. "The economy of qualities." *Economy and Society* 31, no. 2 (2001): 194–217.

<sup>22</sup> Mol, A. "Good Taste." *Journal of Cultural Economy* 2, no. 3 (2009): 269–283.

<sup>23</sup> This is Mary Douglas paraphrasing Durkheim. Douglas, M. *How institutions think*. Syracuse University Press, 1989, p. 96.

<sup>24</sup> Here Douglas is using the word "label" in the sociological sense, labeling people, not literally. *Ibid.*, p. 100.

form a part of the way that institutions, as forms of solidarity and cooperation, seek to propagate a certain worldview by “systematically direct[ing] individual memory and channel[ing] our perceptions into forms compatible with the relations they authorize.”<sup>25</sup> The dissertation focuses on regulatory institutional forms because of their special roles in coordinating social activity and delegating authority.<sup>26</sup> It discusses the ways that regulatory institutions seek to impose rational order on markets, to make sense of both regulatory objects (food) and subjects (consumers), in order to shore up their authority in the name of political fairness and expediency. Unlike Douglas's strictly social account of institutional thinking, however, the description of regulatory institutions offered here seeks to incorporate the “missing masses” by drawing upon new ideas in science studies that foreground the material forms of bureaucracies, the role of objects in distributed cognition, and the ways that scale has consequence on institutional thinking.<sup>27</sup> I argue that institutional framings or rationalities follow institutional forms, and that the work of expert institutions such as the FDA often entails adjudicating between formal and informal forms of social regulation of diet, and by extension competing commonsense and expert senses of what is food.

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<sup>25</sup> *Ibid.*, p. 92.

<sup>26</sup> Here it is useful to return to a dialectical interaction that Karl Marx identified between material and cultural practices:

“History is nothing but the succession of the separate generations, each of which exploits the materials, the capital funds, the productive forces handed down to it by all preceding generations, and thus, on the one hand, continues the traditional activity in completely changed circumstances and, on the other, modifies the old circumstances with a completely changed activity.”

Marx and Engels as quoted in Sutton, J. *Law/society: Origins, interactions, and change*. Vol. 474. Pine Forge Pr, 2001, p. 68. In this sense I am linking to scholarship which depicts social action in everyday life as a repeating series of externalization, objectification, and then internalization. Berger, P. L., and T. Luckmann. *The social construction of reality: A treatise in the sociology of knowledge*. Doubleday New York, 1966. Technoscientific objects represent one form of objectification of externalized behaviors, social organization and patterned activity (bureaucracy) another.

<sup>27</sup> Latour, B. *Where are the missing masses? The sociology of a few mundane artifacts*. Cambridge MA: MIT Press, 1992. For Douglas, worldviews emerge solely out of social exclusion or inclusion. She thus does not account for a role for material change. Latour, on the other hand fails to account for the subjectivities generated (and often informing) material design. Here I am following a mixed approach by looking at institutions as (constantly shifting) social organizations and also physical embodiments of that organization, which together co-produce social collectives.

Regulatory bodies have a special history as social institutions. There are several canonical explanations for regulation, for what it does and whose purposes it serves. One account of regulation is that it is a consequence of the public will, and reflects an interest in maintaining the public order. Foucault distinguishes this kind of public governance from an older notion of sovereign rule, and argues that it rested upon tactics of “disposing so as to lead [...] to an end which is ‘convenient’ for each of the things that are governed.”<sup>28</sup> Thus, the marshaling of public resources, surveillance of human and nonhuman power, and the management of “things” more generally, became an important part of the state and governing the public, what Foucault calls biopower.<sup>29</sup> A second is the notion of public regulation as a corrective or counterbalance to private, self-regulation. In this account, corporations became the driving force of social order, the “visible hand” of corporate interest increasingly replaced Adam Smith’s “invisible hand” in the market.<sup>30</sup> Public regulation, starting in the late 19th and early 20th century, was a public

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<sup>28</sup> The word “convenient,” in this passage, can be taken as a reference to making laws and conventions that fit the natural order. By the disposition of “things,” as opposed to territories, Foucault here is talking about the many material resources which make up the world in which people live and upon which they depend:

One governs things. [...] a sort of complex composed of men and things [...] men in their relations, their links, their imbrications with those other things which are wealth, resources, means of subsistence, the territory with its specific qualities, climate, irrigation, fertility, etc.; men in relation to that other kind of things, customs, habits, ways of acting and thinking, etc.; lastly, men in their relation to that other kind of things, accidents and misfortunes such as famine, epidemics, death, etc.

This passage from Foucault’s essay articulating governmentality offers up a program for how to explore biopolitics by examining the tactics that governments use to control and shape its publics through the control of resources and knowledge about resources. Michel Foucault, “Governmentality,” Burchell, Graham, Colin Gordon, and Peter Miller. *The Foucault Effect: Studies in Governmentality*. 1st ed. University Of Chicago Press, 1991, p. 93-95. Elsewhere, Foucault further articulates this distinction between classical governance of territory through sovereign law, and modern governance of populations and things through normalization. Foucault, M. *History of Sexuality Volume 1: An Introduction*. Allen Lane London, 1979, pp. 139-144. His discussion of “biopower” and biopolitics links in with an older, classical preoccupation in legal studies between *physis* (nature) and *nomos* (convention).

<sup>29</sup> Modern regulation is thus designed in relation to a certain understanding of the natural order and intended to “steer” public practice towards that imagined natural (and politically desirable) purpose. Biopolitics has a positive modality, such as cultivating a healthy, happy, productive (and docile) citizenry. But it also can have a disturbing, restrictive form. James Scott thus describes how high modernist states have wreaked environmental and social havoc upon their citizenry in the interest of rationalizing populations for social control through tactics of “legibility” and “simplification.” Scott, J. C. *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale Univ Pr, 1999.

<sup>30</sup> Chandler, A. D. *The visible hand: The managerial revolution in American business*. Belknap Press, 1977; Trachtenberg, A. *The incorporation of America: Culture and society in the gilded age*. Hill & Wang, 2007.

management alternative to private efforts to implement “coordinated action at a distance.”<sup>31</sup> Some have argued that regulation was “captured” by private organization so that legislation reinforced corporate motives,<sup>32</sup> or that regulatory agencies tended to be peopled by the very groups they are intended to police and have a “revolving door.”<sup>33</sup> A third view is that, however it may have first emerged, regulation creates self-sustaining, self-referencing, and self-interested institutions. The classic articulation of this was Max Weber’s concern that, as law modernized, its rules would become an “iron cage,” where a rationality divorced from social life would come to govern and “trap” individuals in systems based on rational calculation and control.<sup>34</sup> These three narratives are important to keep in mind because of how they are routinely invoked in critiques of regulation.

A closer examination of the actual histories of regulatory institutions, however, shows that all three processes — public modes of representation, negotiations of public/private value, and institutional formalization— have been at work in building and sustaining the state’s police powers on matters of diet and health. It would be hard to find a clearer example of how the state articulates the “manifold restraints” on its subjects, sacrificing the bodily rights of the individual

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<sup>31</sup> In this sense one can understand the modern bureaucratic State institutions as part of a broader human imperative, the interest in group organization and coordinated action, where State regulation versus private regulation is negotiated as drawing boundaries between what are public versus private spaces.

<sup>32</sup> Stigler, G. J. “The theory of economic regulation.” *The Bell journal of economics and management science* 2, no. 1 (1971): 3–21; Kolko, G. *Railroads and regulation, 1887-1916*. NY: Norton, 1965.

<sup>33</sup> Bernstein, M. H. *Regulating business by independent commission*. Princeton University Press, 1955.

<sup>34</sup> In part this feature of regulation, bound by rules and procedure, arises out of an important principle that law be fair, impartial, and predictable. Legal jurisprudence identifies several social roots of this practice. One is the notion that “fairness” emerges out shared social convention, what the Greeks called *nomos*. Cover, R. M. “Nomos and narrative.” *Harv. L. Rev.* 97 (1983): 4–1984. Another argument is that such rule-boundedness in legal practices like *stare decisis*, is important to the triadic dispute settlement function where the judge appears impartial and predictable. In this light, social agreement is less about getting a decision “right” than about showing consistency and transparency in reasoning. Carter, Lief and Thomas F. Burke. *Reason in Law*. New York: Pearson Longman, 2007.

It is also a reflection of modern trends towards professionalization of specialization. Movements of legal positivism, for example, often reduce fairness to procedure and instrumentalize jurisprudence either out of some distrust of judicial discretion or because of the belief that such rule-boundedness is central to the modern division of labor of political institutions. Fuller, L. L. “Positivism and Fidelity to Law-A Reply to Professor Hart.” *Harv. L. Rev.* 71 (1958): 630.

to the collective good or “in public interest,” than that of the 1905 case *Jacobson v. Massachusetts*, where the U.S. Supreme Court ruled in favor of a mandatory vaccination policy.<sup>35</sup> In *Provisioning Paris* (1984), Steven Kaplan shows how concerns with rioting and urban disorder due to grain adulteration and the over-pricing of wheat in 18th century Paris led to the growth of the French state, and especially the Parisian police force, through its policing of the services and products of millers and grain importers.<sup>36</sup> A similar interest informed New Deal policies on fair prices in the United States during the Great Depression.

Arguably the most dramatic regulatory transformation, which largely occurred in the first half of the 20th century, was the expansion of executive administrative agencies by an enlargement of their policing powers and a growth in staff. Particularly under the New Deal in the 1930s and the state's ramping up during World War II, a whole host of regulatory agencies were spawned in order to give the people a “fair deal” through the scientific management of the marketplace.<sup>37</sup> Late twentieth-century Americans largely inherited this federalized, big (and distant) institutional regulatory landscape from the New Deal state. For these new regulatory bodies, procedural fairness and rational management were central rationales and key defenses against political attacks that they were public interferences in private matters.<sup>38</sup> The modern day Food and Drug Administration grew out of these early movements as a federal extension of the

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<sup>35</sup> See *Jacobson v. Massachusetts*, 197 U.S. 11, as discussed in Colgrove, J., and R. Bayer. “The Legacy of *Jacobson v. Massachusetts*: Manifold Restraints: Liberty, Public Health, and the Legacy of *Jacobson v. Massachusetts*.” *American Journal of Public Health* 95, no. 4 (2005): 571.

<sup>36</sup> Kaplan, S. L. *Provisioning Paris: merchants and millers in the grain and flour trade during the eighteenth century*. Cornell Univ Pr, 1984.

<sup>37</sup> Wang, J. “Imagining the Administrative State: Legal Pragmatism, Securities Regulation, and New Deal Liberalism.” *Journal of Policy History* 17, no. 3 (2005): 257–293.

<sup>38</sup> Criticisms of this large administrative state have described the ways in which the accumulation of regulations over the course of the 20th century has resulted in a nearly autonomous state with its own interests—governing through a “trust in numbers” and as an “audit society” — as expert or career public officials have come to rule through complicated calculations or arcane procedures independent of the public will. Porter, T. M. *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton Univ Pr, 1996. Power, M. *The audit society: rituals of verification*. Oxford University Press, USA, 1997.



state's interest in addressing public health and consumer protection concerns in a rational manner. More recently, these federal agencies have come under assault.<sup>39</sup> Their incremental dismantling since the 1970s, because of deregulation movements and neoliberal policies, is the subject of the second half of the dissertation.

Such narratives about the evolution of administrative institutions and their politics reflect social concerns about the problem of specialization, expertise, and the role of delegating responsibility in large communities. This interest in expertise and science's special role in articulating objective grounds for social or legal claims has provided an entry point for science and technology studies in exploring the ways law and science "co-produce" one another by reinforcing each other's special cultural authorities. Early forays into this field explored how science advisory panels functioned as extra-regulatory institutions,<sup>40</sup> or the way in which scientific expert testimony in courts sometimes lent objectivity and credibility to legal rulings while other times truth was deconstructed by the adversarial legal system.<sup>41</sup> These works described science when brought into legal and political settings as functioning as a kind of "double boundary work," both areas defining what were the legitimate epistemological competencies of the other.

A subsequent generation of scholars have shown different modalities of expert evidence in court disputes, over time and in different countries,<sup>42</sup> how scientific visualization tools and objective measures transform juridical arguments and practices,<sup>43</sup> and the ways that law, science,

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<sup>39</sup> For an early STS study of this political turn as it played out with the Environmental Protection Agency, see Jasanoff, S. "Science, politics, and the renegotiation of expertise at EPA." *Osiris* 7 (1992): 195.

<sup>40</sup> Jasanoff, S. *The Fifth Branch: Scientific Advisors as Policymakers*. Cambridge: Harvard University Press, 1990.

<sup>41</sup> Jasanoff, S. *Science at the bar: Law, science, and technology in America*. Harvard Univ Pr, 1997.

<sup>42</sup> Golan, T. *Laws of men and laws of nature: The history of scientific expert testimony in England and America*. Harvard Univ Pr, 2004; Bal, R. "How to kill with a ballpoint: Credibility in Dutch forensic science." *Science, Technology & Human Values* 30, no. 1 (2005): 52.

<sup>43</sup> Mnookin, J. L. "Image of Truth: Photographic Evidence and the Power of Analogy, The." *Yale JL & Human*. 10 (1998): 1; Dumit, J. *Picturing personhood: Brain scans and biomedical identity*. Princeton Univ Pr, 2004; Rafter, N.

and technology shape social identities and are shaped by social movements.<sup>44</sup> Meanwhile, science studies has reassessed many foundational understandings of “objectivity” by showing how cultural definitions of objectivity, such as the idea that an object “speaks for itself,” have changed over time and the adjudication of objectivity is itself culturally negotiable.<sup>45</sup> Given this growth in studies of law and science, merely stating that they “co-produce” one another is no longer an adequate conclusion. There is now a need to explain the specific mechanisms by which law and science co-produce each other and to recognize different and sometimes contradictory modes of co-production.

This speaks to the importance of examining institutional forms in understanding bureaucratic rationalities. Scholars have shown that the organizational structures and the material constructions of how information and decisions flow through an institution can directly shape the institution’s deliberations and decisions. Dianne Vaughn’s study of NASA and the Challenger Spaceship accident shows how organizations can create localized norms about acceptable risk, and structure decision-making through work groups, institutional hierarchies and codes for settling dispute.<sup>46</sup> Joanne Yates shows how firms developed tools and practices to structure information flows both inside the firm and with the outside world in order to structure and centralize decision-making without sacrificing adaptability. Some of these innovations were

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H. “Seeing and Believing: Images of Heredity in Biological Theories of Crime.” *Brook. L. Rev.* 67 (2001): 71; Cole, S. A. *Suspect identities: A history of fingerprinting and criminal identification*. Harvard Univ Pr, 2002.

<sup>44</sup> Espeland, W. “Legally Mediated Identity: The National Environmental Policy Act and the Bureaucratic Construction of Interests.” *Law & society review* 28, no. 5 (1994): 1149–1179; Epstein, S. *Impure science: AIDS, activism, and the politics of knowledge*. Univ of California Pr, 1998; Welke, Barbara Young. *Recasting American liberty*, 2001.

<sup>45</sup> Daston, Lorraine, and Peter Galison. *Objectivity*. 1st ed. Zone Books, 2007. Sheila Jasanoff, “Product, process, or programme: three cultures and the regulation of biotechnology, in Martin Bauer (ed.), *Resistance to new technology: Nuclear power, information technology and biotechnology*, 1995, pp. 311-334. For the political philosophical implications of this turn in STS one need only return to Shapin and Schaffer’s 1985 book, *The Leviathan and the Air-pump*, and the concerns discussed there about whether it was better to build consensus and agreement around empirical, objective claims about nature (the air-pump) or political philosophical arguments about just rule (the Leviathan). Shapin, S., and S. Schaffer. *Leviathan and the air-pump: Hobbes, Boyle, and the experimental life*. Princeton University Press, 1985.

<sup>46</sup> Vaughan, D. *The Challenger Launch decision*. Univ. of Chicago Press, 1996.

simple office tools such as the memo or filing systems, which helped to physically coordinate activities in large businesses.<sup>47</sup> Bruno Latour has playfully shown how the movement of stacks of papers is central to the material practice of administrative law, and even illustrates the ways that laws and legal movements get literally engineered into everyday objects like seat belts.<sup>48</sup> Similarly, Ewick and Silbey have shown that, in the everyday practice of law, “getting it in writing” is sometimes as important or more important than the specific arguments or merits of a person’s case, since legal institutions prioritize leaving a paper trail.<sup>49</sup>

These studies in institutional forms show the ways in which bureaucratic rationalities emerge not only from a legal, textual logic (statutes, court rulings), but are also the result of routines and habits of organizational life that reflect material practices, interests, and constraints. If “normal science” was traditionally depicted to be “disinterested,”<sup>50</sup> and still continues to perform this political disinterest during public disputes, regulatory science and bureaucrat scientists are often explicitly motivated by political or economic interests when pursuing

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<sup>47</sup> Yates, J. A. *Control through communication: The rise of system in American management*. Johns Hopkins Univ Pr, 1993.

<sup>48</sup> Latour could have made much of the fact that “bureau” in French means “desk” and “office,” illustrating the physical, organizational origins, constraints, and significances of bureaucracies. Latour, Bruno, “Scientific Objects and Legal Objectivity” in *Law, Anthropology, and the Constitution of the Social: Making Persons and Things*, Alain Pottage & Martha Mundy (eds.). Cambridge University Press, 2004. On the delegation of social work, rules and laws to physical objects, see Latour, B. *Where are the missing masses? The sociology of a few mundane artifacts*. Cambridge MA: MIT Press, 1992. See also, Silbey, S. S. and A. Cavicchi. “The Common Place of Law: Transforming Matters of Concern into the Objects of Everyday Life.” In Latour, B., and Peter Weibel (eds.). *Making Things Public: Atmospheres of Democracy*. Cambridge, MA: MIT Press, 2005, pp. 556–65.

Latour’s examples of the law regularly characterize it as an outside and intractable impediment to people’s more natural or spontaneous interactions. Thus, for example, he uses the road hump as the example for how the law moves from a signal system (yield sign) to a physical deterrent system. Latour, “Where are the missing masses?,” p. 243. For an alternative participatory consideration of the law, the law as a crystallization of local habits and things in use, one need only consider the common utilization of zebra crossing or crosswalks, which rely on mutually mediated sensibilities about balancing pedestrians’ and car drivers’ needs.

<sup>49</sup> Silbey, Susan, and Patricia Ewick. “The Architecture of Authority: The Place of Law in the Space of Science,” in Austin Sarat, et al., eds. *The Place of Law*. Ann Arbor: University of Michigan Press, 2003, pp. 77-108.

<sup>50</sup> Robert Merton argues that scientific “disinterestedness” emerges from communal policing. Disinterestedness is therefore an institutional rather than an individual feature of science. Silbey, *Law & Science* (II), 14.

scientific knowledge.<sup>51</sup> The regular invocation of the *de minimis* standard in administrative law, that “the law does not concern itself with trifles,” speaks to the importance of how regulatory institutions operate under resource constraints. It also adds symbolic significance to enforcement. The FDA chooses its targets deliberately to send a message,<sup>52</sup> and sometime chooses not to enforce a statute that it sees as problematic but is unable to change. The FDA staff and food lawyers use trade shorthand, naming statutory code by statute clause number or determining legal case, and jargon, such as the “jellybean rule,” ostensibly for professional convenience, but it also has the consequence of restricting discussions to specialized audiences. These pragmatic concerns and tactics of bureaucratic expediency can dramatically reshape the implementation of laws and equip regulatory agencies and their staff with a greater degree of interpretative flexibility. The design of labeling depends upon this “backstage of expertise,” which determines what should go on the label and how they should be framed. The study of food labeling should thus be the study of this institutional and professional framing.<sup>53</sup> Following changes in the regulation of product labeling becomes a study in shifting institutional entanglements and bureaucratic rationales, but also of how these ways of organizing information transform the object of regulatory scrutiny.<sup>54</sup>

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<sup>51</sup> Jasanoff, S. *The Fifth Branch*, 1990. On cigarette epidemiology as it evolved around legal disputes over risk and responsibility, see Brandt, A. M. *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product That Defined America*. Basic Books New York, NY, 2007.

<sup>52</sup> Carpenter, D. P. *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA*. Princeton Univ Pr, 2010.

<sup>53</sup> Following these standards-setting activities not only ‘reveal[s] the “tissue of connections” between corporations and government bureaus’, but also reveal the ways that invisible infrastructures organize and shape technologies and practices of everyday life. Olshan, M. A. “Standards-Making Organizations and the Rationalization of American Life.” *Sociological quarterly* 34, no. 2 (1993): 319–335. Lampland, Martha, and Susan Leigh Star, eds. *Standards and Their Stories*, 2008.

<sup>54</sup> Cambrosio, A., P. Keating, T. Schlich, and G. Weisz. “Biomedical Conventions and Regulatory Objectivity: A Few Introductory Remarks.” *Social Studies of Science* 39, no. 5 (2009): 651. Barry, A. *Political machines: Governing a technological society*. Athlone Pr, 2001. For example, how nutritional quantifications provide a new language of equivalences between products—opening up comparisons between fatty foods, or starchy foods, or carbohydrate-rich foods—that otherwise have very different production histories and cultural contexts. Mudry, J. J. *Measured meals: nutrition in America*. State Univ of New York Pr, 2009.

An important institutional backdrop to this dissertation's story is the role of competing or overlapping jurisdictional authorities in shaping product markets: food security (USDA) versus food safety (FDA), as well as food information (FDA) versus food advertisement (FTC). The FDA would emerge out of the Bureau of Chemistry, which was founded in 1901 inside the USDA, reflecting the Department's growing concern about the chemical manipulation of foods and the adulteration of their "purity" (an issue discussed in the next section).<sup>55</sup> The early activities of the Bureau, particularly the work of the Bureau's chief chemist Harvey W. Wiley, illustrates how the government's policing activities still conceived of food safety as an extension of production concerns where chemical manipulations were seen to be a potential adulteration threat to food *qua* food.<sup>56</sup> When the FDA left the US Department of Agriculture (USDA) in 1941, and moved to what would become the Department of Health and Human Services, it was a political recognition that food safety, the FDA's primary mission, was a matter of public health and not agriculture. The split was a political solution intended to ensure strict enforcement of public health concerns by keeping the regulation of food and the promotion of food production separate. However, it also reflected (and furthered) the increasing perception of a division between food and health as an agricultural concern versus food as an urban consumer concern.<sup>57</sup> Initially nutrition education and food security more generally remained wholly the USDA's jurisdiction. The introduction of nutrition labeling and an Office of Nutrition within the FDA in

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<sup>55</sup> Before the Bureau of Chemistry, there was the Division of Chemistry, founded at the start of the USDA. The evolution of this department shows a gradual shift away from its role in basic research on the uses of chemistry in agricultural production, to regulatory science in policing food production markets. In 1927, for example, the non-regulatory research functions of the Bureau were transferred elsewhere and it was renamed the "Food, Drug, and Insecticide Administration." For an official institutional history, see "FDA's Origin and Function," last visited on May, 7, 2011: <http://www.fda.gov/AboutFDA/WhatWeDo/History/Origin/ucm124403.htm>

<sup>56</sup> Young, J. H. "Food and Drug Regulation under the USDA, 1906-1940." *Agricultural history* 64, no. 2 (1990): 134-142.

<sup>57</sup> On the ways this division of labor has resulted in a historiographical gap between studies of alternative food movements and conventional agriculture history, see Fitzgerald, D. "Eating and Remembering." *Agricultural History* 79, no. 4 (2005): 393-408.

the 1970s signaled an acknowledgement that nutrition was not only about security but also about risk. In this way, the framing of food as a vector for external threat (food safety) versus food as source of sustenance (food security), recapitulates the competing modern frames of a pre-nutrition transition concern with vitamins and food deficiency and a post transition focus on negative nutrition.

A comparative look at language illustrates the work that categorization can play in shaping how we determine risk and responsibility. In Spanish, and many other Latin languages, the words “*seguridad alimentaria*” mean both “food security” and “food safety.” In usage, one would have to make an effort to clarify the two different significations of the phrase.<sup>58</sup> In English, however, these two phrases are used in quite distinct competences, reflecting specific teleologies of development and modernization.<sup>59</sup> Food security is understood to be the concern with adequate supply and access to food and normally used in international development and contexts of poverty. Food safety, in contrast, is used when discussing foodborne illness or contamination. While food safety is also a concern in development, its greater political visibility in the “risk society” has made it the food focus of choice for the field of risk studies.<sup>60</sup> The distinction takes the form of standards of quality versus quantity. Here I would argue that these separate competencies and definitions of safety and security reflect embedded assumptions about the nature of certain diseases and the desirability of social versus collective responsibility for dietary health. Cardiovascular disease and other “diseases of the affluent” are regularly

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<sup>58</sup> I am indebted to Miguel Ángel Recuerda for drawing my attention to this. In part this division of labor is even more visible in Spain because its nutrition transition occurred more recently, in the 1960s, and more dramatically than in the United States. Recuerda Girela, M. A. *Seguridad alimentaria y nuevos alimentos: Régimen jurídico-administrativo*. Thomson-Aranzadi, 2006.

<sup>59</sup> Gupta, A. *Postcolonial developments: Agriculture in the making of modern India*. Duke Univ Pr, 1998.

<sup>60</sup> During an interview, one of my informants, Donna Porter, cautioned me in using the phrase “food risk” when I was doing a project on nutrition labeling. For staff working on food regulation, food risk and risk studies is the frame one uses to address concerns with food safety or contamination, and concerns with additives as possible toxins. Nutrition, on the other hand, is a subject about one’s healthfulness and lifestyle.

characterized as elective diseases of the well off. Hunger, on the other hand, is never considered a “disease of volition,” and for this reason has generally been recognized as a more legitimate area for collective and governmental intervention.<sup>61</sup> Such distinctions about food risk and security become quite substantial when institutionalized as distinct divisions of labor among government administrations.

This institutional division also might explain a gap which has occurred in research on the regulatory institutions. Most studies of governmental food and nutrition policies have tended to focus on the USDA,<sup>62</sup> whereas the literature on the FDA focuses on drugs and pharmaceuticals (which in the last thirty years has occupied the bulk of the agency's resources). These studies have thus missed the ways in which food and drug policies, both being housed in the same agency, have co-evolved and at times directly shaped each other. The attachment of food policies to an agency charged with drug policies has reshaped food, furthering the divide of ag/non-ag concerns relating to food. This is an important consideration for how the agency's limited budget, its decisions on where to focus its attention and resources, have shifted over the years since the 1938 Food, Drug, and Cosmetic Act formalized its food-drug powers and authority. Chapter 2 shows how drug scandals and reforms not only shaped the agency's policies on drugs, but also set in motion its changes in how to handle special dietary foods, foods that fell in a middle zone between food and drug. Dan Carpenter, in his study of FDA regulation of pharmaceuticals, has

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<sup>61</sup> The exceptions, in many ways, prove the rule. Note how “anorexia nervosa” is regularly treated as a mental disorder, most common among comparatively affluent girls, and generally considered an individual's problem. Cf. Brumberg, J. J. *Fasting girls: The emergence of anorexia nervosa as a modern disease*. Harvard University Press Cambridge, MA, 1988. Conversely, the political potency of the hunger strike lies in how political activists willing inflict the unthinkable on themselves. Indeed, it is a common response and strategy for repressive governments to depoliticize hunger strikes by medicalizing them (as acts of insanity) and individualizing them (as isolated cases rather than systemic). For an analogous argument on the redefinition of black riots in the 1960s as a series of individual criminal activities rather than a collective political act, see Balbus, I. D. *The dialectics of legal repression: Black rebels before the American criminal courts*. Russell Sage Foundation, 1973.

<sup>62</sup> Two examples are: Nestle, M. *Food politics: how the food industry influences nutrition and health*. Univ of California Pr, 2007. Mudry, J. J. *Measured meals*. 2009.

documented how from the mid 1940s to the mid 1950s the number of prosecutions and injunctions by the agency brought on food versus drug products shifted from mostly foods to mostly drugs, suggesting that the FDA's attention to drug matters grew to eclipse its earlier focus on food regulation.<sup>63</sup>

One overarching theme of this dissertation is the interplay (or dialectical relation) between the FDA's existing legal frames, constructs from earlier food scandals, and new scientific frames for food as promoted by scientists (but also reframed by food industry in advertisements). Many public health institutions, including the FDA, in the 1950s and 1960s continued to frame food in health terms that fit earlier models of disease burden, specifically diseases of the undernourished, and earlier experiences with market fraud. The FDA thus faced a common organizational challenge referred to as the "Red Queen Effect,"<sup>64</sup> named for the Red Queen's quip in *Alice in Wonderland* that "It takes all the running you can do, to keep in the same place." Just as the FDA was managing to adapt to previous New Deal concerns about fair and equitable economic labeling, it encountered the new diet-conscious labeling demands of affluent, post-nutrition-transition consumers. Whereas some nutrition deficiency campaigns fit the "magic bullet" model of health interventions of the first half the 20th century, "diseases of the affluent" defied such monocausal models and solutions. The use of nutrition labeling and informational tactics from the 1970s forward is the FDA's effort to adopt a newer ecology of information, trying to frame foods by centralizing the flow of nutrition information.<sup>65</sup>

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<sup>63</sup> Carpenter, D. P. *Reputation and Power*, 2010, p. 170. Furthermore, when the FDA addresses food issues, it has historically focused more resources on food safety and contamination than nutrition labeling.

<sup>64</sup> Barnett, W. P, and M. T Hansen. "The red queen in organizational evolution." *Strategic Management Journal* 17, no. 1 (1996): 139–157.

<sup>65</sup> It is hard not to see the introduction of the "Nutrition Facts" panel in the 1990s, in this light, as a kind of "technical fix" (to proliferating and contradictory messages about food and diet) which policymakers continually fall back on when seeking to solve social problems. Once the label was out there, some policymakers might hope that there would be no further need for financing educational campaigns or directly policing egregious cases of nutrition fraud and misdirection.



Bureaucratic frames, as codified in law and then engineered into foods, play an important part in conveying existing ideas about food to new generations of consumers, or in the context of institutions to new regulatory staff members, who in turn, facing a new context, transform the meaning of those frames. Looking at institutional forms and framing tactics in their dialectal relation to cultural trends offers a means by which to fill the gap between static institutional accounts and *zeitgeist* cultural accounts. This dissertation thus adds to a growing literature on the study of “administrative rationalities” and the ways they frame the politics of everyday life.<sup>66</sup> The history of regulating diet-health claims and nutrition labeling is in part a story of efforts to standardize food markets, and thereby transform popular understandings of food and everyday eating habits. Science and technology played an integral role in this industry and government effort to build a uniform national food market. Indeed, in his catalogue of food scares in 20th-century American eating, Harvey Levenstein identifies as one of the few common threads linking these scandals, “the idea that it was necessary and possible to have a national nutrition policy.”<sup>67</sup> To understand the history of nutrition labeling as a particular kind of technique of intervention, a “shared classification,” it is necessary to understand the ways nutrition science creates universal food lexicons or how food technologies conquer issues of scale in mass markets.

Yet here we encounter a clash of contexts and languages between the highly standardized and precise languages and tools of science and the “improvisational” and “bricolage” practices of everyday life.<sup>68</sup> As the language of nutrition science moved out of the lab and into American

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<sup>66</sup> The classic articulation of this theoretical approach is by Max Weber. I thank Andy Lackoff for this framing of regulatory practices. Andrew Lakoff, “Cold War Systems in Crisis: The Concept of Resilience from Psychology to Ecology,” presented at the Harvard STS Circle, April 27, 2008. Jasanoff, S. *The Fifth Branch*, 1990. Jasanoff, S. *Designs on nature: Science and democracy in Europe and the United States*. Princeton Univ Pr, 2005. See also, Ong, A. *Global assemblages*, 2005.

<sup>67</sup> Levenstein, H. A. *Paradox of Plenty*, 2003, p. 254.

<sup>68</sup> De Certeau, M. *The Practice of Everyday Life*. [1984] (Trans. Steven Rendall). Berkeley: U of California P., 1988.

households, its meaning was transformed.<sup>69</sup> While science studies provides us with tools to explain “coordinated action at a distance” in carefully controlled contexts, there is a need to understand how science in the more heterogeneous contexts of consumption is transformed. Looking at the FDA's labeling regimes, which drew upon scientific authority, but also reveal a pragmatics about food and diet advice in everyday contexts, offers an opportunity for exploring the ways regulatory institutions (and food companies) deploy interpretive cooperation, using labels and advertisements to embed consumers in the “interpretive communities” of public health institutions, nutrition professions, and other food experts.<sup>70</sup> The FDA's early food standards system reflected an effort to superimpose a rationality on intuitive ways of thinking about food as food. With the move to informative labeling, the FDA sought to enlist consumers into a nutrition governmentality, though as discussed below, it also reflected a deference to new diet food markets and was thus a marketization of nutrition.

In its simplest form, this dissertation could be summarized as a story of how the FDA came to change its food labeling policies in response to a new scientific understanding of food, diet, and health, and new markets for healthy foods. Its central question in this vein would be, how do regulatory institutions change their organization and modes of intervening in response to

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<sup>69</sup> Thus Douglas, when discussing institutions and Durkheim's concept of collective representations, acknowledged: “he recognized that the hold [publicly standardized ideas] have upon the individual varies in strength.” Douglas, *How Institutions Think*, p. 96. In a brief, but revealing passage of “Drawing Things Together,” Latour notes: “The importance of this cascade of inscriptions may be ignored when studying events in daily life, but it cannot be overestimated when analyzing science and technology” (p. 42). Inside the highly orchestrated context of the lab, the unnesting of inscriptions and translation into standard, replicable actions is possible; yet the determining power of inscriptions may not be so potent outside the lab, because, as Latour summarizes Knorr: “an image, a diagram, cannot convince anyone, both because there are always many interpretations possible, and, above all, because the diagram does not force the dissenter to look at it” (p. 41). Latour, B. “Drawing things together.” In Lynch, M. and Woolgar, S.(eds.), *Representation in Scientific Practice*. MIT Press, 1990.

<sup>70</sup> Schot, J., and A. A de la Bruheze. “The mediated design of products, consumption and consumers in the twentieth century.” *How users matter: The co-construction of users and technologies* (2003): 229–46. These considerations, explored by social construction of technology (SCOT), “interpretive flexibility,” reflect a broader turn in consider the agency of readers in reader/audience studies. Umberto Eco thus described “interpretive cooperation” and Stanley Fish “interpretive communities,” when considering the way in which texts are embedded in expert and lay reader communities shaping the individual reader's interpretation.

new social (and political) classifications of things? To answer this question, however, it attempts to avoid “just-so” stories about how the appearance of new scientific or technical knowledge inevitably forced the hand of regulatory institutions. Such narratives ignore the importance of how institutions, particularly legal institutions, regularly and comfortably operate in the absence of scientific certainty. While tests of scientific accuracy or consensus were important to the story of nutrition labeling, they were often secondary to more bureaucratic concerns, issues such as, which was more expedient, hearings on standards of identity or informational labeling; which would prove simpler to adjudicate and defend as objective, establishing the differences between food versus drug products, or certifying specific nutrient disclosures; and so on. Indeed, the FDA’s shift from standards to information labels could be characterized as merely a shift in administrative management styles: from setting food standards, a (“high modernist”) management solution to market variability and public anxiety, to “informational regulation,” a neoliberal and ostensibly “non-interventionist” mode of regulating markets. Yet underlying the shift in the FDA's mode of classifying food was a transformation in what regulators and their publics understood food to be.

### **Food or Drug? – On the Nature of Commonsense and Expertise**

For public regulatory institutions like the FDA there exists a fundamental tension between its authority built on specialized expertise, and its democratic mission to respond to consumer needs, “protecting consumers” from businesses, but also from themselves. Regulatory institutions bridge this gap in practice by constructing rational arguments for their policies, drawing upon science and its claims to objective knowledge, but also blending scientific argument with pragmatic and political arguments about limited resources and legislative

mandates.<sup>71</sup> Setting classifications and standards are one way that institutions give embodied form to knowledge claims about products and their safety.<sup>72</sup> The FDA's concerns with classifying products, one of its primary modes of intervening in markets, can be situated within a broader epistemological challenge, the shifting target of determining what is normal and healthy versus abnormal and pathological. Here I describe the ways that a nutrition transition and the industrialization of food have constituted a move away from the notion that natural equals normal or good, a turn which destabilized the FDA's standards system and helped usher in the age of food health information. In some sense it is this shifting relationship between intuitive (commonsense) and learned (expert) views of diet and health that complicates regulatory attempts to discipline markets and explains the ambiguous boundaries between the languages of discipline/responsibility and desire/self-interest.

One recurring theme in this classificatory history is the preoccupation with determining what, precisely, counts as food. "Food" is a subject that, at first glance, everyone is certain they would know and recognize, and yet which they discover upon further scrutiny is a social category open to dispute.<sup>73</sup> One might define food as nutritive and safe to eat, so as to distinguish it from the "inedible," but then have trouble accounting for why people willingly consume toxic or dangerous foods, or entirely unwilling to eat other perfectly nutritious substances.<sup>74</sup> Or define it as a solid, to exclude beverages, but then wonder whether excluding soups and sodas might invite hidden calorie creep in prescriptive dietary programs. While on the surface classification appears to be a simple exercise in empirical measurement or establishing a shared conventional

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<sup>71</sup> Stated more succinctly, "Any institution that is going to keep its shape needs to gain legitimacy by distinctive grounding in nature and in reason." Douglas, *How Institutions Think*, p. 112.

<sup>72</sup> Bowker, G. C, and S. L. Star. *Sorting things out: classification and its consequences*. The MIT Press, 2000.

<sup>73</sup> In this sense it is not unlike Justice Potter Stewart's awkward but honest effort to define "porn" as distinct from "art" in 1964 Supreme Court case: "I shall not today attempt further to define the kinds of material I understand to be embraced... [b]ut I know it when I see it..." *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964).

<sup>74</sup> For such "riddles," see Harris, Marvin. *Good to Eat: Riddles of Food and Culture*. Boston and Sydney, Allen & Unwin, 1985. Rozin, P., and A. E. Fallon. "A perspective on disgust." *Psychological Review* 94, no. 1 (1987): 23.

shorthand, in practice it is really an exercise in distributing responsibilities and establishing boundaries of competence.<sup>75</sup>

And it quickly takes the form of defining food in contradistinction to some other category of concern. If we take the example of most immediate relevance to food labeling, we find that the 1938 Food, Drug, and Cosmetics Act (FDCA), the statute outlining the Food and Drug Administration's authority to regulate the market, offers the following definition for food:

The term 'food' means (1) articles used for food and drink for man and other animals, (2) chewing gum, and (3) articles used for components of any such article.<sup>76</sup>

This overly broad, tautological definition does not help us until we consider what foods are defined against, drugs, and examine that category's definition. Drugs, unlike food, are much more carefully defined, using a Boolean "OR" list of possible articles of consumption. They are described as a particular list of chemical products, "articles recognized in the United States Pharmacopoeia," or by a good's intended use, "for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals." They are also defined against foods as "articles (other than food) intended to affect the structure or any function of the body of man or other animals."<sup>77</sup> This defining by contrast has resulted in a long legal history of disputes

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<sup>75</sup> This is, in effect, an inversion of Mary Douglas's observation that risks and taboos are selectively identified and characterized by societies in order to protect "distinctive categories of the universe." Pollution thereby becomes instrumental, "people try to influence one another's behavior," and expressive, "a symbolic load ... [where] some pollutions are used as analogies for expressing a general view of the social order." Douglas, M. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*. London: Routledge, 1966, pp. xi, 3-4.

On the social role of classification, see Bowker & Star, *Sorting things out*, 2000. On boundary work, see Gieryn, T. F. "Boundary-work and the demarcation of science from non-science: Strains and interests in professional ideologies of scientists." *American sociological review* 48, no. 6 (1983): 781-795.

<sup>76</sup> Section 201(f) of the FD&C Act, as quoted in Hutt et al., *Food and Drug Law*, p. 30. The specific inclusion of chewing gum here recalls Foucault's discussion of the Chinese encyclopedia in *The Order of Things*. On the surface the categories and lists of products found together in food law statutes can appear random or counterintuitive, but historical scrutiny reveals a specific legal logic or some past legal dispute that helps to make sense of a classificatory logic. Foucault, M. *The Order of Things: An Archaeology of the Human Sciences*. New York: Vintage Books, 1973.

<sup>77</sup> The FDCA lists one other category of articles to be treated as drugs, "articles intended for use as a component of any article specified in [the other three list items]." Section 201(g)(1) of the FD&C Act, as quoted in Hutt et al., *Food and Drug Law*, p. 39. A striking example of how these definitions can arise out of historically situated ontologies that later appear antiquated or narrow is the definition for cosmetics, the third main are of FDA product

between the FDA and private business over how to fairly draw the line between what are foods versus drugs, and how to handle liminal objects that are nutritious and health promoting, but do not carry the strong cultural expectations associated with modern medicine of having specific medicinal action and demonstrated efficacy.

For the FDA, much of the history of food labeling in the last half century has been framed by this institutional preoccupation with defining food versus drug. Scholars writing about the recent appearance of so-called “functional foods,” foods purporting to provide a health benefit beyond basic nutrition,<sup>78</sup> argue that they pose a unique and novel kind of categorical confusion between foods and drugs; that functional foods, and some would say nutrition in general, represent a new form of medicalizing food. Yet this category confusion continues a long history of formal and informal classifications of ingestible products as whole foods, “organic” food, healthy food, diet food, “special dietary food,” “medical food,” health tonics, vitamin supplements, over-the-counter drugs, and prescription drugs, revealing a porous boundary between eating and treating and the different expectations people have about such products' therapeutic value.

Americans' popular interest in healthy eating has been situated in a late 19th-century, early 20th-century cultural movement of a professionalizing middle class, whose “quest for physical and psychic health,” a “therapeutic ethos,” was “an expression of an 'anxious concern

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regulation. A “cosmetic” is defined as “articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body [...] for cleansing, beautifying, promoting attractiveness, or altering the appearance.” Section 201(i) of the FD&C Act, as quoted in Hutt et al., *Food and Drug Law*, p. 37. This definition has had the predictable (and anticipated) effect of defining “cosmetic” by intended use, but in practice also defines it as something that does not penetrate the skin or actively affect the “structure or function” of the body (in contradistinction to drugs, which are intended to penetrate the body's outer layer. Cosmetics made today which have an active ingredient or would be absorbed can only avoid being classed as “drugs” if they do not describe these features on the product. (Thus, campaigns which state “the appearance of long eye lashes” for products that have been shown to actually physically lengthen eye lashes.)

<sup>78</sup> Including vitamin- enriched staple foods, sports drinks, “probiotics” yogurts, and genetically modified “nutraceutical” foods.

with regenerating selfhood” in response to the social dislocation of modernization.<sup>79</sup> In other words, the commodification of health followed a broader social, economic, and cultural transformation. Bourdieu, along with a subsequent generation of food sociologists, anthropologists, and cultural historians, captures the ways in which the uses of food and dieting practices recapitulate social meaning and status.<sup>80</sup> This dissertation will take up two themes under-explored in that literature: the ways in which the changing social meanings of diet and the body have followed epistemological changes in how people understand food, and how diet ethos is attached to concrete political institutions and their interventions in markets. Nutritionists and people in public health deliberately applied their expertise in accounting for taste, measuring food and labeling its nutritional properties, in order to use these accounting measures to reshape dietary habits. Whereas Bourdieu describes (middleclass) “taste” to be “a virtue made of necessity,” this dissertation focuses on how the scientific study of food excess was a process of redefining “necessity.”<sup>81</sup> Necessity was a shifting target. A “nutrition transition,” discussed below, and industrialization and affluence more generally, had largely reconfigured “necessity” as an “authentic” and austere conception of food. And once food industry and regulators incorporated the new ideas of food and risk into their advertisement and public health campaigns, one could say it became a process of manufacturing necessity.

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<sup>79</sup> Robert Crawford quoting Jackson Lears. Crawford, Robert. “Health as a meaningful social practice.” *Health (London)* 10, no. 4 (October 1, 2006): 405.

<sup>80</sup> Bourdieu famously observed that eating, and the body itself, could become a medium for displaying social distinction—clerical and commercial workers deploy a “modest” taste when they display their Benthamite calculative restraint, while manual workers conversely revel in the “spontaneous materialism” of an abundant meal. Bourdieu, P. *Distinction: A social critique of the judgement of taste*. R. Nice, transl. Harvard Univ Pr, 1984.

<sup>81</sup> This is a project which seeks to study how healthy “tastes” and habits emerge out of, and are sustained by the design of public health tools. It builds off a particularly French school of social analysis that plays with the similarity of the words *disposition* (habit) and *dispositif* (device), and explores the sociological relationship between the two in the construction of markets. Cochoy, F., and C. Venn. “A Brief Theory of the ‘Captation’ of Publics: Understanding the market with Little Red Riding Hood.” *Theory, culture & society* 24, no. 7-8 (2007): 203–223. I am grateful to Pauline Barraud de Lagerie for bringing this work to my attention. For an older literature on the history of habits and their relationship to changing technologies, see Mumford, L., *Technics and civilization*. Harcourt, Brace and Co., 1934. Giedion, S. *Mechanization takes command*. Oxford university press, 1948. Elias, N. *The civilizing process*. Pantheon Books, 1969.

Gyorgy Scrinis has described the present day focus on food as nutrition, “nutritionism,” cataloguing a variety of ways in which the nutrition profession (captured by agribusiness interests) propagates a functionalist, biological reductionist relationship to food.<sup>82</sup> This nutritionism follows the growth of a particular set of epistemological practices in the measurement of food, diet, and bodily metabolism. Starting in the late 18th century and then accelerating in the 19th century, physicians and physiologists applied the new laboratory techniques to the human body and to questions about metabolism and proper diets, the application of what has been called the “Chemical revolution” to food and dietetics.<sup>83</sup> One feature of this work was the search for the body’s “vital elements,” the chemical compounds without which the human (or animal model organism as was more commonly the case) could not survive. By the late 19th century, scientists had broken food into three general categories of significant components – protein (associated with nitrogen), fats, and carbohydrates. Until the 20th century, with the discovery of vitamins, it was assumed that these three elements formed the foundation for all dietary needs, though there were shifting consensuses over which of the three was most important to human development.

In addition to these building blocks for life, nutrition science also introduced the idea of food as energy, first through the measurement of joules released when exercising, and then through the development of the concept of the kilocalorie. The chemical isolation of “vitamines”

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<sup>82</sup> Scrinis actually describes at least seven different modes of nutritionism: “biological functionalism” (reducing food to function), “health reductionism” (reducing food to health), “food-level reductionism” (e.g. “super foods”), “first” and “second order” nutritional reductionism (the former food reduced to nutri-biochemical, the latter ignoring nutri-biochemical complexity and interactivity), nutritional determinism (that health problems are due to nutrition), the myth of nutritional precision (that nutrition science precisely and fully measures a quality of food and its relation to health), and biomarker reductionism (e.g. BMI). While useful as a first effort to articulate different ways in which nutrition science is deployed in food markets, by conflating them into one ideology Scrinis does not examine how they often emerge from very different and sometimes competing interests. Scrinis, G. “On the ideology of nutritionism.” *Gastronomica* 8, no. 1 (2008): 39–48.

<sup>83</sup> Carpenter, K. J. “A short history of nutritional science: Part 1 (1785-1885).” *Journal of Nutrition* 133, no. 3 (2003): 638.



in the 1910s, and the realization that such “newer knowledge of nutrition” could be used to remediate disease, would make nutrition research of value to public health organizations. These shifts resulted in multiple, overlapping but also competing visions of food and eating: a composite of ingredients or properties, a whole food, a meal, a way of life. Moreover, with each new discovery there have been, at times competing, at times complementary beliefs about which core or essential elements were the foundation of a good diet, and shifting focuses on whether the concern should be on food as nutrients versus as energy (calories), or on dieting as quality of food versus quantity.

A second transformation was the alignment of state institutions with specific medical concerns, the control of infectious disease and public sanitation, into what would come to be the field of public health. In part public health grew out of nineteenth century social movements concerned with the ill effects of urbanization and poverty as well as industrial pollution. Public health reflected a progressive concern about the role of environment and social inequality (as products of a capitalism run amok) in shaping the differential burden of disease. The discovery that certain diseases were caused by microorganisms (bacteria) and later viruses highlighted the contagious and social nature of the spread of disease.<sup>84</sup> Popular concern with “Germ theory” bolstered the push for large public health campaigns at the turn of the twentieth century against “social diseases” like tuberculosis or syphilis. These campaigns targeted and transformed daily habits, leading to hand washing, changes in production to address food spoilage and contamination, and popular current notions of cleanliness.<sup>85</sup> It was these new understandings of

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<sup>84</sup> Latour, B. *The pasteurization of France*. Harvard Univ Pr, 1993. Rosenberg, C. E. *The cholera years*. University of Chicago Press, 1962.

<sup>85</sup> Tomes, N. *The gospel of germs: Men, women, and the microbe in American life*. Harvard Univ Pr, 1999. Paxson discusses the contemporary ramifications of the Pasteurian model of risk and food, using example of pasteurized versus unpasteurized cheeses. Paxson, H. “Post-Pasteurian Cultures: The microbiopolitics of raw-milk cheese in the United States.” *Cultural Anthropology* 23, no. 1 (2008): 15–47.

risk and responsibility at the turn of the 20th century that informed concerns about food purity seen in Upton Sinclair's *The Jungle*, and which led to the 1906 Pure Food and Drug Act.

Progressive movements embraced the language of public health in order to reconfigure food production in terms of sanitation and social wellbeing. These movements also sometimes raised legal questions about the conflict between the state's interests and those of the individual. One example was vaccination movements, which pitted individual rights and freedoms (to not be vaccinated) against the collective wellbeing of populations in which infectious diseases spread. However, in general, public health movements focused on methods of persuasion, particularly public education, rather than state coercion.<sup>86</sup>

With this growth in state powers over the collective good a tension emerged between private practice and public health. If in the 19th century physicians regularly participated on public health boards as a measure of good faith and to cultivate public favor, by the 20th century many saw public health initiatives as infringements on or competing with their private practice.<sup>87</sup> One dimension of this antagonism emerged out of the public health interest in curbing social illnesses through preventive measures. The success of vaccination campaigns or the use other “magic bullets” to curb contagious disease rested upon shifting the decision to use mass treatments away from individual physicians and to the state, intervening (or interfering) in the “sacrosanct relationship of physician and patient.” The fallout from a century of division between private medical associations and public health organizations could be crudely

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<sup>86</sup> Colgrove and Bayer. “The Legacy of Jacobson v Massachusetts.” *American Journal of Public Health*, p. 571. However, these legal movements were also intertwined with the history of the eugenics movement, and the shadow of eugenics in many ways shapes the present day mistrust of state intervention in personal hygiene and health.

There is also a broader story to be told about “dependency” versus “self-actualization” in, for example, the history of policing licit versus illicit drugs, intertwined with America's prohibition movement. On these connections, see Reinerman, Craig. “Policing pleasure: Food, drugs, and the politics of ingestion.” *Gastronomica* 7, no. 3 (2007): 53–61.

<sup>87</sup> Paul Starr describes the appearance of this conflict as a mark of the success of medical associations by the early twentieth century in establishing their social authority and professional power. Starr, P. *The social transformation of American medicine*. Basic Books, 1982.

characterized through a series of professional dichotomies between the two: a focus on individuals versus on populations, reductionist (molecular, physiological) versus holistic (environmental, behavioral), laboratory (scientific) versus field (societal), non-political (“against the state”) versus inherently political (“socialist”), downstream focus on disease versus upstream focus on prevention.<sup>88</sup> The return to a focus on prevention in medical care in the last half century, and the interest in both publicly and privately managing diet and regimen, reopened tensions between physicians who establish fee-for-service private practice and those who work in public health.<sup>89</sup> It also underscored the ambiguity over whether health is a public or a private good.

One dramatic material change that occurred which has recast many of these debates was an “epidemiological transition,” the shift in the burden of disease in populations from those caused by infectious disease and malnutrition to chronic degenerative disease. Over the course of the 20th century, medical practice and public health increasingly focused on the specific role of diet in disease, first in treating and preventing malnutrition, but progressively focusing on diet-related “diseases of the affluent,” heart disease, cancers, and diabetes. In this way the new public health was also about forging new tools for preventive health. Particularly with early interest in using vitamin research to treat malnutrition, one could say the Gospel of germs was applied to diet issues such that vitamin supplements were seen to be potential magic bullets, too. Popular interest in vitamins was such that by the 1920s sales exploded for certain natural supplements (e.g. cod-liver oil), and companies rushed to vitamin enrich or “fortify” a wide variety of

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<sup>88</sup> I take these dichotomies from Allan Brandt, who is quick to point out that they are imagined dichotomies (I would say “ideal types”), which quickly fall apart when one examines the messiness of specific historical examples. Brandt, A. M, and M. Gardner. “Antagonism and accommodation: interpreting the relationship between public health and medicine in the United States during the 20th century.” *American journal of public health* 90, no. 5 (2000): 707.

<sup>89</sup> On this perennial tension between modern medicine as a private versus a public good, see *Ibid.* Starr, *The social transformation of American medicine*. 1982.

commonly available foods.<sup>90</sup> More recently nutrition research expanded beyond diets of scarcity to also examine the metabolic and health affects on the body of excessive consumption.

Scientists who sought to realign nutrition to tackle “diseases of the affluent,” discussed in Chapter 1, were laying the groundwork for a preventive turn in medicine, which reflected new, affluent expectations about diet and health. However, well-meaning these efforts might have been, from the 1970s forward this concern with health risk and “lifestyle choices” has also been mobilized in public health campaigns focused on personal responsibility, which suggest that the growing social burden of the disease, their cost to society, is in part the fault of irresponsible individuals.<sup>91</sup>

The food/drug boundary is also regularly framed as a problem of abundance and plenty, how best to spend resources on one’s health and wellbeing. The “nutrition transition,” the dietary shift (associated with the epidemiological transition) from problems of malnutrition and

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<sup>90</sup> Apple, R. D. *Vitamania: Vitamins in American culture*. Rutgers University Press, 1996. For reasons I discuss in Chapter 2, largely owing to regulators’ distrust of the widespread nutrition quackery surrounding the sale of vitamin supplements and their commitment to food first diet advice, this market-driven vitamania was slow to catch on in public health institutions, though there would be visible success stories such as Goldberger’s campaign against pellagra.

<sup>91</sup> Alongside the history of increasing specialization and government intervention there has persisted a populist and pragmatist counterpoint to expert diet advice, emphasizing diet adaptability, autonomy and commonsense, which I take up in the Conclusion. As Steve Shapin has noted in his consideration of the popularity of present-day counter-conventional diets like the Atkins diet, many proponents of diet advice, even if themselves trained as scientists, will often disavow their credentials in order to establish a trust with their readers through a shared commonsense. Steven Shapin, “Expertise, Common Sense, and the Atkins Diet,” In *Public Science in Liberal Democracy*, ed. Peter W.B. Phillips. Toronto: University of Toronto Press, 2007, pp. 174–193. Thus, writers from as far back as Montaigne up to Michael Pollan in the present seek to establish credibility with their readers by discounting experts’ inconsistent or rigid diet recommendations, presenting their own recommendations as more modest and intuitive. For example, compare the striking similarities between the following, Michel Yquem de Montaigne, “Of Experience,” in *The Essayes of Michael Lord of Montaigne*, trans. John Florio, 3 vols. (New York: E. P. Dutton, 1928; orig. publ. 1581-1588), Vol. III, pp. 322-386. Pollan, M. *In Defense of Food: An Eater’s Manifesto*. Penguin Press, 2008. I am indebted to Steve Shapin’s “History of Dietetics” course for bringing this long tradition to my attention.

While Americans appear to have a particularly strong tradition of pursuing diet fads and self-improvement through eating, there has long existed alongside this faddism a counter-critique which proposes a return to moderation and treating foods as foods and not health tonics. For two such critiques of this American preoccupation and susceptibility to diet faddism, see Melanie duPuis, “Angels and Vegetables: A Brief History of Food Advice in America,” *Gastronomica* (Summer 2007), pp. 34-44. Pollan, M. “Our National Eating Disorder.” *New York Times Magazine*, October 17, 2004, p. 74.

underconsumption to an increase in diseases associated with overeating,<sup>92</sup> is not only described in symptomatic terms—the literal growth in the amount of foods we eat or the growth in our bodies and epidemics of diet-related disease—but also in terms of much wider cultural transformations—consumers being misled into eating too much either directly by industry marketing (creating demand, discussed below) or indirectly by the overly success systems of food production.<sup>93</sup> Food scholars today document a long history of cultural preoccupations with industrial abundance and resultant social anxieties about food, from “paradoxes of plenty” to the “omnivore’s dilemma.” Claude Fischler argues that our present “dietary cacophony” of diet advice and omnivorous options has had the paradoxical affect of leaving us more anxious about the significance of our choices. It has transformed diet from reflecting any biological necessity or imperative into a cultural platform for social expression and distinction.<sup>94</sup> Dieting and health thus become either a search for self-defined limits or patients shopping around. This creates a marketplace for expertise, but also sets up a tension between functional eating versus pleasurable eating, a tension captured by the popular axiom: do you eat to live or live to eat? The FDA’s nutrition label emerged from this mixed market of health benefits and cultural capital. Seen in

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<sup>92</sup> Caballero, Benjamin, and Barry M. Popkin. *The nutrition transition*. Academic Press, 2002.

<sup>93</sup> Embedded in these criticisms, often framed in arguments about the positive or negative consequences of civilization, were (contradictory) assumptions about the relationship between what is cultural versus natural and what is good to eat. This debate, inflected with a this strong normative concern, expresses an old cultural and intellectual debate over the relationship between culture and nature. This debate has Christian roots in physiocratic concerns with reading the “book of god” versus the “book of nature.” It also reflects modern debates over progress and the nature of technology and production in driving social benefits and creating social ills, the classic articulation of which is Marx’s notion of dialectal materialism as an interplay between ideology and material structures of production.

The nature/culture debate still surfaces in present-day scholarship on food habits, diets, and health. Many scientific positivist accounts reify traditional diets, providing “just so” narratives which reduce food history to scientific explanations about how good food habits emerged out of the unconscious evolutionary wisdom of populations. See, for example, the chapter on pork restrictions in Harris, *Good to eat*, 1985. Thus cognitive psychologist Steven Pinker reduces “disgust” towards filth to a natural form of “intuitive microbiology.” Pinker, S. *How the mind works*. Harmondsworth: Penguin, 1998. Conversely, cultural relativists can’t explain what “sticks” with certain new diets over time, ignoring the clear impact of material transformations brought with modern medical practice on present-day diet and nutrition practices. This dissertation seeks to move past the nature/nurture debate and consider the interactions of biological and social explanations in forming the diet-heart thesis and nutritional understandings of food.

<sup>94</sup> Fischler, C. *L’omnivore*. Paris, France: Odile Jacob, 1990. Levenstein, H. A. *Paradox of Plenty*, 2003.

this societal context of increasing concern with overabundant diets, food labeling functioned as a platform where experts and regulators grappled with how to classify and manage foods according to what they believe to be the standard (natural or normal), the deviation (technological and innovative), and imitation (economic and exploitative).

As Ulrich Beck might say, the diet-heart thesis and interest in preventive health fueled new markets for “consuming dietary risk.” Foods low in certain kinds of fat, such as margarines and vegetable oils, could be marketed as a kind of tonic against future health risk. Beck’s work not only calls attention to the increasing public sensitivity to risk and hazard, it also describes the institutional fragmentation and proliferation of expertise.<sup>95</sup> In this contested terrain of expertise, food labeling becomes an important site for institutional framing, for either standardizing foods or standardizing information about foods. It was with this intention that the American Medical Association (AMA) in 1905, for example, began to set standards for drugs and made it policy not to allow advertising of non-certified drugs in its medical journal, *JAMA*. In what would set a precedent for the FDA’s food-drug division in advertising, the AMA would also not approve any drug whose manufacturer directly advertised to the public or whose “label, package or circular” listed the disease for which the drug was to be used. The policy, set amidst the scandals that led to the 1906 Pure Food and Drug Act, was intended to centralize control of prescription to only doctors. A consequence was that serious manufacturers who wished to gain market access to this powerful community of physicians also had to avoid using any disease claims on foods.<sup>96</sup> It reflected one way that the American Medical Association (and the FDA to the extent that it endorsed this system) attempted to keep medicine within the realm of professional authority and

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<sup>95</sup> Beck, U. *Risk Society*, 1992.

<sup>96</sup> Starr, *The social transformation of American medicine*, pp. 130-134. These restrictions on ads would also be a revenue generator for AMA, since drug ads would only appear in medical journals.

not a commodified good or service.<sup>97</sup> Underlying this market protectionism was the belief that consumers were not equipped to evaluate the new medical therapeutics without the guidance of accredited medical experts.

Certain products, however, fell into a grey zone of what was best left to markets and what should be controlled, and beginning in the 1930s medical associations and the FDA, often with deep reservations, began to reconsider the legitimacy of allowing certain limited nutrient declarations even if they implied a health claim.<sup>98</sup> As I will show, several new kinds of diet foods —specifically 1) vitamins, and vitamin enriched or fortified foods, 2) low-calorie products made with new artificial sweeteners, and 3) low-saturated fat foods and fatty acids labeling— created problems for the FDA in how they defied the agency's food-drug categorizations. These foods all capitalized on an emerging cultural interest in healthy eating tied to new scientific knowledge and understandings of food, though each provoked different kinds of cultural suspicions from regulators. Vitamins and enriched foods were seen to be marketed as health tonics and fit within a longer history of nutrition quackery. Low-calorie foods were associated with vanity dieting, and raised flags for how dieters might take undue risks with poorly understood new food additives. And low-fat foods and the marketing surrounding the “diet-heart thesis” —the relation between “saturated fats” and so-called “diseases of the affluent”— raised problems with how the FDA handled preventive health messages which blurred the boundaries between the agency's segregation of food-drug markets on health claims. Each of them in different ways illustrates the slippage that occurs with food between languages of consumption and markets (desire, self-interest) and the disciplining language of regulation and citizenship (focused on social

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<sup>97</sup> For more on the legal and professional resistances to the commodification of medical services, see Tomes, N. “An undesired necessity: The commodification of medical service in the interwar United States.” In Strasser, S. (ed.). *Commodifying Everything: Relationships of the Market*. New York: Routledge, 2003, pp. 97-118.

<sup>98</sup> I return to this in Chapter 2. Indeed, to highlight the fundamental differences in framing foods and drugs in medical practice, consider the improbable scenario of doctors prescribing food to hungry patients.

responsibility, restraint). Classifications can be understood as the FDA's effort to make sense of (or impose a rational order on) traditional and intuitive ways of understanding food, which are themselves transforming in the context of an evolving food market.

Of these three stories, I have chosen to focus on that of the diet-heart thesis for two reasons. First, it was specifically the concerns about diet and its relation to an epidemic of heart disease and obesity which prompted public interest in nutrition labeling, particularly during the 1990s labeling reforms. Second, more than the other two diet foods and their embodied epistemologies for food, the diet-heart thesis and low-fat foods promoted a new understanding of preventive health as a way to address future risk, and drew upon a statistical, population-based language—epidemiology—to do so. Despite this focus, the stories of all three diet foods are important to understanding the transformation in food labeling that occurred in the FDA, and throughout the dissertation I discuss them when they directly shaped the agency's policies on labels and advertising.

This dissertation focuses on the legal framings and bureaucratic rationalities embedded in food labeling policies because of how they shape commonplace understandings of food, diet, and responsibility. The FDA's concern with adjudicating what is sound, objective knowledge about food, and its relation to intuitive, commonsense notions of food, is complicated by changes in the nature of food and health. These are partly epistemological changes, but also political and ethical shifts. In this sense the study of nutrition labeling is a study in the work institutions do in reproducing what Sheila Jasanoff calls civic epistemology, "the culturally specific, historically and politically grounded, public knowledge-ways."<sup>99</sup> The FDA's food labeling policies were in

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<sup>99</sup> Jasanoff, *Designs on Nature*, p. 249. Legal institutions by no means have a monopoly on this work in framing public epistemologies. Felicity Mellor has described how popular science and science-fiction literature "[maintain] a cultural resource of normative images and understandings of science which acquire a wide public circulation and can be invoked whenever challenges are made to the position of science in society." Felicity Mellor, "Between Fact



dialogue with a changing civic food epistemology, sometimes responsive to these public critiques, but other times closed to them. Yet, power is not only the capacity to give the answers to the big questions society asks, but also to determine what those questions even are.<sup>100</sup> A critical framing that arose in the debates over nutrition labeling was that the diet-heart thesis be seen as a problem of individual consumption rather than of public health. Thus this dissertation looks at the epistemology of a particular kind of citizen, the consumer.

### Imagining Consumers, Manufacturing Choices

The consumer is one of the central subjects of 20th-century governance, yet a uniquely modern category of identity. Raymond Williams's *Keywords* entry on "consumer" explains how earlier pre-Industrial Revolution uses of the word "consumer" reflected an older negative sense of the word "consume," to use up or to waste. A neutral sense of consumer, used in counterpoint to a generic "producer," came into usage in 18th-century bourgeois accounts of political economy. It was only at the turn of the twentieth century, and first and foremost in America, that the modern sense of consumer began to appear: the displacement of what before would have been more commonly referred to as the "customer" by this new term "consumer," the former "imply[ing] some regular and continuing relationship to a supplier," the latter indicating "the more abstract figure in a more abstract market."<sup>101</sup> In other words, the usage of the word

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and Fiction: Demarcating Science from Non-Science in Popular Physics Books," *Social Studies of Science* Vol. 33, No. 4 (August 2003): 521. Similarly, diet advice books, cookbooks and TV shows all contribute to the "public knowledge-ways" of food and diet. Efforts by the FDA to frame food through labeling must be considered in this wider ecology of food information and guidance.

<sup>100</sup> To use Daniel Carpenter's words, "The idea is that power exists not only in broad formal authority to direct behavior of others (directive power) but also in appearances that are less obvious: the ability to define what sorts of problems, debates, and agendas structure human activity (gatekeeper power), and the ability to shape the content and structure of human cognition (conceptual power)." Carpenter, *Reputation and Power*, p. 15. Here I am suggesting that food labeling is a platform where the FDA can exert conceptual power of food habits and purchasing patterns.

<sup>101</sup> Despite the origins of the term "consumer" having initially reflected the producer's vision of consumption, the using up of goods produced, Williams notes that the positive sense of consumer, or even what he calls the "curious

consumer emerged out of the distancing of market relations, but articulates a changing, increasingly more abstract relationship between purchaser and vendor and the nature of goods consumed.

In recent decades it has become common in some policy circles to hear described an “active consumer” who is not only capable of making responsible, socially-oriented decisions in his or her purchases, but actively seeks to do so.<sup>102</sup> Talk of this “active consumer” in politics, however, has raised concerns about the fundamental nature of consumer agency. For historians, social scientists, and policymakers alike, a central question has been whether consumers, individually or collectively, are agents of change or are, instead, passive recipients of grand transformations brought by the industrial revolution and new technologies of mass communication. A subgenre of these debates over “push” versus “pull” narratives—supply-side versus demand-side accounts of change—are arguments over whether advertising, including food labeling and packaging, is best characterized as a tool for producers to manipulate consumers (creating demand to meet supply),<sup>103</sup> or represents companies’ sophisticated

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phrase” of “consumer choice,” emerged mid century with the formation of consumers’ associations and the notion that the consumer had some autonomy or agency. Williams, R. *Keywords: A vocabulary of culture and society*. Oxford University Press, USA, 1985, pp. 68-70.

<sup>102</sup> Trentmann, F. *The making of the consumer: Knowledge, power and identity in the modern world*. Berg Publishers, 2006, pp. 5-7.

<sup>103</sup> The canonical statement of this argument is Roland Marchand’s *Advertising the American Dream*, though a deeper theoretical articulation of it can be found in historian T.J. Jackson Lears’s discussion of Gramsci and hegemony. Lears, and many historians of consumption to follow, depict consumers as “less powerful folk [who] may be unwitting accomplices in the maintenance of existing inequalities” (p. 573). Advertising, for this group of scholars, is the means by which producers convince consumers to adopt the “producer ideology” of “conspicuous accumulation.” Lears, T. J.J. “The concept of cultural hegemony: Problems and possibilities.” *The American Historical Review* 90, no. 3 (1985): 567–593. Marchand, R. *Advertising the American dream: Making way for modernity, 1920-1940*. Univ of California Pr, 1985.

Agricultural historians have similarly argued that U.S. food consumption is driven by productivist concerns. The most compelling illustration of this argument is how, in the 1930s, G. Harold Powell encourages California growers to reframe their “overproduction” problem as an “underconsumption” problem, launching a new consumer education campaign on fruit built around the creation of new markets through new creative advertising (including the deployment of fruit grades and standards and crate labels). Stoll, S. *The fruits of natural advantage: making the industrial countryside in California*. Univ of California Pr, 1998, pp. 88-93.

awareness of their clients, businesses' tireless study of customers' changing tastes through consumer studies (surveilling consumer trends to adjust supply to new demand).

Recently scholars have tried to move away from these polarizing grand narratives, by focusing on the role of expert mediators, such as consumer experts or arbiters of taste.<sup>104</sup> They examine the tools or crafts these intermediary agents use to determine popular tastes, as well as their position in industry organizations and thus their influence on production decisions. One facet of this shift in focus has been the study of how the physical redesign of products and changing spaces of consumption transform the relationships between consumers and producers, a study that Franck Cochoy calls a "sociology of packaging."<sup>105</sup> These scholars of packaging, supermarkets, and other "consumption junctions" follow a broader sociological turn away from globalizing structural explanations of production and consumption towards analyses which attempt to explain global and macro transformations through localized processes and tactics.

Food labelling is situated within a much longer history of efforts by manufacturers, distributors, retailers, consumers, and the state to establish mechanisms for quality assurance and trust between buyer and seller. Early efforts to regulate food quality took advantage of the physical space of marketplaces, rationalising the food supply through the control of vendors' physical location within town markets. While popular protests over food often centred on negotiating a fair price, another common problem was adulteration or trickery that disguised

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<sup>104</sup> Two such examples are Blaszczyk, R. L. *Imagining consumers: design and innovation from Wedgwood to Corning*. Johns Hopkins Univ Pr, 2000, and Schot, J., and A. A de la Bruheze. "The mediated design of products, consumption and consumers in the twentieth century." *How users matter* (2003), pp. 229–46, though older origins of this turn can be found in Cowan, R. S. "The consumption junction: A proposal for research strategies in the sociology of technology." In Bijker, W. E, T. P Hughes, and T. J Pinch. *The social construction of technological systems: New directions in the sociology and history of technology*. MIT Press, 1987, pp. 261–80, and Kline, R. R. *Consumers in the country: Technology and social change in rural America*. Johns Hopkins Univ Pr, 2000.

<sup>105</sup> Cochoy, F. *Une sociologie du packaging ou l'âne de Buridan face au marché*. Presses Universitaires de France, 2002; Porter, G. "Cultural forces and commercial constraints: designing packaging in the twentieth-century United States." *Journal of Design History* 12, no. 1 (1999): 25; Strasser, S. *Satisfaction guaranteed: The making of the American mass market*. Pantheon Books, 1989.

poor quality or unsafe food.<sup>106</sup> The emergence of food labelling in the late 19th century was a response to the rise of packaging and the lengthening of the supply chain between producer and customer following the industrial revolution. Manufacturers embraced labelling as an important tool to establish market segmentation, product positioning, and brand loyalty, and to regain some control over “substitution evil,” where grocers substituted one brand for an equivalent absent one. Manufacturers also used labels to address a central concern with packaged foods, that “[c]ans and boxes concealed colours and odours and prevented shoppers from tasting food before they bought it.”<sup>107</sup>

Branding ideally functioned as a private tool for accountability, encouraging consumers to develop product loyalty with producers whom they could no longer meet directly at the marketplace. The state, however, played an important third-party role in policing these technologies of trust, particularly owing to the importance that food provisioning plays in maintaining public order.<sup>108</sup> In the United States, early federal labelling laws focused on preventing “unfair” and deceptive packaging practices through slack-fill container laws and setting product standards. Only later, beginning around the 1920s with the popularisation of

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<sup>106</sup> Hutt, P. B., and P. B.I.I Hutt. “History of Government Regulation of Adulteration and Misbranding of Food, A.” *Food Drug Cosm. LJ* 39 (1984): 2; Thompson, E. P. “The moral economy of the English crowd in the eighteenth century.” *Past and present* (1971): 76–136. Examples of pre-capitalist markets in Europe provide illustrative, useful contrast with modern supermarkets. Kaplan shows how the state constructed the marketplace as the sole legal site for marketing goods in order to keep the exchange of goods in visible sight. Kaplan, S. L. *The bakers of Paris and the bread question, 1700-1775*. Duke Univ Pr, 1996.

E.P. Thompson concluded his essay, “The Moral Economy of the English Crowd in the Eighteenth Century,” by noting:

Marketing (or 'shopping') becomes in mature industrial society increasingly impersonal. In eighteenth-century Britain or France (and in parts of Southern Italy or Haiti or rural India or Africa today) the market remained a social as well as an economic nexus. It was the place where one-hundred-and-one social and personal transactions went on; where news was passed, rumour and gossip flew around, politics was (if ever) discussed in the inns or wine-shops round the market-square. The market was the place where the people, because they were numerous, felt for a moment that they were strong. (134-135)

This impersonal, “generic” nature of the modern shopper, consumer rather than customer, is an important feature in the design of nutrition labels.

<sup>107</sup> Strasser, *Satisfaction guaranteed*, p. 35.

<sup>108</sup> Kaplan, *Provisioning Paris*, 1984; Kaplan, *The bakers of Paris and the bread question*, 1996.

vitamins and the marketing of cod-liver oil additives, did rules on nutrition and health claims become a regulatory concern. In this early period, government regulation focused on preventing outright nutrition quackery, pseudoscientific claims, and what was known as “economic adulteration,” the use of cheap substitutes which cheated consumers out of the more wholesome authentic product.

Over the course of the twentieth century there has been a shift from focus on consumers *eating* foods to consumers *reading* foods, an informational turn. In many respects this turn reflects the abstraction of the marketplace, but it also grows out of a particularly progressive liberal belief in the rationalization of the market with an emphasis on transparency (through the provision of information) and consumer choice. While histories of consumption have often focused on consumer movements to articulate changing tastes, some scholars have recently focused on the construction of the spaces of consumption, in particular supermarkets, to argue that consumer choice is in fact highly orchestrated and constrained by backstage decisions. Tracey Deutsch describes how grocery chains deliberately reconfigured the organization of stores, building modern supermarkets—”large, centrally managed stores that limited personal attention”—that emphasized the virtues of “convenience” and the “refinement of clean, well-lit, and orderly” spaces. They molded these new spaces of consumptions around “a conservative, middle-class model of femininity” so as to transform the housewife’s role from an actively engaged, locally knowledgeable customer to a passive (or pacified), literate consumer.<sup>109</sup> In this way the rise of the supermarket was an extension of postwar interest in forming a suburban America. Shane Hamilton similarly describes supermarkets as highly structured spaces and an

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<sup>109</sup> Deutsch, Tracey. *Building a Housewife’s Paradise: Gender, Politics, and American Grocery Stores in the Twentieth Century*. The University of North Carolina Press, 2010. The recent shift towards marketing “convenience” (in both eating and shopping) has paralleled the dissolution of structured households and structured work-play routines.

extension of decisions in agricultural policy which have a “technological momentum” not readily transported from one production context to another.<sup>110</sup>

Looking at the history of food labeling as a point-of-purchase middleground in the consumer-producer paradigm allows one to move past entrenched debates over supplyside and demandside change and instead explore how experts imagined consumers and in doing so constituted new political subjects in food consumption. This is not a history of consumerism (though it at times discusses consumer advocates), but is rather a history of the consumer as an archetype of producers, regulators and experts. It explores food labeling as a tactic experts use to “mobilize the consumer,”<sup>111</sup> to engender or facilitate certain kinds of consumers. More specifically, the dissertation describes three successive “conceptual personae”<sup>112</sup> — the “ordinary consumer” in the 1950s, the “informed consumer” in the 1970s, and the “commensurated

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<sup>110</sup> Hamilton, S. “Supermarket USA confronts State Socialism: Airlifting the Technopolitics of Industrial Food Distribution into Cold War Yugoslavia.” In *Cold War Kitchen: Americanization, Technology, and European Users*. Ruth Oldenziel & Karin Zachman (eds.), MIT Press, 2009. For example of how new food processing technologies were reconstructing the notion of convenience and what was “food,” see Josephson, P. R. “The Ocean’s Hot Dog: The Development of the Fish Stick.” *Technology and Culture* 49, no. 1 (2008): 41–61.

<sup>111</sup> Miller, P., and N. Rose. “Mobilizing the consumer: assembling the subject of consumption.” *Theory, Culture & Society* 14, no. 1 (1997): 1–36.

<sup>112</sup> Deleuze, G., and F. Guattari. *What is philosophy?* Columbia Univ Pr, 1996. Science and law are saturated with imagined or implied, ideal-type characters that lawyers and judges use to frame jurisprudence. There is the conceptual persona of “the criminal” – lawyers are trained to interpret the law “thinking like a criminal,” or to establish *mens rea*, the guilty mind, as an important precept for determining a person’s responsibility for a crime. Similarly, in intellectual property law, courts imagine “the creator” or “the inventor” when constructing an idea as a thing belonging to a person. Silbey, J. “The Mythical Beginnings of Intellectual Property.” *Geo. Mason L. Rev.* 15 (2007): 319. The legal fiction of “personhood” is also a site where lawyers and judges construct legal personae, one of the more long-lasting, disputed examples being the U.S. Supreme Court’s construction of “the corporation” as a special kind of legal person. For a discussion of how different legal practices constitute different kinds of legal subjects, see Silbey, S., and A. Sarat. “Dispute processing in law and legal scholarship: from institutional critique to the reconstruction of the juridical subject.” *Denv. UL Rev.* 66 (1988): 437..

Science also has its conceptual personae, the most famous example of which is the implied “I” in René Descartes’s famous utterance “cogito ergo sum.” Of closer relevance to this paper is the scientific conceptual persona of *l’homme moyen*, or the average man, in statistics. Gigerenzer, et al., have shown how the shift in the early 19th century in both science and law from a focus on *l’homme éclairé*, the reasonable man, to *l’homme moyen* registered a dramatic transformation and formalization in how experts construed agency in the way might people “take a chance” on a dangerous product. Gigerenzer, G., Z. Swijtink, T. Porter, L. Daston, J. Beatty, and L. Kruger. *The empire of chance: How probability changed science and everyday life*. Cambridge Univ Pr, 1990.

consumer” of the 1990s label— to illustrate the FDA’s evolving understanding of the food label’s target audience.

In this respect, the dissertation draws upon science studies which look at the role that interface design plays in configuring users and constituting selves.<sup>113</sup> A critical point from these studies is the “multiplicity of self.” This project seeks to add nutrition to other market attributes as an important axis of food politics and marketing. The evolution of the “healthy consumer” has occurred alongside other consumer personae, such as the “middle-class” versus “working-class consumer” that surface in the politics of food pricing,<sup>114</sup> the gendered consumer at the center of supermarket design,<sup>115</sup> or the “family” or “community consumer” as contrasted with the individual consumer, in studies of food commensality.<sup>116</sup> The argument here is not that these different kinds of imagined consumers are mutually exclusive, but rather that they represent different yet potentially overlapping axes of niche marketing, and that niche marketing, through the design of labels and advertising, is a means by which to sustain or engender new social identities. Looking at the FDA-industry negotiations around food labeling and advertising provides an avenue by which one can link grand macro changes in food production that shape the larger contexts of eating and purchasing food, what Sidney Mintz refers to as “outside meaning,”

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<sup>113</sup> See, for example, Woolgar, Steve. “Configuring the User: The Case of Usability Trials.” In *A Sociology of Monsters: Essays on Power, Technology, and Domination*. Routledge, 1991; Turkle, S. “Cyberspace and identity.” *Contemporary Sociology* (1999): 643–648; Oudshoorn, Nelly, Els Rommes, and Marcelle Stienstra. “Configuring the User as Everybody: Gender and Design Cultures in Information and Communication Technologies.” *Science, Technology & Human Values*, vol. 29 (January 1, 2004): 30-63. This has also been one innovation of accounts of co-production which focus on the legal and political making of new subject-identities.

<sup>114</sup> Jacobs, M. “‘Democracy’s Third Estate:’ New Deal Politics and the Construction of a ‘Consuming Public.’” *International Labor and Working-Class History* 55 (2001): 27-51.

<sup>115</sup> Deutsch, Tracey. *Building a Housewife’s Paradise*, 2010.

<sup>116</sup> Kaufmann, J. C. *Casseroles, amour et crises: ce que cuisiner veut dire*. Hachette Littératures, 2005; Cf. Douglas, M. “Deciphering a meal.” *Daedalus* (1972): 61–81.

to the more intimate daily routines and private desires, what would come to be called lifestyles, which Mintz describes as the “inside meaning” of food.<sup>117</sup>

One regulatory tactic that plays a prominent role in this story is the “architecture of authority,” the way in which regulatory institutions regulate space, physical or virtual, as means by which to regulate market behavior.<sup>118</sup> In part this is because under U.S. law “labeling” is construed broadly to include any source of information that changes how a consumer might interpret a product label, giving the FDA broad authority over the information that circulates about food. The use of the awkward gerund, “labeling,” in this project’s title owes to this special legal distinction made in food law between “label,” the physical label attached to food packaging, and “labeling,” any and all informational materials which reference the label and/or bear upon its interpretation.<sup>119</sup> Food labeling includes advertising campaigns and health claims which might not appear directly on the food package. (This expansive jurisdiction has also meant that, since the 1940s, the FDA has competed with as well as worked in coordination with the Federal Trade Commission, a matter this dissertation only touches upon, but is important to a fuller telling of the history of food labeling.)

One FDA official in the 1970s described advertising as “the dictionary of the labeler,” when explaining why any and all promotional materials linking food to health would be subject

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<sup>117</sup> Mintz, S. “Food and its relationship to concepts of power.” *Food and agrarian orders in the world-economy* (1995): 3–14. Jackson Lears argues that advertising is a part of modern society's cultural repertoire. Lears, J., and T. J.J Lears. *Fables of abundance: A cultural history of advertising in America*. Basic Books, 1995.

<sup>118</sup> Silbey & Ewick argue that governments regulate laboratory spaces rather than scientific practices as compromise between the government interest in ensuring worker safety and the scientists' desire for autonomy. By focusing on spaces, regulation does not threaten the scientists' sense of academic liberty. Silbey & Ewick use regulation of laboratories as an example of how governments inculcate “governmentality” in their subjects as a soft-handed (and therefore often less resisted) style of governing. Silbey and Ewick. “The Architecture of Authority,” in Austin Sarat, et al., eds. *The Place of Law*. Ann Arbor: University of Michigan Press, 2003, 77-108.

<sup>119</sup> This legal distinction was defined in *Kordel v. United States*. 335 U.S. 345 (1948). As discussed in Hutt, P.B., Merrill, R.A., and Grossman, L.A. *Food and Drug Law*. 3rd ed. Foundation Press, 2007, pp. 99-102.



to the agency's new labeling rules.<sup>120</sup> This legal construction of a hypertextual relation of health claims creates a virtual, informational space where the FDA can chart territories of competency —informational panels or disclosures versus TV ads and educational literature— and public-private domains, e.g. front-of-package labels versus side panels. But it also raises ambiguities (discussed in Chapter 2) about what are the boundaries between education as a public practice, deserving protection by the state, versus marketing as private practice, which might warrant the FDA to intervene and determine whether an advertisement is inappropriate and therefore “misbranding” or acceptable as commercial puffery. The FDA’s efforts to demarcate the line between educating, informing, advertising, and deceiving can be seen in this light as an effort to negotiate the extent to which citizens’ health ought to be a consumable good.

This touches upon a point about how changes in labeling rules are as much about dialogues between industry and regulators as they are about the government and its publics. Indeed, throughout much of the dissertation the FDA is often in conversation with producers more than consumers, even if it is acting “in the consumer’s interest.” This might suggest, as some critics argue, Marion Nestle most prominently, that regulation is captured by industry or that Big Food has distorted and diverted efforts to use food labeling and nutrition education for the public good. This argument is problematic and overly simple in a couple of ways. First, it ignores the plurality of interests among the food industry. It underestimates the way in which the FDA, through its design of labels, is not only imagining consumers, but also imagining producers, giving preferential treatment to those who are selling healthy foods (as defined implicitly or explicitly by the agency's labeling rules). Second, Nestle's capture thesis critique falsely supposes a clean separation of public and private interests that has never existed, and is

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<sup>120</sup> By this then FDA Chief Counsel Peter Hutt clarified, “What you say in advertising qualifies and gives meaning to what is in the labeling.” “Questions and Answers,” *Food, Drug, Cosmetic Law Journal* (February, 1973): 144.

therefore unable to explain how such public-private value is co-produced, or how the mixed assembly of interests involved in food labeling in a broader sense manufactures choice.<sup>121</sup> In this respect, I show how the regulation of labeling is a place where the state and corporate interests negotiate the boundaries between public and private, and in the process constitute new markets, but also new subjects. Furthermore, Nestle's focus on the USDA misses significant institutional differences between the FDA and USDA with regards to their missions to protect the consumer. While the USDA has a long history grappling the contradictions of its pro-industry, pro-public health missions, the FDA is not so encumbered by this mixed heritage.

Instead, the FDA's difficulties with labeling are better understood in the context of changing understandings of food and institutional responsibility. In the case of nutrition labeling, changes in food science and technology have reframed food, value, and risk, and by extension food markets. The experts in this story are not concerned with simply selling products or meeting consumer wants, per se, but rather seek to reshape consumers' understandings of their needs. Nutrition labeling is inflected with issues relating to consumers' trust in government, in this case the Food and Drug Administration, its role in shaping food markets, "protecting consumers" from fraudulent claims, and using tools such as food labels to achieve public health goals.<sup>122</sup> While the FDA frames its concern with nutrition labeling as the remediation of "consumer confusion," this dissertation will show how the "confusion" here in part arises from consumers' changing cultural understanding of diet and risk. When the 1938 Food, Drug, and Cosmetic Act

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<sup>121</sup> However, Nestle's larger point, the way that nutrition science in recent years has been appropriated by markets is useful to bear in mind when considering the turn from a standards system focused on foods to a labeling system focused on scientific information. The turn to labeling has created a market for industry to invest in and thus shape scientific research on nutrients. Nestle, *Food politics*, 2007.

<sup>122</sup> The FDA's food labeling policies have been less about surveillance and more about making food products (and companies) accountable and audit-able. This is because the FDA, unlike the US Department of Agriculture, does not have factory inspection powers, and is therefore only able to regulate food products based on what they declare on the product label. Food labeling has thus functioned as a "second order trust relationship," where the FDA relies upon information that companies provide it or provide their customers. Power, M. *The audit society*, 1997.

was passed, resulting in the FDA's initial food standards system, food and health concerns were largely framed, to use MFK Fischer's terms, by an amateur economics which sought "ways to make little seem like more." Depression-era hunger was the focus of the nutrition profession, and "economic adulteration" and nutrition cheats were the FDA's principle targets for action.<sup>123</sup> By the late 1950s, the economy had changed such that Kenneth Galbraith signaled a new era, describing the postwar America as an "affluent society" whose consumers no longer chose products based on "original needs," but rather on "induced needs" based the manipulations of savvy marketers.<sup>124</sup> Diet scientists and public health officials similarly struggled with the health implications of this new economy, to address "diseases of the affluent" and what appeared to be a new kind of epistemology of food consumption. Under the pressures of new diet foods and the concern with a new burden of disease caused by eating too much, the FDA's system began to fall apart.

The introduction of nutrition labeling in the 1970s was about shaping public consumption to encourage consumers to develop a "taste" for healthier foods, or more to the point, to impose a new rationality over taste. Here the epistemic and the affectual link up together. The presumption of nutrition labeling was that "taste," in the sense of intuitive liking, would come to follow reasoned understanding (public health and new scientific knowledge). For this reason, a central question for regulators throughout the history of nutrition labeling has been whether, in fact, the "customer is always right," and whether the design of the food label ought to merely protect the consumer (from deceitful nutrition quackery), inform the consumer (of accurate nutrition information), or actively reshape the consumer (through directive nutrition facts). Nutrition

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<sup>123</sup> Quote from Fischer, M. F. K. *The Art of Eating*. New York: World Publishing Company, 1954, on "How to Distribute Virtue." On this "pocketbook politics," see Jacobs, M. *Pocketbook politics: economic citizenship in twentieth-century America*. Princeton Univ Pr, 2005.

<sup>124</sup> In Galbraith's words, consumers are "so far removed from physical want that they do not already know what they want." Galbraith, J. Kenneth. *The affluent society*. Houghton Mifflin, 1958. Cf. Sassatelli, *Consumer Culture*, p. 78.

labeling thus fits in a larger genre of socially responsible consumption and ethical shopping.<sup>125</sup>

Yet, enabling the active consumer, in this story, is predicated on the notion of a less active state. Since the FDA's switch from food standards to compositional labeling, it has remained unclear to what extent nutrition labeling has served to further the state's interest in cultivating healthy citizens, or conversely whether market-embedded ethics, healthy consuming, has appropriated "responsibility" and reshaped it to simply serve profitable ends. This project examines how the turn to information labeling reflects a governance choice to translate questions of public health and the management of citizens' health into questions of markets and the management of consumers.

### **Chapter Outline**

The dissertation is broken into five chronological chapters and a brief conclusion. Chapter 1, "The Fat of the Land, 1945–1960," uses the research of epidemiologist Ancel B. Keys to explore the dietary concerns of post-WWII America. It describes Keys's application of new measurement instruments and population-level methods to diet-heart research, and his subsequent proclamations about an emerging heart-disease epidemic and popular advice on low-fat diets. Keys was one of a group of scientists who would forge the "diet-heart thesis," the proposition that heart disease was associated with and in part caused by diets high in saturated fats. The chapter situates Keys's scientific program to link food, diet, and public health within a particular historical moment, America's sudden preoccupation with its affluence and international authority, as well as a longer history of biomedical measurement and social debates about disease, normalcy, and social control. The chapter shows how Keys was both contesting a

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<sup>125</sup> Sassatelli, R. *Consumer culture*, p. 187.

previous conventional wisdom about the nature of health in an affluent society, while forging a new one. It thereby sets the stage for subsequent debates over how best to govern the public's health, discussed in ensuing chapters.

Chapter 2, “Faux Food Fight, 1960–1968,” takes the story about Keys’s diet-heart thesis, and moves it into an institutional context, describing the FDA’s reaction to the new health advice when appropriated by the market and deployed in food advertisements. The chapter opens with a 1960 American Heart Association (AHA) panel on which Ancel Keys served. It is this panel that first established the Association’s low-fat policies, and which initiated debate within the scientific profession (the AHA vs. the American Medical Association) and among governmental organizations (the Food and Drug Administration and the NAS Food and Nutrition Board) over the problems with the mass-marketing of health claims. The chapter then describes the rise in the marketing of three new kinds of diet foods—vitamin-enriched foods, low-calorie artificially sweetened products, and low-fat and vegetable oil advertisement campaigns based on the diet-heart thesis—and how these ads clashed with the FDA’s campaign against “nutrition quackery” and its anti-“economic adulteration” labeling rules. At the heart of the debates were differences over legal and medical distinctions drawn at the time between “standard” versus “special dietary” foods, and by extension healthy, ordinary consumers versus special-needs consumers. The chapter foregrounds the way in which the (imagination of the) consumer/public acts as a hidden actor in such contests, in that all parties—the FDA, the food companies, and the AHA—were seeking to marshal the consumer in support of their diverse interests: the government’s legitimacy, industry’s market creation, and the medical profession’s authority.

Tensions over what one would consider standard versus special foods come to a head in Chapter 3, “Transitions, 1968–1972.” Here I look at three major events which led to subsequent

transformations in FDA policy and had profound impact on nutrition scientists' understanding of the public and the government. The first is the FDA food standards hearings on “special dietary” foods, which dragged on from 1968–1970, and which left much of the nutrition science community disenchanted with the existing New Deal regulatory system of food standards. The second is the 1969 White House Conference on Food, Nutrition, and Health. In addition to its enormous public significance for food policy more generally, this conference included two panels which would have a direct impact on future changes in food labeling: a panel chaired by Keys on “Adults in an Affluent Society,” and a panel on “New Foods” with Peter B. Hutt, an industry food lawyer who would go on to work at the FDA in the 1970s and play a central role in the introduction of nutrition labeling. The third event, the banning of the artificial sweetener cyclamate as a possible carcinogen, is treated only briefly, though it would play an important part in the subsequent 1970s politics around the FDA’s food policies. The chapter explores these three events as generating a kind of public “shock of recognition” that the food governance system was out of alignment with public sentiment and practice, and looks at how certain individuals and institutions dealt with public scandal and public understandings of nutrition science. This is the period in the dissertation when actors’ politics were most visible, and therefore when the political stakes embedded in different labeling proposals and regulatory approaches were most clearly articulated. But the chapter also describes the growing recognition of what Margaret Mead calls at this time, “the changing significance of food”: the ways that technology, and with it expectations of what constitutes food (how food should interact with human bodies and societies), is shifting, and therewith the economics and politics of food production.

Chapter 4, “Nutrition and Neoliberal Governmentality, 1972–1984,” covers the period of greatest institutional change, the FDA’s shift from food standards to informative labeling as accomplished through three new agency rules: the introduction of a voluntary “Nutrition Information” label, the end of the use of “imitation” labeling, and the requirement of ingredients labeling for all foods, not just nonstandard ones. It situates these efforts within a climate of neoliberalism and early deregulation. Cross-party dissatisfaction with paternalistic governance as well as confidence in “letting consumers decide for themselves” culminated in the adoption of persuasive tactics (information labels, dietary “guidelines”) rather than coercive ones (food prohibitions). The chapter examines the variety of ways that the FDA construed its implementation of the first nutrition label as a “modest” intervention: emphasizing the label’s “voluntary” nature, playing up popular consumer support for the label’s introduction, and using “objective” numbers and nutrition over more subjective or politicized descriptions of food. The chapter then describes two concomitant episodes in food politics, the passage of two pieces of Congressional legislation that directly restricted the FDA’s powers on vitamin supplements and saccharine regulation and the efforts to implant national “Dietary Guidelines” in the U.S. Department of Agriculture. Using these examples as counterpoint, it considers the assumptions about personal versus collective responsibility for health embedded in the use of food labeling and other models of government-run consumer protection based on the power to mobilize the rational, informed, and literate consumer.

At the end of the 1980s, a period in which the FDA invested few resources in food labeling, one official complained that the supermarket was a “Tower of Babel,” a place where consumers suffered information overload. In Chapter 5, “Drawing ‘Nutrition Facts’ Together, 1984–1995,” I look at how the mandatory “Nutrition Facts” panel in the early 1990s, found

today on nearly all packaged foods in the United States, was introduced as an effort to standardize the kind of scientific and health information made available to consumers. I describe the new nutrition label as an assemblage of vastly different political and professional backgrounds and interests: government regulators (FDA Center for Food Safety and Nutrition), public interest groups (Center for Science in the Public Interest), food industry, public health officials, techno-scientific experts (Association of Official Analytic Chemists), peer government (USDA), and even design firms (Greenfield-Belser Ltd.). This chapter recapitulates earlier chapters' discussion of concerns over what would be categorized as "food" or "drug," and whether it should fall to personal or public responsibility to promote certain forms of diet consciousness. The FDA's introduction of the nutrition label and allowance of health claims in the early 1990s marked the ascendance of a new way of understanding food as a vehicle for personal health. This transition in the FDA's consumer model parallels what some scholars describe as a more general cultural transformation from a society of consumers who see themselves as healthy to one of consumers who imagine themselves on a continuum of healthiness, where everyone has some degree of disease risk.<sup>126</sup>

### **The Infrastructures of Information**

While nobody would suggest there is anything "natural" about the Nutrition Facts panel, the label has become a taken-for-granted part of America's food landscape. Midway through the twentieth century, words like "cholesterol" or "saturated fats" were the domain of a specialized community of researchers. Today, they form a part of our everyday lexicon for food, whether or not one subscribes to the diet-heart thesis. Such a change speaks to the emergence of new

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<sup>126</sup> Dumit, J. "Drugs for life." *Molecular Interventions* 2, no. 3 (2002): 124.



institutions and new tools for popularizing technical visions of the world, and new cultural attitudes about food, diet and self-governance. This history describes what I am calling an informational turn in food politics and consumerism, but it does so by focusing on the ways that regulatory, scientific, and corporate institutions build an infrastructure for that information. It describes legal and material constraints which forged the early food labeling practices embodied in the FDA's standards of identity, and the political and epistemological transformations which led to a shift towards informative labeling and the everyday appearance of "nutrition facts."

By grounding the story on one specific regulatory apparatus, food labeling, the dissertation seeks to bridge outward directing and inward directing narratives of change in policy and culture. It uses an institutional account of scientific and legal constructions of food as a lens with which to explore late 20th-century cultural preoccupations about consumption and governance and the role of experts in a modern democracy. It explores questions of how organizations address change and risk by creating ordered classifications. What frameworks, specifically what legal and scientific constructions (or imaginations) of the consumer, guided regulators' decisions about the "appropriate" scope and form of governmental interventions in the food supply, and how did these change over time? How did public health-minded scientists, in their positions as government technical advisors, or food engineers and corporate marketers, through their designs of new foods and ad campaigns, propagate rational, chemical visions of food in place of traditional understandings? Moreover, it explores the extent to which the FDA's non-food concerns, such as campaigns and scandals with cigarettes and prescription drugs, shaped these institutional frameworks.

However, it also uses the example of regulating food labels to explore broader cultural changes in America regarding notions of individual versus collective responsibility as they relate

to managing the health risks of an abundant food supply. How did regulators' preoccupations with rationalizing new processed foods resonate with post-WWII concerns about America's material affluence and ascendance as a world leader? How did new ways of seeing and understanding population-level risks contribute to the way Americans talked about food as a risky object? In what ways did the representational medium of food labels transform how all parties—consumers, regulators, scientists, and businesses—addressed food safety and healthy lifestyles? It takes the example of changes in food labeling and diet advice to explore both the particulars of institutional change while also considering the more general cultural dimensions of changing food habits in a modern society.

The dissertation thus explores food labeling not as representation (information or discourse), but rather as a regulatory assemblage which draws together a variety of political, legal, corporate, and technoscientific interests into the practice of constructing a public-private infrastructure of information.<sup>127</sup> In this way, it seeks to articulate specific mechanism by which legal, scientific, and corporate interests co-produce one another, and how those practices stick or cohere in a tool like the nutrition label. By following this broader notion of infrastructure, I will show how the turn to labeling was not merely a shift in the representation of food, but was more broadly a retooling of food markets to embed notions about personal responsibility for health into the ways that food was designed, marketed, and consumed. The history of nutrition labeling is by no means the only story of that transformation, yet it is a politically visible and a publicly accessible one, and an illustrative example of how a nutrition “governmentality” and modern

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<sup>127</sup> Ong, *Global assemblages*, 2005. See also, Sassen, S. *Territory, authority, rights: from medieval to global assemblages*. Princeton Univ Pr, 2008, p. 5, footnote #5.

habits of mind are constituted in everyday contexts through regulatory tools like the label.<sup>128</sup>

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<sup>128</sup> Burchell, Graham, Colin Gordon, and Peter Miller. *The Foucault Effect: Studies in Governmentality*. 1st ed. University Of Chicago Press, 1991. Hacking, I. "Making up people." In *The science studies reader*. M. Biagioli, 161–171. Routledge, 1999.



## **Chapter 1**

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### **The Fat of the Land:**

### **Making Food Risks Legible in an Affluent Society**

**1945 – 1960**

*Now goods are comparatively abundant. Although there is much malnutrition in the world, more die in the United States of too much food than of too little.”*

— Kenneth Galbraith, *The Affluent Society*, 1958.<sup>129</sup>

*Sunday dinner is no longer special because only then do we have a big piece of meat; [now] we have Sunday every day.*

— Ancel and Margaret Keys, *Eat Well and Stay Well*, 1959.<sup>130</sup>

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<sup>129</sup> Galbraith, J. Kenneth. *The affluent society*. Houghton Mifflin, 1958, p. 101.

<sup>130</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*. Garden City, NY: Doubleday & Company, 1959, p. 19.

Ancel Keys and his wife Margaret Keys opened their highly successful 1959 diet advice book, *Eat Well & Stay Well*, with the following observation about modern eating:

Civilized living is an intelligent search for durable satisfaction, a nice compromise between the pleasures of the moment and those of the future. So it is with eating, a balance should be struck between first impulse and appreciation of the consequences of such indulgence.

The Keyeses go on to discuss how such a gap between what one might call the “first nature” and “second nature” of dietetics has widened as result of America’s recent technological advances in food production:

Prosperity has produced a new situation where an almost endless supply of all kinds of foods encourages us to eat more and more of the foods formerly limited by scarcity and expense.<sup>131</sup>

The authors offered this diet advice and cookbook to their readers as a useful remedy to an emerging challenge for postwar America, the rise in so-called “diseases of the affluent.” On the surface, the authors’ call for moderation and a well-balanced menu seems quite traditional. Yet, the book’s central messages, that Americans were eating too much, that new sciences were showing a direct link between heart disease and overeating, and that Americans could look for a solution in low-fat foods, signaled a new era in diet advice and public health campaigns.

In this Chapter, I will examine the way in which an emerging medical concern in the years following World War II, namely rising incidences of cardiovascular disease, what would be called an “epidemic” of heart disease, became associated with varying dietary habits, even particular foods. Employing new scientific tools (bio-measurement instruments and probabilistic models of the distribution of disease in a population) and a newfound organizational and institutional prestige, cardiovascular disease epidemiologists were able to reframe “affluent

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<sup>131</sup> *Ibid.*, pp. 14-15. On first and second nature, see Cronon, *Nature’s metropolis*, especially p. xix.

diets” as a matter of public health concern and therefore a target of professional engagement. Charles Rosenberg argues that epidemics have a certain dramaturgic form: “Epidemics start at a moment in time, proceed on a stage limited in space and duration, follow a plot line of increasing and revelatory tension, move to a crisis of individual and collective character, then drift toward closure.” By naming something an epidemic, the speaker mobilizes “specific rhetorical and policy goals.”<sup>132</sup> Describing these illnesses as “diseases of the affluent,” these researchers sought to denaturalize common assumptions about aging and illness and to open up avenues for studying the ways that civilization and food abundance shape patterns of health.<sup>133</sup> Moreover, by making hidden dietary risks legible and sounding the alarm on rising incidences of heart disease, this group of scientists worked to transform the relationship between consumers and the foods they eat.

This chapter focuses around the work of one scientist, Ancel B. Keys, who played a central role in the years follow World War II in establishing the link between dietary fats, blood serum cholesterol, and incidences of heart disease. Among the many cultural changes brought by a new “consumer’s republic”<sup>134</sup> were two that would have a profound impact on the young field of nutrition science: a shift in nutrition scientists’ previous focus on the undernourished to an expanded focus on curbing overeating—the subject of this chapter—and the introduction into the market of a plethora of engineered foods purporting to have novel health properties, something that will be explored in Chapter 2. While some would look to the latter, technological food innovation, to solve the problem of overnutrition, Keys put forward the proposition that scientific

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<sup>132</sup> Charles E. Rosenberg, “What is an epidemic? AIDS in historical perspective,” *Daedalus* (1989): 1-2.

<sup>133</sup> Indeed, one can find no clearer articulation of this reconceptualization of age and illness than from Keys himself in 1967: “the concept that atherosclerosis is in fact a disease rather than an inevitable consequence of aging, is based largely on such statistical evidence [from population studies].” Cowdry, E. V, and H. T Blumenthal. *Cowdry’s arteriosclerosis: a survey of the problem*. Thomas, 1967, p. 541.

<sup>134</sup> Cohen, L. *A Consumers’ Republic: The Politics of Mass Consumption in Postwar*. New York: Alfred A. Knopf, 2003.



comparison of traditional diets combined with the age-old wisdom of self-restraint was adequate to curb this new trend in diet and disease. Both narratives, the new foods and the return to self-restraint, drew their legitimacy from competing understandings of the epidemic at hand, differing opinions about its origin, its social manifestation, its proper management, and its eventual end. “Expert” advice was not monolithic, but rather pluralistic and hotly disputed. Examining the “discovery moment” of widespread heart disease and its dietary basis therefore elucidates many of the assumptions and disagreements that would govern the policies and politics I describe in later chapters.

### **The Emergence of a Biomedical Platform for Diet Research**

The scientific “discovery” of a heart disease epidemic and its relationship to diet was in part a consequence of the spread of new biochemical and physiological techniques into the field of diet and nutrition science. While at the turn of the twentieth century nutrition science was largely practiced in departments of “agricultural chemistry” or “home economics,” by the end of World War II diet research was increasingly colonized by biochemists, physiologists, and clinical researchers interested in reexamining the relationship between the body, the pathology of disease, and one’s environment. Out of this biomedical interest in diet and nutrition would emerge a new “platform” for diet research, which bridged previous laboratory-bound methods focus on food chemistry and metabolism with a newer public health concerned with studying disease as encountered in-the-field.<sup>135</sup>

Ansel Keys’ early training illustrates both significant continuities and transformations taking place in the science of food and diet in the mid 20th century. Ansel Benjamin Keys

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<sup>135</sup> Keating, P., and A. Cambrosio. *Biomedical platforms: Realigning the normal and the pathological in late-twentieth-century medicine*. MIT Press, 2003.

(1904–2004) was born in Colorado Springs to teenager parents who shortly thereafter moved to Berkeley, California to look for work. Keys described his early education as not particularly eventful, even professing at one point to have been “bored with high school and life in Berkeley.” From an early age he did show an interest in science, attempting at his eighth birthday to chloroform a fly—but instead chloroforming himself—and attempting in Junior High to start a Chemistry Club, although to his disappointment nobody came. More noteworthy were his early job exploits, which included working in a bat cave harvesting guano for fertilizer at the age of 16, and working as an oiler on a steamship, the SS President Wilson, the summer after his freshmen year of college. He entered the University of California at Berkeley hoping to get a degree in chemistry, but by his third year decided it would be easier and faster to get out if he switched to political science and economics. Less than a year out of college and unhappy with his job prospects, the country still submerged in a depression, Keys returned to UC Berkeley this time to pursue an MA and Ph.D. in biology, with a doctoral thesis showing how an environmental challenge could be selective on the evolution of a local fish species. In 1930, Keys accepted a National Research Council Fellowship to study with August Krogh in Copenhagen, thus beginning a career in physiology and a lifetime of extended research stays in Europe.<sup>136</sup>

In the 1930s, after his doctorate, Keys spent time at laboratories in the University of Cambridge, where he met Albert Szent-György, the Hungarian physiologist credited with discovering ascorbic acid, or vitamin C, and at the Fatigue Laboratory at Harvard University where he joined a group of physiologists and biochemists attempting to apply their expertise to

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<sup>136</sup> Ancel Keys, *Adventures of a medical scientist: sixty years of research in thirteen countries* (1999), pp. 1-9.

“things besides the diagnosis and treatment of disease.”<sup>137</sup> Here his most notable research was on a trip to the Andes to study physiology at high altitudes, where he had his own blood drawn as a sample for the study. The experiment would later draw the attention of the US military for wartime research on K-rations, but it also foreshadowed Keys’s future use of simple physiological measurements and comparisons of blood to explore differential impacts of the environment on bodies. The project also reflected the increasing “border crossings” between the laboratory and the field in physiology since the turn of the 20th century.<sup>138</sup>

Yet it was when Keys moved to Minnesota in 1936—first to the Mayo Clinic, then to the University of Minnesota, an agricultural school, to build the Laboratory of Physiological Hygiene—that he began to study food and nutrition more closely, and in particular the physiological effects of diets on the pathology of disease. It was also in Minnesota, at the Mayo Clinic, that Ancel Keys met Margaret Haney, herself a trained analytic chemist, whom he would marry. They would spend the next sixty years together, until Ancel’s death, and throughout Margaret would accompany him on most of his research travels abroad, assisting as a lab technician and even co-authoring publication together.

Whereas Ancel Keys followed other physiologists and biochemists into a new interest in food and diet, it is worth noting that up until then a more conventional path to nutrition science

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<sup>137</sup> Ancel Keys, *Adventures of a medical scientist*, p. 17. Chihyung Jeon, “Measuring the ‘Right Stuff,’ Inventing the ‘Human Factor’: Psychology, Physiology, and Anthropology of Pilot Selection and Training,” SHOT 2008 Annual Conference, Lisbon, Portugal, Oct. 13, 2008. Keys’s early interest in the relationship between environment and body can also be situated within a movement during the 1920s and 1930s known as “constitutional medicine,” which posited a “post-Pasteurian” holistic vision of disease that defined disease as “a struggle between a given external or environmental agent [...] and a given individual.” The movement’s preoccupation with accurate “biotypology,” recognizing individual variability through the measurement and assignment of categories of individuals within a study, was a central concern of Keys throughout his lifetime of research. The movement had followers in the Harvard Fatigue Lab, and Walter Alvarez, one of the leaders of the constitutional medicine, was at the Mayo Clinic, where Keys would soon relocate. Tracy, Sarah W. “An Evolving Science of Man: The Transformation and Demise of American Constitutional Medicine, 1920-1950,” In Lawrence, Christopher and George Weisz, *Greater than the parts*. Oxford University Press US, 1998, pp. 161-188.

<sup>138</sup> Robert E. Kohler, *Landscapes & Labscapes: Exploring the Lab-Field Border in Biology*. University of Chicago Press, 2002.

passed through agriculture schools.<sup>139</sup> This separation of nutrition science from physiology and chemistry was an artifact of the late 19th-century stigmatization of “applied” or commercial sciences in many university departments. Justus von Liebig, often considered the father of the modern study of nutrition, analyzed the molecular composition of necessary “animal substances,” in particular nitrogen based organic components of food, with the intent of discovering how the body absorbed and metabolized them. He disseminated his analyses in a widely read book *Animal Chemistry or Organic Chemistry in its Application to Physiology and Pathology*, thus promoting the chemical study of food and diet.<sup>140</sup> While Liebig was responsible for many important scientific discoveries of that period, the close ties that he and others made with industry quickly invited scientific accusations of quackery and charlatanism. (A vivid illustration of this is how Liebig’s name became synonymous with “Liebig’s extract of meat,” a product which he manufactured and sold as a health supplement alternative to meat, alleging it improved muscle strength.)<sup>141</sup>

By the end of the 19th century, the study of nutrition was considered an “applied” science largely practiced in either agricultural extension programs or home economics departments, not the “basic” science encouraged in “elite” biochemistry and physiology departments. Within these programs, nutrition science was practiced for its value to companies for improving the quality and marketability of foods, or of use to the state or the public in promoting the efficient use of

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<sup>139</sup> Fredrick J. Stare, an agricultural chemist with a PhD. from the University of Wisconsin, was tracing the exact opposite path at this time, called to Harvard to start a new Division of Nutrition in School of Public Health. The department was the first of its kind in a public health school. When reflecting on the change in his profession, Stare later observed, “The foundations of modern nutrition had been laid at least 50 years before by pioneers in this relatively new science who held appointments in agricultural chemistry, [...] and home economics – not in nutrition or in a department of nutrition in a medical school or in a school of public health.” Fredrick Stare, *Adventures in Nutrition: An autobiography*. Hanover Mass.: Christopher Pub. House, 1991, p. 23.

<sup>140</sup> Liebig, J., and W. Gregory. *Animal chemistry: or, Organic chemistry in its application to physiology and pathology*. J. Owen, 1842.

<sup>141</sup> It was subsequently found to have no real nutritional value.

resources or a more efficient workforce.<sup>142</sup> From the 1880s to the 1900s, Wilbur O. Atwater, widely celebrated as the father of nutrition in the United States, imported much of the European, particularly German interest in food metabolism and measurement to the U.S. agricultural extension research centers. Atwater developed the calorimeter and performed numerous public displays of how it measured bodily expenditures when under physical duress, in this way popularizing many nutrition concepts like the “calorie” through pamphlets distributed through the U.S. Department of Agriculture (USDA). As one historian has described it, the calorie in the early 20th century was quickly embraced as a unit for the politics of national health and efficiency.<sup>143</sup> Yet this research and dissemination occurred through conventional USDA agricultural extension networks.<sup>144</sup>

Keys’s path from physiology lab to agricultural school reflected an expansion in the study of physiology and biochemistry to issues once marginalized from “pure” or “basic” science. This interest was driven, in part, by the evolution of a particular line of investigation into biomeasurement, called “fatigue” research, particularly strong in Europe, that was yielding new instruments and new biochemical and physiological insights into the human “machine.”<sup>145</sup> Interest in metabolism and “physiological chemistry,” which culminated in the enzyme theory at the end of the 19th century, gave rise to a new field of science, “biochemistry.”<sup>146</sup>

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<sup>142</sup> Kamminga, H., and A. Cunningham. *The science and culture of nutrition, 1840-1940*. Rodopi Bv Editions, 1995.

<sup>143</sup> Cullather, N. “The Foreign Policy of the Calorie.” *The American Historical Review* 112, no. 2 (2007): 337-364. Indeed, Atwater also published what could be called the first national dietary guidelines in 1915, linking the state’s interest in maintaining an efficient, healthy public to the profession of nutrition.

<sup>144</sup> Based on his experiments with the human calorimeter, Atwater would argue that carbohydrates could be metabolized by the body to become body fat. In this respect he differed from Liebig, who had believed that body fat could only come from dietary fat. Deborah I Levine. *Managing American Bodies: Diet, Nutrition, and Obesity in America, 1840–1920*. Harvard University, Dissertation, 2008, pp. 117-148.

<sup>145</sup> Anson Rabinbach, *The human motor*, 1992.

<sup>146</sup> While “Biochemistry” was comparatively new, only recognized as such around the turn of the twentieth century, by the time Keys was making his trips to Europe in the 1930s it had its own specialized journals and societies.

Robert E Kohler Jr, “The enzyme theory and the origin of biochemistry,” *Isis* (1973): 181–196.

The growth in interest was also owed in part to new funding institutions, which sought to promote public health and welfare. In parallel with advances in the scientific study of diet were certain deductive discoveries relating to a class of food elements whose deficiency in humans seemed to lead to severe disease. In 1912 Casimir Funk, a Polish biochemist, gave a name to these new vital elements, “vitamines,” and argued that pellagra, scurvy, and rickets were all likely due to some deficiency in them.<sup>147</sup> The discovery of a wide variety of such vitamins seemed to usher in a new era of diet therapeutics and, in the words of one nutritionist, Elmer McCollum heralded a “newer knowledge of nutrition” through which public health institutions could mobilize against disease.<sup>148</sup> In the 1910s while investigating an epidemic of pellagra in the South for the U.S. Public Health Service, Joseph Goldberger established a link between corn-based diets and the illness. Goldberger’s findings included a dietary remedy, administering brewer’s yeast, which the Red Cross distributed through hospitals in the region in the 1930s.<sup>149</sup>

The successful eradication of pellagra would become a rallying cry by nutrition scientists to fund similar initiatives in the U.S. and abroad. Especially in Europe, government medical and public health institutions began extensive research programs to identify diet-related diseases.<sup>150</sup> Private foundations in the United States at this time, particularly the Rockefeller Foundation, were also investing heavily in building up both basic biological sciences, particularly in

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<sup>147</sup> A few years later the “e” was dropped, once chemists determined that vitamins were not amino acids (in protein). Physicians had long suspected that scurvy was a result of dietary imbalances, as suggested by the famous experiment by James Lind in the 18th century using citrus to prevent incidences of scurvy among British sailors, but were uncertain whether it was caused by a deficiency or some putrefaction of meat which the citric acid cured. By the 19th century, many physicians had come to believe diseases like scurvy were due to specific diet deficiencies, and by the 1890s and 1900s, chemists began isolating specific compounds absent in diets associated with these diseases. Carpenter, K. J. “A short history of nutritional science: Part 2 (1885-1912).” *Journal of Nutrition* 133, no. 4 (2003): 975.

<sup>148</sup> Carpenter, K. J. “A short history of nutritional science: Part 3 (1912-1944).” *Journal of nutrition* 133, no. 10 (2003): 3023.

<sup>149</sup> Later, the enrichment of wheat with vitamin B further contributed to the declining incidence of the disease. Pat Swan, “Goldberger’s War: The Life and Work of a Public Health Crusader (review),” *Bulletin of the History of Medicine* 79, no. 1 (2005): 146. “Newer knowledge of nutrition” is a reference to Johns Hopkins University biochemist Elmer V. McCollum’s textbook, first published in 1918, *The newer knowledge of nutrition*.

<sup>150</sup> M. Mayhew, “The 1930s nutrition controversy,” *Journal of Contemporary History* 23, no. 3 (1988): 445–464.

emerging fields like biochemistry with a potential for welfare applications, and in international health infrastructures to export their experience fighting communicable diseases from developed to developing countries.<sup>151</sup> These shifts or realignments of interest moved physiological research both from the laboratory out into the field, and from a focus on basic science questions about the nature of the human body to an applied concern with how physiology and environment (ought to) direct hygiene, diet, and health. If these shifts were already beginning to take shape in the 1930s, manifesting in the institutional form of new journals, societies, and university departments, they accelerated with the advent of world war in the 1940s.<sup>152</sup>

World War II had a dramatic impact on the sciences since most scientists were marshaled to apply their research towards military ends. Wartime science, particularly the large scale projects of World War II, brought together scientists from different fields of study, and in many cases led to new syntheses across previously fixed disciplinary boundaries.<sup>153</sup> In the cases of

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<sup>151</sup> Ancel Keys himself travelled to England in 1931 on a Rockefeller Foundation grant to study under Joseph Barcroft, a physiologist at King's College in Cambridge. On the Rockefeller Foundation's interest in the biological sciences during this period, see Robert E Kohler, "The management of science: The experience of Warren Weaver and the Rockefeller Foundation programme in molecular biology," *Minerva* 14, no. 3 (1976): 279–306. P. Abir-Am, "The Discourse of Physical Power and Biological Knowledge in the 1930s: A Reappraisal of the Rockefeller Foundation's Policy' in Molecular Biology," *Social Studies of Science* 12, no. 3 (1982): 341–382. On the Rockefeller's role in building a world public health network, and what would eventually become the World Health Organization, see Farley, John. *To cast out disease*. Oxford University Press US, 2004. On the divisions between public and private funding of science, as well as division between "old elite" and up-in-coming universities in the United States, see Robert E. Kohler, *Partners in science: Foundations and natural scientists, 1900–1945*. University of Chicago Press, 1991, pp. 200-232.

<sup>152</sup> Evidence for the growth of interest can be seen in the birth of numerous specialized science journals in the field. The first issue of the *Journal of Food Science* was published in 1936, and the first issue of *Food Technology* was published at the beginning of 1947, both published by the Institute of Food Technologists. (The Institute of Food Technologists had only formed in the 1930s, holding its first conference at MIT by invitation from MIT President Karl T. Compton.) The *Journal of Agriculture and Food Chemistry*, published by the American Chemical Society, was first issued in 1950. The Association of Official Agricultural Chemists (AOAC), which was established as early as 1884 and whose membership had long reflected the more traditional agriculture school roots of nutrition chemistry, changed its name in 1965 to the Association of Official Analytic Chemists "to recognize the expansion of AOAC's scope of interest beyond agriculture topics." As quoted on AOAC International website: <http://www.aoac.org/about/History.htm>, Last visited: Nov. 16, 2009.

<sup>153</sup> The canonical examples are the Manhattan Project and radar research. See, for example, Rhodes, R. *The making of the atomic bomb*. Simon & Schuster, 1995. But many other areas of science and engineering experienced this cross-pollination. See, Galison, *Image and Logic*, 1997. David A. Mindell, *Between human and machine: feedback, control, and computing before cybernetics*. Johns Hopkins University Press, 2002.

nutrition, food, and diet sciences, war raised challenges that would preoccupy researchers in ways that endured well beyond the war. Wartime rationing, especially of meat and sugar, opened up public questions about nutrition deficiency even as it raised the profile of novel food substitutes.<sup>154</sup> The logistical challenges of having an “army march on its stomach,” all over the world, opened up new opportunities for food industries to export their production abroad and shore up the future consumer base by feeding soldiers away from home.<sup>155</sup> These and other wartime concerns quickly became the center of Ancel Keys’s research.

The two wartime projects that Ancel Keys would become most famous for were his development of the K-rations and, towards the end of the war, his Semistarvation Experiment. Even before the U.S.’s entry into the war, Keys was given a contract by the Army Quartermaster General to help design a compact, but nutritional food ration, what would be called a “K-ration,” that could be utilized by paratroopers on the move.<sup>156</sup> In a wartime documentary about the study of soldier diets, Keys commented:

“If vitamins were missing from his food, the soldier might have to take concentrated vitamins. If he had vitamins but no food, he would still starve. The best way, naturally, is to supply vitamins in the food.”<sup>157</sup>

<sup>154</sup> Bentley, A. *Eating for victory: Food rationing and the politics of domesticity*. University of Illinois Press, 1998, see especially the chapter on “Meat and Sugar,” pp. 85-. Cf. Rima D. Apple, *Vitamina*, 1996.

<sup>155</sup> Daniel Miller, “Coca-Cola: A Sweet Black Drink from Trinidad,” *Material Culture: Why Some Things Matter* (1998): 169–87.

<sup>156</sup> The “K” was for Keys. The military picked Keys because of his work with the Harvard Physiological Hygiene Lab’s research of metabolism at high altitude, which were the special physical conditions the military was concerned about in designing meals for paratroopers. Sarah W. Tracy, “Food Technology, Food Psychology: Ancel Keys and the World War II Development of the K Ration,” SHOT 2008 Annual Conference, Lisbon, Portugal, Oct. 13, 2008. The “Ancel Keys Scrapbooks, Newspaper Clippings 1938-1948” scrapbook in Ancel B. Keys & LPH papers, Minneapolis, Minnesota, contains numerous press clippings on the Laboratory’s efforts to design and test K-rations.

<sup>157</sup> As quoted in Association of Schools of Public Health documentary, “Dr. Ancel Keys,” in the Public Health Leadership Videos: [http://www.asph.org/movies/keys\\_high\\_ram](http://www.asph.org/movies/keys_high_ram), Last visited Nov. 2, 2009. Indeed, Keys was regularly quoted in the newspapers as disclaiming the viability of super pills for soldiers. See, for example, “Army’s Stomachs Don’t ‘Travel’ on Pills, Says the Grub Officer,” *Minneapolis Star Journal*, June 23, 1941, and “Scientist Urges Vitamin Cash Be Spent for Just Good Food,” *Minneapolis Star Journal*, May 10, 1943, in “Ancel Keys Scrapbooks, Newspaper Clippings 1938-1948,” Ancel B. Keys & LPH papers, Minneapolis, Minnesota.



Here Keys argued that vitamins were not the solution to addressing soldier nutrition deficiencies, but rather whole foods and a balanced diet were.

Prior to World War II, U.S. federal agencies had frowned upon the vitamin enrichment of ordinary foods such as bread. Then, in 1941, upon the scandalous discovery that some American soldiers enlisted for the war had failed the entry test because of nutrition deficiency, President Roosevelt implemented a Food and Nutrition Board which subsequently approved certain forms of vitamin enriched foods. However, reliance upon enrichment technologies had its detractors in the nutrition science community, for fears that focus on vitamin enriched foods would draw attention away from the more important message of eating a well-balanced diet. Many nutrition and diet experts worried that food faddism and “nutrition quackery” would lead to the commercial ramping up of vitamin enrichment beyond medically defensible levels. This concern prompted many experts in the nutrition community to take a hard line against promoting vitamins to healthy people, arguing that they were only of relevance to people with special medical needs.<sup>158</sup> (I will return to this debate in the next chapter.)

This explains Keys’s continual insistence on the centrality of whole foods in soldiers’ diets. Yet it is important to note that Keys’s reticence towards enriched “super” foods did not reflect a broader reticence about the importance of science in improving the efficiency of soldiers. Keys regularly described his laboratory’s study of “soldier fatigue” as central to the war effort:

“In the World war, the major problem was for men to get the most out of the machines they used; in the recent war this is reversed and in many cases it is a problem of finding the men who can approach the capabilities of the machines they use.”

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<sup>158</sup> James H Young, *The medical messiahs: A social history of health quackery in twentieth-century America*. Princeton University Press, 1967. Rima D. Apple, *Vitamina*, 1996.

The hope expressed here was that by studying soldier's movements and energy needs in motion, they could better "gear men to war" and keep them precisely nourished.<sup>159</sup>

Ancel Keys's research on human starvation, conducted at the University of Minnesota on a group of conscientious objectors to the war who were given the choice between time in jail or participating in Keys's study, reinforced his conviction that food was the solution to dietary stress, not vitamins. The study was inspired by Keys's and other's growing concern, late in the war, about how to address the large population of semi-starved people in Germany and other occupied countries when the war ended. (The volunteers, mostly pacifist Quakers, Mennonites, and Church of Brethren members, were actually all eager participants, given the humanitarian goals of the project.) Subjects were put on near-starvation diets for three months, and then rehabilitated on a "refeeding" diet, throughout all of which they were submitted to almost daily biochemical, physiological, and psychological tests to examine the effects on their bodies. The preliminary evidence that Keys sent out to international relief agencies in 1945 was that refeeding "required abundant calories daily [about 4,000], with little advantage from vitamin supplements."<sup>160</sup>

It is not possible here to offer a full case for how nutrition science was transformed by these new institutional affiliations and methodologies. But it is important to mention the arrival of this new epistemology to field of nutrition and diet research because it created antagonisms between nutrition science's new and traditional practitioners. When I interviewed them about the transformation in their profession since World War II, nutrition scientists today repeatedly

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<sup>159</sup> Keys as quoted in "'U' Makes Secret Study to Gear Men to War," *The Minneapolis Tribune*, p. 6. Wartime concern over the impact of "super" foods can be seen in the reported discovery that German soldiers' "courage tablets" were in fact pure dextrose. Dextrose tablets, "an important source of energy for work and for regulation of body temperature," were given at noon meal to American soldiers, along with further "pep" with the addition of citric acid. "Nazi Oomph Tablet Just Dextrose," *Minneapolis Morning Tribune*, August 2, 1941. Both found in "Ancel Keys Scrapbooks, Newspaper Clippings 1938-1948," Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

<sup>160</sup> ASPH documentary, "Dr. Ancel Keys": [http://www.asph.org/movies/keys\\_high\\_ram](http://www.asph.org/movies/keys_high_ram), Last visited Nov. 2, 2009.

claimed that much of the resistance to new diet advice and scientific models for diet and health of the last half century came from people in traditional agricultural departments who felt threatened by these “encroachments.” Indeed, one nutrition scientist described the shift as a “Kuhnian” realignment of the field.<sup>161</sup> Compounding the tensions surrounding this epistemological shift would be the equally dramatic shift in priorities that a new science of “negative nutrition” would call for. The nutrition that was the focus of most pre-war and wartime research was the traditional one concerned with the threats of undernutrition and fatigue, issues which had engaged classical nutrition scientists like Atwater and his predecessors for decades before. (In the years after WWII, American nutrition researchers would also “export” this study of and intervention in undernutrition through their research abroad in developing countries.) Following the war, however, many researchers, Keys among them, were starting to look at overnutrition as a new, and in their eyes more urgent target of research.

### **Sifting the Normal from the Pathological, Making Dietary Risk Legible**

While in Europe the war’s devastation made hunger and starvation the most salient and pressing nutritional concern, in the United States postwar attention soon turned to America’s new affluence. Some researchers, Ancel Keys foremost among them, considered new avenues of diet research to address the emerging anxieties of a “consumer’s republic.”<sup>162</sup> Since the late 19th century, American middle class women had taken up slimming or “reducing” diets. Historian Hillel Schwartz argues such dieting caught on at the turn of the twentieth century as part of a

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<sup>161</sup> Referring to Kuhn, T. S. *The structure of scientific revolutions*. University of Chicago Press Chicago, 1970. Johanna Dwyer, senior nutrition scientist in the NIH Office of Dietary Supplements, former participant in 1969 White House Conference on Food, Nutrition and Health (assistant to Jean Mayer), phone interview, Nov. 20, 2009. Cf. Peter Greenwald, director of the National Cancer Institute Center for Cancer Prevention, FDA oral history (with FDA Historian Suzanne Junod), Rockville, Maryland, Aug. 26, 2009.

<sup>162</sup> Lizabeth Cohen, *A Consumer's Republic*, 2003.

broader turn to efficiency for reformers seeking to counter a “fear of abundance and golem of waste” of the leisure class.<sup>163</sup> At the turn of the twentieth century, Russell Chittenden began to popularize counting kilocalories as a means of controlling weight, which drew upon the new fervor for the scientific measurement of food and growing interest in the “calorie.”<sup>164</sup> Following World War II popular interest in such diet “fads” grew substantially, though they continued to be criticized by many “serious” medical scientists as health quackery because of their focus on the aesthetics of thin bodies rather than bodily health. The positive political economy of the calorie gave way to a new “negative nutrition” and a consumer interest in the low-cal or no-cal foods as a more sustainable and healthy alternative to conventional sweeteners.<sup>165</sup>

Yet, as Schwartz notes, “To Russell Chittenden and many other Americans [...] fat was fat, and any food could end up as fat.”<sup>166</sup> It was only in the 1910s when obesity became identified by insurance companies with higher mortality rates and when physiologists began to explore the role of diet on the pathological mechanisms of atherosclerosis, the thickening of the arterial walls caused by the build-up of fatty materials, that scientists more systematically formulate the “lipid hypothesis.” The first major scientific landmark linking diet to the pathology of heart disease

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<sup>163</sup> Hillel Schwartz, *Never Satisfied: A cultural history of diets, fantasies, and fat*. Collier Macmillan London, 1986, pp. 82, 85-90. Overnutrition here was about traditionally scorned “taking-without-needing” rather than a specific medical epistemology. Thus, during World War I people would talk of “treasonable fat” in reference to those who gorged despite wartime rationing (pp. 140-145).

<sup>164</sup> Hillel Schwartz, *Never Satisfied*, pp. 131-134. On Wilbur O. Atwater’s public demonstrations of the calorimeter and the political economy of the calorie, see Cullather, N. “The Foreign Policy of the Calorie.” (2007): 337-364. For a longer work on the history of the calorie in sugary foods, see Sidney Mintz, *Sweetness and Power: The place of sugar in world history*. New York: Penguin Books, 1986.

<sup>165</sup> Historian Harvey Levenstein coined the phrase “negative nutrition,” and situates the rise of its popularity in the late 1960s and 1970s. Harvey A. Levenstein, *Paradox of Plenty*, 2003. However the 1950s is the period when the phrase “empty calorie” first came into widespread usage, a phrase of value in a society where calorie counting was popular and when mass-marketed “low-cal” diet sodas were first appearing. Carolyn de la Peña explores the growth of popularity of low-cal culture through a historical study of artificial sweeteners, which takes the story back to the 1950s. De La Peña, C. *Empty Pleasures: The Story of Artificial Sweeteners from Saccharin to Splenda*. Univ of North Carolina Pr, 2010. This popular anti-calorie sentiment did not always translate into anti-fat diets. As late as 1953 nutritionist Fredrick Stare was giving the common professional viewpoint when he was quoted in a Time Magazine article on dieting, “Don’t forget fat. It is a sort of blotter. It sops up the food and slows down absorption.” “34 Million Fatties,” *Time*, March 23, 1953, <http://www.time.com/time/magazine/article/0,9171,806631,00.html>.

<sup>166</sup> Hillel Schwartz, *Never satisfied*, p. 133. Atwater had come to believe that body fat could form from eating carbohydrates as well as dietary fats.

came out of a series of experiments on rabbits conducted in 1913 by Russian pathologist Nikolai N. Anichkov, where he showed that rabbits fed large amounts of cholesterol developed “atheromatous lesions,” fatty clots that might obstruct blood flow. Such discoveries helped to fuel interest in blood chemistry and how fatty plaques and blood serum cholesterols formed in the body.<sup>167</sup>

Physicians were also becoming increasingly aware of the differences in diet-related disease incidence across populations. In 1914 Cornelias De Langen, a doctor and physiologist, was hired by the Dutch government to combat the plague in the Dutch East Indies (present-day Indonesia). Over the course of his two decades there, he was struck by the near non-existence of common Western diseases like angina pectoris or hypertension among the Javanese population as compared to Europeans. Upon his return to the Netherlands in 1935, De Langen influenced other Dutch investigators to take up the study of cultural comparison of diet and disease.<sup>168</sup> For Keys and his peers, however, the scientific discovery that they would later widely credit for inspiring epidemiological interest in studying diet and heart disease came out of the events of World War II. One of the war’s “surprising” impacts on diet science was the way that wartime starvation made the diet-CVD link more visible. Under Nazi occupation in the Netherlands and Scandinavia, doctors noticed that the death rate from coronary artery disease was dropping despite the extreme stresses people experienced. In 1950, Sweden’s Haqvin Malmros published an article showing how the change in death rate neatly correlated with the severe restrictions on

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<sup>167</sup> The very term “atherosclerosis” was not coined until 1904 by Felix Marchand. Anichkov’s experiment did not achieve its canonical status until the 1950s, when there was a rapid growth in publications on fat and cholesterol and researchers like Keys began to establish through their citations a history of the field. I. E. Konstantinov, N. Mejevoi, and N. M. Anichkov, “Nikolai N. Anichkov and his theory of atherosclerosis,” *Texas Heart Institute Journal* 33, no. 4 (2006): 417. For a “longue durée” history of pathology encounters with fat deposits around hearts, going back to the 16th and 17th centuries, see Hillel Schwartz, *Never satisfied*, pp. 213-221.

<sup>168</sup> In particular, Isidore Snapper and J. Juda Groen. “Cornelis De Langen, MD (1887-1967)” entry for the “Preventing Heart Attack and Stroke Web Project”: <http://www.epi.umn.edu/cvdepi/bio.asp?id=92>, Last visited: Nov. 26, 2009.

fatty foods.<sup>169</sup> This wartime discovery suggested that coronary heart disease was shaped by environmental context, and thus open to population-level interventions, and also that it was not a problem limited to the elderly, but potentially growing inside us from an early age and thus requiring attention before a given person reached the category of being “diseased.”

Such biomedical curiosities drew Keys’s attention to what he called the “new American plague,” or the rise in coronary heart disease. Beginning as early as 1947, in what would be called the Minnesota Business and Professional Men’s Study, Keys enlisted 500 business executives in Minnesota to periodically come in to his lab for an annual checkup. The goal of the study was to compare the early findings, before cardiovascular disease appeared, with later findings as the disease differentially emerged in the group under study. Keys brought to the study the same rigorous measurement methods that he had applied to the starvation study during the war. The checkup entailed extensive physiological measurements, including measurements of blood pressure, weight, a skin-fold test and urine analysis, as well as a blood sample and electrocardiogram.<sup>170</sup> The ability to make such physiological measurements in the study of heart disease and diet was still comparatively new. Paul Dudley White, then a very prominent cardiologist, founder and president of the American Heart Association, had built much of his reputation for cutting-edge research by bringing the electrocardiogram from Europe to the United States in the 1920s. White traveled extensively with Keys throughout the 1950s, and wrote the

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<sup>169</sup> In 1948, Keys “challenged” the American Medical Association to re-examine its views of dieting and disease based on the widespread anecdotal evidence from World Wars I and II. “Minnesota Nutrition Expert Debunks Cherished Diet Fads,” *The Duluth Herald*, July 3, 1948. [Clipping found in personal archives of Henry Blackburn, “Scrapbook, 1938-1948”] See also, “The Fat of the Land,” *Time*, January 13, 1961, <http://www.time.com/time/magazine/article/0,9171,828721,00.html>. Haqvin Malmros, “The Relation of Nutrition to Health: A Statistical Study of the Effect of the War-time on Arteriosclerosis, Cardiosclerosis, Tuberculosis, and Diabetes,” *Acta Medica Scandinavica* 138, no. S246 (1950): 137-153.

<sup>170</sup> “Minnesota Business and Professional Men’s Study” entry for the “Preventing Heart Attack and Stroke Web Project”: <http://www.epi.umn.edu/cvdepi/study.asp?id=5>, Last visited: July 5, 2009.

foreword to the 1959 edition of the Keyeses' popular diet advice book.<sup>171</sup> The electrocardiogram was an important tool for standardizing measurements in Keys's studies, and reflected a wider shifting use of the EKG from laboratory research to clinical field sites.<sup>172</sup> The study wedded Keys's training as a physiologist, concerned with careful measurement, to a growing interest in the medical research community, post World War II, in studying population-level health consequences of environmental and behavior difference. In other words, what would be the emergence of epidemiology and the study of what was eventually called "risk factors."

An example of Keys's concern for exact measurement and greater scientific precision can be found in his efforts to critique both popular and life insurance companies' usages of "fatness" and "obesity." Beginning in the 1910s, the Actuarial Society of America published studies, which among other things, showed that the more overweight a man was, the shorter the life he lived. In 1942, the Metropolitan Life Insurance Company published new height-weight tables that would become the basis for contemporary tables on what companies believe to be the "ideal" body size for a long, healthy life.<sup>173</sup> Keys saw insurance companies' use of crude weight data, as measured on a scale without concern for varying body types or the actual percent of weight that was fat, inexact and highly unscientific. In a 1952 workshop on "Overeating, Overweight and Obesity," hosted by Fred Stare at Harvard's School of Public Health, Keys tore

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<sup>171</sup> For an extended history of the emergence of bodily measurement as a tool for social and political reform, see Rabinbach, *The human motor*, 1992. Michel Foucault, *The History of Sexuality*, pp. 135-145 ("Biopower"). Michel Foucault, "Dietetics," in Foucault, *The Use of Pleasure: The History of Sexuality, Volume 2*, trans. Robert Hurley. New York: Vintage, 1990, pp. 95-116.

<sup>172</sup> As one historian of the medical profession writes, medical measurement tools were increasingly of such rigorous empirical objectivity and consistency that physicians could have confidence in moving their study outside the controlled space of the lab and study disease as it moved through populations and in different environments. See Starr, *The social transformation of American medicine*, pp. 135-137. The resulting studies of population-level and environmental health data challenged the traditional medical clinical practice focused on patient individualism. On the problem of "individual idiosyncrasy," see Aronowitz, R. A. *Making sense of illness: science, society, and disease*. Cambridge Univ Pr, 1999.

<sup>173</sup> For a history of the shift from using height-weight tables as a measure of distribution to a predictor of mortality risk, see Amanda M. Czerniawski, "From Average to Ideal: The Evolution of the Height and Weight Table in the United States, 1836-1943," *Social Science History* 31, no. 2 (2007): 273-296. Hillel Schwartz, *Never satisfied*, pp. 153-159.

apart the utility of the tables on a variety of grounds: the sampling was poor and haphazard, it was mathematically inexact to use an arithmetic mean for weights in a particular age class given that weights always skewed right because “emaciation is limited but obesity is almost boundless,” and even that the kinds of “ordinary indoor clothing” worn in 1890 (when much of the data was collected) would lead to different heights and weights than the clothes worn today. But the most damning flaw, for Keys, was that “there is an implicit assumption that all body weight is equivalent.” In place of these one-dimensional scale-based tables, Keys described how it was now possible “to estimate the fat itself” in the intact living body, by way of skinfold measures or “densitometry” measurements of a person’s weight in air versus weight submerged in water.<sup>174</sup>

While a demonstration of ways that more exact measurement might yield more precise prediction, Keys was also laying out a broader argument about understanding the normal versus the pathological. As early as 1949, Keys was quoted in a newspaper article, arguing that:

“Dr. Alfred C. Kinsey says every man’s emotional life is a pattern unto itself—I say this holds true in the physiological sense. It is utterly impossible to characterize any man by one single feature. [...] In other words, I can’t say that any particular measurements prove that any man is normal unless I know a great deal more about him than the measurements reveal.”<sup>175</sup>

The same year, Keys laid out a more elaborate manifesto for his peers in an article, “The Physiology of the Individual as an Approach to a More Quantitative Biology of Man,” arguing

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<sup>174</sup> J. Brozek and Ancel Keys, “Body measurements and the evaluation of human nutrition,” *Nutrition Reviews* 14, no. 10 (October 1956): 289-91. “Overweight, obesity, and coronary heart disease,” Brozek & Keys, in *Geriatrics*, Vol. 12, No. 2, pp. 79-87.

<sup>175</sup> “All men normal unto themselves,” *St. Paul Pioneer Press*, Oct. 9, 1949, in, “Ancel Keys Scrapbooks, 1946-1955,” Ancel B. Keys & LPH papers, Minneapolis, Minnesota. The quote is an indication of the great social preoccupation and anxiety of this period with defining normalcy.



that individual variation within a population ought to be the focus of physiological inquiry, not ignored or minimized by taking “a good average.”<sup>176</sup>

In this same period Ancel Keys began to focus his attention on coronary disease and the proper characterization of its etiology. In a 1955 *Time Magazine* report, Keys summarized and then dispensed with the five leading popular explanations of heart disease. The first was affluence. “The popular picture of the coronary victim as a burly businessman, fat and soft from overeating and lack of exercise, who smokes and drinks too much because [of his stressful climb to the top],” Keys complained, “is a caricature.” Keys acknowledged that there were patients of his who fit this stereotype, but other heart disease sufferers did not.<sup>177</sup> The second was family history. Keys noted that “Families with a 'bad heredity' for coronary disease attract attention,” and only conceded that there was a “familial tendency” for heart disease. Third was race. According to Keys race didn’t account for much, because “U.S. Negroes living well in Chicago have about the same rates as whites, though Africans whose ancestors escaped slavery in the U.S. are spared the disease. U.S. citizens of Italian descent approximate U.S. average rates, and not those of their second cousins in the old country.” The fourth widely believed factor that Keys dismissed was smoking, noting that he knew of many peasant men who smoked heavily without developing the disease. The fifth factor was weight. Keys largely ruled out obesity, except gross obesity, arguing that it explained less (i.e. correlated less) than other factors with heart disease.<sup>178</sup>

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<sup>176</sup> Ancel Keys, “The physiology of the individual as an approach to a more quantitative biology of man,” in *Federation proceedings*, vol. 8, 1949, 523.

<sup>177</sup> For an extended, and highly humorous, critique of the argument that business executives are uniquely prone to heart disease, see Ancel Keys, “How to Be an Executive and Live,” Address for the Annual Meeting of the American Mutual Insurance Alliance, Chicago, 28 May, 1957.

<sup>178</sup> “The Specialized Nubbin,” *Time*, October 31, 1955, <http://www.time.com/time/magazine/article/0,9171,807885,00.html>. Keys’ failure to acknowledge smoking as a contributor to heart disease is curious, though perhaps not surprising. At that time epidemiologists were just beginning to put together the tools to link smoking to heart disease. Brandt, *The Cigarette Century*, 2007. While with the lipid hypothesis Keys positioned himself with the vanguard of such CVD epidemiology research, it appears that with smoking he did not. Indeed, at this time Keys was a regular smoker.

The only two commonsense factors that Keys believed remained were lack of physical exercise and diet. Indeed, the second of these, particularly the role of fats in unhealthy diets, had already become the central focus of his research attention.<sup>179</sup>

Keys was not alone in his interest in focusing on fats as a probable cause of heart disease. In 1950 researchers at the University of California, led by John Gofman, made the news for their findings that certain “giant molecules” in the blood were associated with the build up of fatty deposits. They also reported that after only a few weeks on a low-fat, low-cholesterol diet the levels of these “abnormal” molecules in the blood dropped dramatically in their patients.<sup>180</sup> Keys, with the help of Francisco Grande Covián, recently emigrated from Spain, would run a series of experiments on schizophrenic patients consigned to Hastings State Hospital in Minnesota to determine what specific diets might raise or lower blood serum cholesterol.<sup>181</sup> In 1947, the same year Keys had started the Minnesota Businessmen’s Study, the U.S. Public Health Service and

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<sup>179</sup> While for the remainder of this dissertation I will focus on the history of research on diets and heart disease, there is a parallel long and equally rich (and contentious) history on the role of exercise in preventing heart disease, and on whether our increasingly sedate lifestyle is a root cause of rising incidences of heart disease. Some early scientists involved in that research were Jean Mayer, a Harvard nutrition scientist whose role as presidential advisor for the 1969 White House Conference on Food, Nutrition, and Health I discuss in Chapter 3, and Jeremy Morris, a British epidemiologist who ran a widely cited comparative study of double-decker bus drivers and conductors in London in the 1940s and ‘50s, showing that because the conductors climbed the stairs regularly everyday they had lower heart-attack rates than drivers. Dennis Hevesi, “Jeremy Morris, Who Proved Exercise Is Heart-Healthy, Dies at 99½,” *The New York Times*, November 8, 2009, sec. Health / Research, <http://www.nytimes.com/2009/11/08/health/research/08morris.html>. For an extended discussion of the history of expert endorsements of the health benefits of exercise, dating back to Antiquity, see, U.S. Surgeon General. *Physical activity and health*. Center for Disease Control and Prevention, 1999. Available online at: <http://www.cdc.gov/nccdphp/sgr/index.htm>, pp. 11-20.

<sup>180</sup> “Medicine: The Wicked Giants,” *Time*, June 5, 1950, <http://www.time.com/time/magazine/article/0,9171,812581,00.html>. For Keys’s response to Gofman’s findings see, Ancel Keys, “Cholesterol, ‘giant molecules,’ and atherosclerosis,” *JAMA* 147, no. 16 (1951): 1514. Ancel Keys, “Giant molecules and cholesterol in relation to atherosclerosis,” *Bulletin of the Johns Hopkins Hospital* 88, no. 5 (1951): 473. E. V. Allen et al., “Atherosclerosis; a symposium,” *Circulation* 5, no. 1 (1952): 98.

<sup>181</sup> I will discuss these experiments in greater depth in Chapter 2, because of their importance in raising public awareness about the differences between vegetable oils versus animal fats as lesser or greater determinants of cardiovascular disease. Ancel Keys, J. T. Anderson, and Francisco Grande, “Prediction of serum-cholesterol responses of man to changes in fats in the diet,” *Lancet* 273, no. 7003 (1957): 959. J. T. Anderson, A. Keys, and F. Grande, “The effects of different food fats on serum cholesterol concentration in man,” *Journal of Nutrition* 62, no. 3 (1957): 421. J. T. Anderson, F. Grande, and A. Keys, “Essential fatty acids, degree of unsaturation, and effect of corn (maize) oil on the serum-cholesterol level in man,” *Lancet* 272, no. 6959 (1957): 66.

the newly formed National Heart Institute launched the much larger, and longer enduring Framingham Heart Study to observe the differing coronary heart disease outcomes among a population of residents of Framingham, Massachusetts in relation to specific measured risk factors. By the mid 1950s, the architects of the Framingham Study added dietary intake surveys in response to Keys's "lipid hypothesis" that dietary fats were the cause of high cholesterol and incidences of coronary heart disease.<sup>182</sup>

Another group of researchers in the New York City Department of Health's Bureau of Nutrition, under the direction of Norman H. Jolliffe, also began a study in the mid 1950s which they dubbed the "Anti-Coronary Club," that put businessmen in their 40s and 50s on a strictly controlled diet in an effort to reduce their cholesterol levels. Drawing upon this research, Jolliffe would popularize his low-fat "Prudent Diet," publishing a popular guide to dieting, *Reduce and Stay Reduced* in 1952, and a second edition in 1957.<sup>183</sup> Two other researchers who were investigating the role of diet and fats in the etiology of heart disease, and who would play a central role along with Keys in establishing the lipid hypothesis, were Edward H. Ahrens and Jeremiah Stamler. Ahrens was a physician who was also studying the effects of dietary fat on blood serum cholesterol at the Rockefeller Institute for Medical Research. Stamler had been studying the pathology of atherosclerosis in animals since the 1940s, and began population-based studies in Chicago in the 1950s, first at the Michael Reese Hospital in Chicago, and then at the Chicago Health Department, in order to find upstream causes of cardiovascular disease, in what

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<sup>182</sup> George V. Mann et al., "Diet and Cardiovascular Disease in the Framingham Study: I. Measurement of Dietary Intake," *Am J Clin Nutr* 11, no. 3 (September 1, 1962): 200-225. For a history of the Framingham Heart Study, see Oppenheimer, Gerald. "Becoming the Framingham Study." *American Journal of Public Health* 95 (April 2004): 602-610.

<sup>183</sup> Along with Ancel Keys's book, *Eat Well and Stay Well*, discussed below, it was central to the immense popular interest in low fat diets and diet foods in the late 1950s and early 1960s. Jolliffe, N., S. H. Rinzler, and M. Archer. "The anti-coronary club; including a discussion of the effects of a prudent diet on the serum cholesterol level of middle-aged men." *The American Journal of Clinical Nutrition* 7, no. 4 (July 1, 1959): 451. Jolliffe, N. *Reduce and stay reduced*. Simon and Schuster, 1957. R. R. Williams, "Norman H. Jolliffe:—A Biographical Sketch\*(August 18, 1901-August 1, 1961)," *Journal of Nutrition* 80, no. 1 (1963): 1.

would become a lifetime effort to develop and popularize “preventive cardiology.”<sup>184</sup> While all saw diet as playing a key role in shaping blood levels relating to atherosclerosis, their research during this period focused around questions as to whether it was dietary cholesterol, dietary saturated or unsaturated fats, or some combination of the three which shape the etiology of the disease. And though this research regularly received attention in the medicine or science sections of the news, until 1955 it rarely captured national attention.

That dramatically changed on Friday, September 23, 1955. That morning President Dwight D. Eisenhower played golf and then lunched on a hamburger, which appeared to give him indigestion. That night he woke up with chest pain. The following day he was taken to the hospital where he was diagnosed with a heart attack, and by Sunday renowned cardiologist Paul D. White was flown in to help him in recovery.<sup>185</sup> Eisenhower’s heart attack turned the public spotlight on heart disease and launched it and its many researchers into the limelight. One immediate cultural consequence was that it recast dieting as a men’s issue.<sup>186</sup> A second consequence, owing to White’s repeated proclamation about the importance of a healthy diet in the prevention of heart disease, was that it raised the profile of research on preventive cardiology, including Keys’s interest in fats in diet as a probable cause of coronary disease.<sup>187</sup>

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<sup>184</sup> Carmel McCoubrey, “Edward Ahrens Cholesterol Researcher, Is Dead at 85,” *New York Times*, Jan. 15, 2008. “14. Jeremiah Stamler (1919–),” in Allen B. Weisse, *Heart to heart: The twentieth century battle against cardiac disease, An oral history*. Rutgers University Press, 2002. Stamler would also become very involved with Ancel Keys and Paul D. White in international collaborations in cardiology research, first through the American Heart Association, then through the International Society and Federation of Cardiology.

<sup>185</sup> “How It Happened,” *Time*, October 3, 1955, <http://www.time.com/time/magazine/article/0,9171,807675-1,00.html>. Oglesby, Paul, *Take Heart: The Life and Prescription for Living of Dr. Paul Dudley White*. Harvard University Press, the Francis A. Countway Library of Medicine, 1986.

<sup>186</sup> Hillel Schwartz, *Never satisfied*, p. 16. Cf. Peter N Stearns, *Fat history: bodies and beauty in the modern West*. NYU Press, 2002. Though over-nutrition would continue to be a concern for women. *Vogue Magazine* ran a special segment on weight reduction and spot-reducing with Ancel Keys, Harvard nutrition scientist Jean Mayer, and Yale physiologist John Brobeck as its panel of experts. “Vogue’s eye view of eating your way into fashion,” *Vogue*, Feb. 15, 1956, in “Ancel Keys / Scrapbook Photo Album & Clippings, 1955-1966,” in Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

<sup>187</sup> When reflecting back on how heart disease and diet had become such a hugely important and popular concern, Fredrick Stare said: “I think there are two people responsible for this, one is President Eisenhower and the other is

For months afterwards newspapers across America chronicled the latest science on heart disease, featuring photos of the “great men of science” who were investigating its causes and developing preventive regimens or potential cures.<sup>188</sup> Adding to the sense of urgency was a report that year which showed that American soldiers killed in the Korean conflict were found to have coronary lesions, the early stage of coronary heart disease, even though they were on average only 22 years old.<sup>189</sup>

A recurring theme of newspaper and televised accounts of the cardiovascular disease research was how the many gadgets revealed hidden physiological phenomena about heart disease. In the 1955 CBS news documentary “The Search,” Keys’s team of researchers are depicted as “detectives” that are “searching for clues” which they could use to predict the incidence of cardiovascular disease. A recurring trope in the documentary is how the eyes can deceive (and thus more technical measurement is needed). One scene particularly colorfully illustrates this. Keys’s associate lines two men up next to each other, and asks the audience to guess which of the two weighs four times as much as the other according to the Lab’s “densitometer.” The audience is “surprised” to learn that the thinner of the two is the heavier.

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Paul Dudley White. Because President Eisenhower had a heart attack, a coronary, and Paul was called in as a consultant, and those of us who remember seeing Paul on television he told everything from A to Z and he was very enthusiastic about the importance of diet as a preventive factor in coronary disease and I think Paul is largely responsible to the American public for interesting them in the importance of nutrition, in possibly lessening the development of our principal cause of death.” Oglesby Paul interview with Fredrick Stare on April 22, 1983. Paul Dudley White papers at Countway Library, Part XI: Box 84, Folder “49/ Stare, Frederick J.” [Oglesby Paul Files], pp. 6-7.

<sup>188</sup> See, for example, “Heart Attack” article (source unclear) and “Are You Eating Your Way to a Heart Attack?,” *Saturday Evening Post*, Dec. 1, 1956, in “Ancel Keys / Scrapbook Photo Album & Clippings, 1955-1966,” in Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

<sup>189</sup> William F. Enos, Robert H. Holmes, and James C. Beyer, “Landmark Article – Coronary Disease Among United States Soldiers Killed in Action in Korea: Preliminary Report,” *J Am Med Assoc* 256, no. 20 (1986): 2859-2862. William F. Enos, James C. Beyer, and Robert H. Holmes, “Pathogenesis of Coronary Disease In American Soldiers Killed In Korea,” *J Am Med Assoc* 158, no. 11 (July 16, 1955): 912-914.

Keys summarizes the lesson of the exercise: “The obvious point is that first appearances may be deceptive.”<sup>190</sup>

A survey of newspaper articles published on Ancel Keys’s Laboratory of Physiological Hygiene shows photo images which foreground Keys’s instruments and the ways he pinched, poked, prodded, and even dunked subjects in order to render the physiological factors which associated with risk for cardiovascular disease more “legible.” These instruments were a source of Keys’s scientific authority and prestige, reflecting the culmination of over a century of biomeasurement instrumentation spreading across a variety of scientific disciplines concerned with the study of the “human motor.”<sup>191</sup> They were part of a program to redefine a public health problem, the occurrence of heart disease which incurs social costs, as a physiology and empirical research agenda, the measurement of discrete and empirically accessible phenomena.<sup>192</sup> The focus on “hidden” risk elements also removed from laypersons the authority for determining good health, bestowing it on the expert with his capacity for technical interpretation. Jeremy Greene writes that the introduction of instrument measures for hypertension transformed the definition of hypertension as a disease with visible symptoms (noticeable by patients) or signs

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<sup>190</sup> The guessing game resembles the TV game-show, *To Tell the Truth*, which began airing in 1956, where contestants had to guess which of a line of people was the one whose biography was read. (Ancel Keys would appear as the special guest on the show in 1961.) The CBS documentary is interesting in how the narrator opens with the stethoscope, “a tool” to “magnify the heartbeat,” notes how the disease is more complicated than that one measurement, and then builds to describe an array of tools utilized by the Lab to “identify” patients by their difference physiological properties, an extended lesson on technical seeing. “The Search” CBS Documentary, 1955, in Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

<sup>191</sup> See, for example, “How Fat is a fat man?,” 1947 article (source unclear), in “Ancel Keys Scrapbooks, 1946-1955,” Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

<sup>192</sup> Giving rise to what Bruce J. Hunt likes to call “the proxy problem” in the sciences. Unable to study a social problem directly, scientists seek out measurable proxies thereby allowing them to conduct empirical and objective studies. However, the relationship between the proxy and the social problem that it references may continue to remain in dispute. Cf. Rabinbach, *The Human Motor*. In later chapters I will argue that nutrition scientists’ reframing of diet and public health challenges as challenges in determining “objective” measurement and accounting played an important role in settling political disputes over food labeling and marketing. Here I only seek to foreshadow how biomeasurement practices can be appropriated by the state, whereby “legibility” and “simplicity” become central tools of statecraft and state control, James C. Scott, *Seeing like a state*, 1999. See also, Theodore M. Porter, *Trust in numbers*, 1996.

(only noticeable by doctors) into a disease of numbers and probabilistic future risk.<sup>193</sup> Keys similarly sought to construct a causal chain of events for heart disease, by linking what one eats, to measurable bodily transformations, to a final predicted health outcome.

### **Cold War Heart Disease Epidemiology, an Open World**

Keys's Minnesota Business Study became a stepping stone for the much more ambitious Seven Countries Study, which would correct for the statistically "small" sample size of the Minnesota study by enlisting tens of thousands of participants and would entail substantially more logistical work coordinating research across international boundaries. Just as nutrition science was shaped during World War II by wartime concerns with rationing and starvation, so heart disease research during the cold war was deeply affected by preoccupations with building international ties and the linkages between food policy and foreign policy. Recently, historians have begun to show how many scientists sought open collaborations during the cold war, in reaction to efforts at the time to enclose or nationalize science.<sup>194</sup> John Krige argues that many foreign relations organizations deliberately drew upon science in their cold war policies, because scientists' pre-existing international social networks would help foster transnational initiatives such as the political unification of European countries. Rebecca Lemov has described a more

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<sup>193</sup> Greene's focus is on how the marketing of new pharmaceuticals can work to expand the category of a disease, falling within a larger history of medicine literature on the impact of the "therapeutic revolution" on modern medicine. But he also describes how, in an "environment of therapeutic uncertainty," the "specific" and measurable response of patients with high blood pressure to Diuril lent credibility to their classification as hypertensive patients. Jeremy A. Greene, "Releasing the flood waters: Diuril and the reshaping of hypertension," *Bulletin of the History of Medicine* 79, no. 4 (2005): 778-782. See also, Jeremy A. Greene, *Prescribing by numbers: drugs and the definition of disease*. Johns Hopkins Univ Pr, 2007.

<sup>194</sup> In this respect the history of coronary heart disease epidemiology runs counter to characterizations of Cold War research, particularly computing and military research, as a "closed world," where scientific practice is confined to secure laboratories and many closed world assumptions were literally hard wired into the devices that scientists created to study the world from their enclosed spaces. The principal example of this characterization of the cold war is, Edwards, P. N. *The closed world: Computers and the politics of discourse in Cold War America*. MIT Press, 1996. On the trouble with "openness" versus "secrecy" in the historiography of Cold War science, see also, D. A Hounshell, "Rethinking the Cold War; Rethinking Science and Technology in the Cold War; Rethinking the Social Study of Science and Technology," *Social Studies of Science* 31, no. 2 (2001): 289-298.

“open world” of cold war research in certain sciences where there was a turn to collecting field data from around the world which could then be collated by new computing technologies.<sup>195</sup> An examination of efforts by Keys and his peers to build international collaborations in heart disease research adds to the case being made that during the Cold War there was a reaction by many in the scientific community against drawing national boundaries.

An important backdrop to Keys’s international research was the way in which food policy, and by extension governmental funds for research on food and diet, and foreign policy were intimately linked during the cold war. In July of 1947, Keys sounded what became a common alarm when he warned that underfed Europeans would be easy targets for communism, and the, “Prospect of democratic remnants hanging on in Europe will be gone” unless the U.S. hastened to send aid.<sup>196</sup> In his 1949 Inaugural Address, President Truman laid out what would become his “Point Four” Program, arguing that in order to alleviate the inadequate food supplies and rampant disease faced by more than half the world’s people Americans “must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.”<sup>197</sup> The Food and Agricultural Organization (FAO), founded in 1945, and the U.S.’s postwar “European Recovery Program (a.k.a. “Marshall Plan”) both heavily sponsored the travel of American nutrition and diet experts like Ancel Keys to European countries to study local health problems and provide

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<sup>195</sup> John Krige, “Technological Leadership and American Hegemony,” MIT STS Colloquium, Nov. 24, 2008. Rebecca Lemov, “Database of Dreams: Technologies for Assembling Subjective Materials, 1945-1961,” MIT STS Colloquium, Dec. 1, 2008.

<sup>196</sup> “Europeans ‘Fed Up,’ Hasten Aid to Curb Communism--Keys,” *Minneapolis Star Journal*, July 28, 1947, in “Ancel Keys Scrapbooks, Newspaper Clippings 1938-1948,” Ancel B. Keys & LPH papers, Minneapolis, Minnesota. For further discussion of this line of argument in postwar American, see the chapter “Freedom from Want: Abundance and Sacrifice in U.S. Postwar Famine Relief” in Amy Bentley, *Eating for victory*, pp. 142-170.

<sup>197</sup> “Harry S. Truman Inaugural Address, Thursday, January 20, 1949. <http://www.bartleby.com/124/pres53.html>, Last visited on July 5, 2009; “Point Four Program of Technical Assistance to Developing Nations,” Archival Materials at the Harry S. Truman Library & Museum, <http://www.trumanlibrary.org/hstpape/point4.htm>, Last visited on July 5, 2009.



advice. These international relief measures aided Keys and Paul Dudley White in establishing international networks for cardiovascular research well into the 1950s. For White, especially, these peaceful collaborations were more than a defense against communism, but rather a concerted effort at an internationalism which transcended the American-Soviet hostilities.<sup>198</sup>

The new internationalism also meant that American scientists had access to new populations for study. Just as Ancel Keys mobilized innovative measurement techniques to critique the life insurance companies' use of crudely calculated obese life outcomes statistics, he would now use the availability of a "natural experiment," diverse populations of people across the European continent with vastly different diets, to argue that environmental variations and factors rather than genetic (intractable) differences could explain global variability in incidence of heart disease. Even before the war, cardiologists such as Paul D. White had begun to argue for the necessity of "observational studies" to settle questions about heart disease, which the controlled experiment could not explain. In his 1940 Briggs lecture White observed:

Heart Disease is a world problem, ... Nature has for centuries been conducting gigantic experiments as to the effects of climate, of type of work, of diet, and of local and worldwide diseases, that are spread out before our very eyes for us to record and to

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<sup>198</sup> Several dramatic episodes in Keys and White's lives during this period give more poignant evidence of the Cold War backdrop to CVD research. For example, Ancel Keys and Paul D. White, along with several other cardiologists, testified before the House Committee on UnAmerican Activities on behalf of preventive cardiologist Jeremy Stamler. In a letter to Stamler in support of his case against HUAC, Keys made the following claim: "I personally know that you [Stamler] have devoted to the cause of medical science so many hours, day and night, seven days a week, that it is literally impossible for you to have engaged in any appreciable way in other activities, at least over the years I have known you." For a brief, but vivid account of the HUAC incident, see the "HUAC invades CVD Epidemiology, Stamler v. Willis 1965" entry for the "Preventing Heart Attack and Stroke Web Project": <http://www.epi.umn.edu/cvdepi/essay.asp?id=142>, Last visited: Nov. 26, 2009. Stamler later met personally with White, who confessed to being a "civil libertarian" whose political interests only extended to "broad arena of world friendship among peoples and the role of the International Cardiological and Heart movement, as a means of building friendship among peoples and putting brakes on the drive to jingoism and to war [...]" Oglesby Paul interview with Dr. and Mrs. Jeremiah Stamler on March 3, 1983. Paul Dudley White papers at Countway Library, Part XI: Box 84, Folder "48/ Stamler, Jeremy" [Oglesby Paul Files], p. 5.

analyze, quite readily yielding information that might never be obtainable from our own experiments on man...”<sup>199</sup>

The turn to epidemiological studies of heart disease in the late 1940s, while in part motivated by “internalist” concerns about how best to establish evidence-based medicine,<sup>200</sup> was greatly facilitated by this postwar appearance of funding and interest in examining the diets of populations recently under severe economic distress.

Because of the popularity and utility of his book *Biology of Human Starvation*, published in 1950, Keys regularly toured Europe to share his findings from the wartime starvation study, and participating in congresses of the new World Health (WHO) and Food and Agriculture Organizations. Keys was appointed chairman for the first meeting of the FAO on human nutrition in 1951. At that meeting, Keys mentioned the problem of coronary heart disease and its probable link to diet, but no interest was raised because nobody else believed there to be much incidence of heart disease. As one participant, physiologist Gino Bergami, responded, coronary heart disease was “not a big problem in Naples.” The statement struck Keys as surprising, and when Keys later wrote him about it, Bergami replied, “Come and see!” Keys’s visit to Naples, followed by a stay in Madrid, in 1952 would prove pivotal in the formation of what came to be known as his “diet-heart” thesis. A comparison of the local public hospital, where coronary heart disease was in fact rare, with a private hospital where more patients had cardiovascular disease, led Keys to seek out subjects from both the working class and the higher income class. Keys first

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<sup>199</sup> Oglesby Paul, *Take Heart: The Life and Prescription for Living of Dr. Paul Dudley White*. Harvard University Press, Francis A. Countway Library of Medicine, 1986, p. 211. Ancel Keys specifically noted that White 1st mentioned this speech to him around 1948, as a form of encouragement to Keys in pursuing population-level studies. Papers of Paul Dudley White, Part XI: Box 84, Folder “23/ Keys, Ancel” [Oglesby Paul Files], at the Francis A. Countway Library of Medicine.

<sup>200</sup> Stefan Timmermans & Marc Berg, *The gold standard: The challenge of evidence-based medicine and standardization in health care*. Temple Univ. Press, 2003. Cf. Brandt, *The Cigarette Century*. By “internalist” I refer to the distinction commonly drawn by historians of science between narratives which describe changes in science being driven by the science itself, experimentation or theoretical debates, versus “externalist” accounts which focus on the role of sociological, cultural, or economic factors that are often viewed by scientists as “external” to their inquiry.

measured the vital signs of municipal workers, his wife setting up and running the apparatus for measuring blood serum cholesterol. And at a dinner hosted by members from the Naples Rotary Club, Keys invited his affluent hosts to come in for testing and provide a contrast to the municipal workers. Only a few months after Naples, Keys ran similar tests on a visit to Madrid, with similar results.<sup>201</sup> Workers-class subjects had low cholesterol and low incidences of cardiovascular disease, while the more affluent had higher incidences of both.

From this trip Keys developed two hypotheses that would come to shape the structure of the Seven Countries Study. First, he argued that differences in class, especially differences in the quantity and types of foods eaten by the wealthy versus the more Spartan diets of the poor, might explain the differences in incidence of heart disease within a population.<sup>202</sup> Second, Keys suggested that culinary differences between countries like Greece, Spain and Italy, where olive oil, beans, fruits and vegetables formed the core foundation of local diets, versus countries like Finland and the U.S. whose diets were richer in animal fats (i.e., dairy and meat), might explain why some countries had lower rates of heart disease than others. Over the course of the 1950s, Keys ran pilot tests and developed contacts in Yugoslavia, Italy, Greece, Finland, the Netherlands, and Japan, such that a diet study could be coordinated across seven countries where there were significant variations in diet, risk, and disease. The Seven Countries Study officially

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<sup>201</sup> Keys, *Adventures of a Medical Scientist*, pp. 43-44, 49-54. See also A Keys, "From Naples to seven countries--a sentimental journey," *Progress in Biochemical Pharmacology* 19 (1983): 1-30.

<sup>202</sup> It was perhaps the first of these two critical associations, that of diet and class, that frustrated efforts by Keys and especially Paul Dudley White to goad the newly emerging World Health Organization to make heart disease a focus of its work. Keys noted that in the 1950s the WHO's "focus was on communicable diseases in what were then called the "undeveloped" countries, now more euphemistically termed "developing." Neither then nor later did Paul carry any weight at WHO; the atmosphere was not pro-American and clinicians were not held in great regard, attitudes that seem to be persistent at WHO." Papers of Paul Dudley White, Part XI: Box 84, Folder "23/ Keys, Ancel" [Oglesby Paul Files], at the Francis A. Countway Library of Medicine, pp. 3-4. This reluctance continues today. A systematic review of the global incidence and burden of disease revealed that ischemic heart disease and stroke ranked as the number 1 and 2 causes of death in both low-income and high-income countries; yet world health initiatives in developing countries remain focused on infectious disease, HIV and tuberculosis, while initiatives in developed countries address heart disease and diabetes. Lopez, Alan D., Colin D. Mathers, Majid Ezzati, Dean T. Jamison, and Christopher J.L., Murray. "Global and Regional Burden of Disease and Risk Factors, 2001: Systematic Analysis of Population Health Data." *Lancet* 367 (27 May 2006): 1747-1757.

started in 1958 and would run through to 1970. And the University of Minnesota Laboratory of Physiological Hygiene, located at Memorial Stadium Gate 27, the same site as Keys's wartime starvation experiment, would serve as the hub of this international epidemiological study. From there, Keys worked to standardize physiological tests across the different national field sites by introducing what became known as the "Minnesota code" for reading electrocardiograms, and by having samples such as the blood drawn at certain field sites sent to his lab for analysis of cholesterol levels.<sup>203</sup>

Keys's Seven Country Study was part of a wider trend in CVD epidemiological research, though it was the first to focus specifically on diet. Studies such as Keys's and the Framingham Heart Study begun in 1948 were specifically designed to single out "factors" that contribute to heart disease independent of familiar genetic or racial explanations. Such was the interest and excitement around these new studies that Harvard nutrition scientist Fred Stare later wrote, "We had been wondering [...] for some time how could we ever design a study in which we could try to neutralize the heredity factors." Stare, with connections through Paul White, put together an Irish Study run through Harvard, comparing incidence of heart disease between Irish-American immigrants and their relations back in Ireland.<sup>204</sup> Keys's own effort to neutralize heredity factors centered on a comparative study between populations of Japanese-origin found in Los Angeles (the "Nisei," or second-generation), Hawaii (first-generation Japanese-Americans), and Japan (including farmers, miners and clerks). In the study, Keys, and his principal Japanese collaborator Noburu Kimura, compared incidences of heart disease across the three

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<sup>203</sup> Henry Blackburn, "Seven Countries Study: Addendum," entry for the "Preventing Heart Attack and Stroke Web Project": <http://www.epi.umn.edu/research/7countries/addendum.shtml#mncode>, Last visited: July 5, 2009. Thus Keys's Lab became an "obligatory point of passage" for data processing in the Seven Countries Study. Bruno Latour, *Science in action: How to follow scientists and engineers through society*. Harvard Univ Pr, 1987. Cf. S. L. Star and J. R. Griesemer, "Institutional ecology, 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39," *Social studies of science* (1989): 387-420.

<sup>204</sup> Oglesby Paul interview with Fredrick Stare on April 22, 1983. Paul Dudley White papers at Countway Library, Part XI: Box 84, Folder "49/ Stare, Frederick J." [Oglesby Paul Files], p. 2.

geographically delineated, but ethnically similar communities, noting that “something happens to Japanese when they move to Hawaii and begin to adopt American customs.” Observing that the diets of Japanese immigrants changed, in particular the percent of calories from fats went up, across the three groups, they concluded that diet was likely a greater determinant of heart disease risk than genetics.<sup>205</sup>

The studies were designed to remove race and ethnicity as causal explanation of variation in disease occurrence, and undercut the common fatalistic arguments (which stymied public health activism) that heart disease was inevitable for some; but they also constituted a new way of perceiving dietary risk and responsibility, focusing at the level of the population instead of the individual. Advocates of heart disease epidemiology came to distinguish the old “individual approach” from the new “population approach” as follows:

“The individual approach [exploring individual risk within a culture] best served the medical audience and provided the basis for preventive cardiology. The population approach [using geographical and social contrasts in HD] helped establish the evidence and credibility for public health policy in CVD prevention.”<sup>206</sup>

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<sup>205</sup> Ancel Keys, Noboru Kimura, Akira Kusunokawa, B. Bronte-Stewart, Nils Larsen, & Margaret Haney Keys, “Lessons from Serum Cholesterol studies in Japan, Hawaii and Los Angeles,” *Annals of Internal Medicine*, Vol. 48, No. 1 (January, 1958): 83-94. What is striking about these studies is how they accomplish exactly what Michael Pollan recently disparaged “nutritionism” for doing, “to empty [food choices] of their ethnic content and history.” Michael Pollan, *In Defense of Food*, pp. 57-58. Pollan insinuates that this process of making food choices more scientific is culturally disempowering, but here one can see that Keys and others’ intent was quite the contrary, to empower people with regards to heart disease risk by minimizing biologically deterministic explanations and emphasizing an individual’s environmental control.

<sup>206</sup> “Evolution of the risk factor concept: a revolution and paradigm,” from “Preventing Heart Attack and Stroke”: <http://www.epi.umn.edu/cvdepi/essay.asp?id=110>, Last visited: Nov. 2, 2009. Personal interview with Henry Blackburn, Dec. 16, 2008. For an articulation of this difference between measuring risk in individuals versus populations, an issue I will return to in Chapters 4 & 5, see Geoffrey Rose, “Sick individuals and sick populations,” *International Journal of Epidemiology*, Vol. 14 (1985): 32–38. A longer history of the introduction of a “population approach” in medicine would have to go back to at least mid 19th-century France, with the French physician Pierre Louis’s “numerical method” and his campaign to bring what today might be called “evidence-based medicine” to bear on debates over the efficacy of therapeutics like bloodletting. One can find the physician already grappling with many still current issues about whether one ought to apply medical intervention measures deduced from the “general resemblances” of disease across a population to the “individualities” of a specific case. Pierre Louis. *Recherches on the Effects of Bloodletting in Some Inflammatory Diseases* Boston: C.G. Putnam, 1836, pp. 56-58, 67-69. I am grateful to David S. Jones for first bringing this to my attention.

In other words, the measurement of risk across populations also engendered a sense of community responsibility for managing the distribution of that risk.<sup>207</sup> If disease was understood to manifest itself across an entire population, rather than just individually or limited to a racial minority, then policies to redress it would have to be tailored to entire populations rather than locally or individually.

The population approach was an epistemological response to continued resistance in the profession and the public to the idea of heart disease as something that is environmentally malleable as opposed to a more fatalistic explanation that it reflected hereditary differences in populations or was due to Americans' longer lifespans. In part this resistance was due to conflicting anecdotal accounts of how low fat versus high fat diets correlated to atherosclerosis and coronary heart disease.<sup>208</sup> In the 1910s explorer and ethnologist Vilhjalmur Stefansson made several expeditions to the Arctic, where he studied native Inuit and discovered that, despite a diet almost exclusively composed of meat, they had comparatively low body fat. Inspired by this discovery, in 1928 Stefansson subjected himself to a 12-month diet of exclusively meat, and lost weight and showed good health. Differing explanations would be made of this Inuit mystery, that it was due to the Inuit's unique genetic profile, or that an all-meat diet matched our body's evolutionary "natural" cave-man adaptation to meat, which had been distorted by high-carbohydrate diets of Western civilization. Stefansson went on to publish a book, *Not by Bread Alone*, in 1946, and reprinted in 1956 as *The Fat of the Land*, which extolled the health virtues of

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<sup>207</sup> This association between the field of epidemiology as a set of scientific methods and frames, on the one hand, and as a traditionally normative practice of community-engagement, on the other, or what Henry Blackburn refers to as, "Epidemiology as a Bridge," is one reason Paul Dudley White faced intense resistance to his proposal to add an "Epidemiology Council" to the American Heart Association in the 1950s. Personal interview with Henry Blackburn, Dec. 16, 2008, Minneapolis, Minnesota. Henry Blackburn, *It Isn't Always Fun, Memoir of a Different Sort of Medical Life*. Vol. II. 1972-2002.

<sup>208</sup> A review article of population studies of fat consumption and incidences of coronary thrombosis published in 1957 concluded that there was not enough evidence for or against the "theory of any single or major dietary cause of coronary thrombosis." John Yudkin, "Diet and coronary thrombosis hypothesis and fact.," *Lancet* 273, no. 6987 (1957): 163.

meat-eating.<sup>209</sup> A more mainstream, conservative position could be found in Irvine H. Page, a physiologist at the Cleveland Clinic, who investigated the pathology of hypertension. Page acknowledged the possible role of diet in shaping the rising rates of heart disease in America, but continued to emphasize the central importance of heredity and the fact that more people were living to ripe old age when succumbing to heart disease was inevitable. Page became the president of the American Heart Association in 1955, and was lead author on the AHA's 1957 report, "Atherosclerosis and the Fat Content of the Diet." There he, Fred Stare and several other leading diet scientists argued that, at best, new data of the kind Keys was furnishing suggested that those patients already prone to coronary heart disease might consider trial low-fat diets, but that the general population need not adjust what it eats.<sup>210</sup> Such scientific uncertainty in the late 1950s, along with immense public interest in the wake of Eisenhower's heart attack, only further encouraged public commentary and speculations over whether heart disease was best characterized as a intractable or irreversible disease of aging or of families and kinship, or a disease of personal responsibility reflecting individual misbehavior or lack of self-restraint.

Keys, however, was already confident that a low-fat diet was an important determinant of heart disease risk, and that his study of diets and coronary heart disease in Europe and the U.S. was furnishing sufficient evidence to warrant a new diet advice for eager readers. The trips to

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<sup>209</sup> Clarence W. Lieb, "The Effects on Human Beings of a Twelve Months' Exclusive Meat Diet: Based On Intensive Clinical And Laboratory Studies on Two Arctic Explorers Living Under Average Conditions in a New York Climate," *J Am Med Assoc.* 1929;93(1): 20-22. The 1956 edition included commentary by Fredrick Stare and Paul D. White. Vilhjalmur Stefansson, *Not by bread alone*, (New York: The Macmillan company, 1946).

While Stefansson's specific biomedical claims about adaptation and the metabolism of meat versus carbohydrates were new, arguments about the virtues of eating meat to stave off the debilitating effects of civilized living were quite old. For a discussion of this, see Ritvo, Harriet: "Mad cow mysteries," *American Scholar* (67:2) Spring 1998, 113-122.

<sup>210</sup> This debate over whether the science on the relationship between diet and heart disease warranted action, and whether the medical intervention should focus on sick individuals, between a patient and his doctor, or targeted more generally to the public, will be picked up in greater depth in Chapter 2. William S. Barton, "Heredity Linked to Heart Disease," *Los Angeles Times* (Jan. 7, 1956): p. A1. Irvine Page, *Hypertension Research: A Memoir : 1920-1960*. (New York: Pergamon, 1988). Page, I H, F J Stare, A C Corcoran, H Pollack, and C F Wilkinson. "Atherosclerosis and the fat content of the diet." *Circulation* 16, no. 2 (August 1957): 163-78.

Europe in the 1950s that gave birth to the Seven Countries Study also inspired Ancel and Margaret Keys's best-selling cookbook, *Eat Well & Stay Well*, published in 1959. Below I will give a more in-depth analysis of the rhetoric which Keys and his wife deployed in their book. Here I only note how the book's success, its wide readership, in part reflected a broad interest in internationalism in the U.S. following the war. As more and more people sought recipes from the Keyeses for the Italian foods that Ancel advocated as good for the heart, the couple observed that there were no English-language cookbooks for Italian food that described the "plain cookery of [Italian] working people," or that could advise Americans on how to find appropriate ingredients in their own supermarkets. Margaret developed recipes, Ancel helped in drafting the diet advice, and they drew upon their now regular trips to Naples for culinary insights and dishes.<sup>211</sup>

The success of the Keyeses' cookbook and their advocacy of so-called Mediterranean diets registered the resurgence of international tourism and the enormous American interest in and taste for European culture at home in the years following the war. In England, Elizabeth David published a cookbook in 1950, titled, *A Book of Mediterranean Food*, which touted the simple pleasures of Italian cuisine, and the ease with which the English could transplant it to their country. In America, Julia Child published her cookbook, *Mastering the Art of French Cooking*, only two years later, also to great success. The direct impact of the war on these introduced culinary traditions is evident from the fact that both David and Child had spent time in continental Europe as part of the war effort, a fact that the books' marketers made much of when selling the books. It is also telling that Keys, in his recollections on writing the book, made note of his exposure at a young age to Italian food growing up in Berkeley. Food historians have written substantially about how Italian food was the first successfully imported "ethnic" food,

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<sup>211</sup> Keys, *Adventures of a Medical Scientist*, pp. 99-100.



despite efforts by urban reformists in the 1920s and 30s to denounce it as nutritionally unsound. Though by the 1950s such Italian immigrant communities would have been fairly well settled in the United States, Italian food would still, for better or for worse, be widely considered an “ethnic” cuisine.<sup>212</sup> Yet even as such it would have been familiar to Americans in large cities, and for many like Keys it might even have had nostalgic value.<sup>213</sup>

This postwar internationalism, one might say globalization, not only shaped the Keys’s gastronomical experiments. It also shaped Keys and his peers’ research experiences abroad. During their trips to Europe, Keys wrote letters which he sent to the editor of the Minnesota medical journal, *The Minnesota Lancet*, for publication. The letters, titled “Notes from a Medical Journey,” were a description of Keys’s thoughts and experiences as he travelled through the various medical centers there. What is striking about these letters is how much at times they resemble a travel log, with detailed attention to cultural and political differences, local environments, and even the local foods that he and his wife were served when socializing with researchers there. In a February 1952 letter written from Naples, Italy, Keys observes how “Naples is a far cry from Minneapolis,” opening with the following picturesque Mediterranean image: “the steep mountains come tumbling down to the sea with the slopes covered either with tightly packed buildings or elaborately terraced to use every foot for cultivation of olives, grapes, lemons and oranges, with vegetables planted between and under the trees.” Keys laments, “I

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<sup>212</sup> On the poor reception of Italian food by nutrition-conscious reformers, see Harvey Levenstein, “The American Response to Italian Food, 1880-1931,” *Food and Foodways* 1 (1985): 1–24. On the status of Italian cuisine as “ethnic” food, even as late as the 1950s, see Diner, Hasia R. *Hungering for America: Italian, Irish, and Jewish foodways in the age of migration*. Harvard University Press, 2001.

<sup>213</sup> On the colonialist attitudes that are imbedded in our contemporary “tastes” for exotic food, see Heldke, Lisa. *Exotic Appetites: Ruminations of a Food Adventurer*. 1st ed. Routledge, 2003. Yet there is an important role that familiarity and nostalgia plays here in how Keys comes to embrace this Mediterranean food. Raymond Williams in critiquing the nostalgia around place describes an “escalator effect,” where each generation views the place of their childhood as “authentic,” even as successive changes to the place render it as having no fixed original form. Raymond Williams, *The country and the city*. Oxford University Press, USA, 1975, p. 10. In similar fashion, one can see similar processes at work in how Keys and his audience understanding of authentic “American” versus “ethnic” cuisine would change for each generation, based on the changes in their childhood culinary environment.

wish we could sit in the sun or go strolling along the water front, but mostly we are hard at work.”<sup>214</sup> This in a medical journal! In another letter dated November 1951 Keys describes how “Spain is a land of great contrasts. Bread and olive oil are still rationed but the meat portion of an upper class meal would feed a British family for a month,” and “The amount of bread ration is inversely proportional to one’s economic status.” In such a setting of striking class (and by extension dietary) difference, reports that coronary disease was problem for the wealthy, not for the poor, were “grist to [his] mill” to study the link between diet and serum cholesterol. The sudden postwar demand for nutrition scientists abroad, their experiences traveling through very different cultures and seeing dramatic differences in diet and affluence, turned the world into a lab.

### **Eat Well and Stay Well: Rhetorics of Authenticity, Restraint, and Common Sense**

Ancel and Margaret Keys’s best-selling book, *Eat Well and Stay Well*, resonated with its readers because it drew upon a widespread interest in tasting other cultures in an affluent postwar America. But the book also succeeded because it identified an emerging and urgent public health concern, gave a coherent narrative to that concern using authoritative but accessible language, and wedded the narrative to simple solutions with which its readers could identify. A close reading of the diet advice and cookbook illustrates the ways that Ancel Keys and his wife utilized rhetorics of authenticity and common sense to deliver a message of scientific discovery in more familiar and compelling terms, and to enroll readers in their appeals for a return to self-restraint in a society of threatening abundance.

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<sup>214</sup> Ancel Keys, “Notes from a medical journey,” *The Journal-Lancet* 80 (April 1952): 205-207. Ancel Keys, “Notes from a medical journey,” *The Journal-Lancet* 80 (January 1952): 205-207. Keys’s letters from Europe would continue to be published well into the 1960s. The journal was local to Minnesota, mostly read by physicians, Keys’s peers, and fellow researchers in the state, and should not be confused with the British medical journal, *The Lancet*.

“Human diets are always compromises between what appeals to our appetites, what foods are available, and what we think we should eat for strength and health.”<sup>215</sup> From this deceptively simple assertion about the competing gustatory motives of taste, environment, and health, the Keyeses seek to identify for the reader how we have come to lose touch with healthy eating and fall prey to an epidemic of obesity and heart disease. Getting to “the heart of the matter,” their initial explanation lays the blame on how civilization, through its unnatural opulence, has led us away from our evolutionary origins:

“During most of human evolution down to recent times only very few people had an opportunity, except on special occasions, to eat too much *and* too richly, so it is natural that we have so little instinct to curb an appetite for luxurious eating. [...] Prosperity has produced a new situation where an almost endless supply of all kinds of foods encourages us to eat more and more of the foods formerly limited by scarcity and expense.”<sup>216</sup>

Here the Keyeses echo an older, recurring concern about “diseases of civilization” and the popular anxieties that civilized humans have “lost touch” with their simpler past selves, or that unchecked opulence threatens not only one’s moral character but also his or her physical constitution. “Sunday dinner,” the Keyeses note, “is no longer special because only then do we have a big piece of meat; [now] we have Sunday every day.”<sup>217</sup>

Yet the authors also reject facile or nostalgic laments about lost natural or “authentic” diets or complaints that the stresses of civilized life are the source of rising heart disease. In part, this reflects Ansel Keys’s professional commitment to elevating the physiology of diet and

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<sup>215</sup> Ansel Keys and Margaret Keys, *Eat Well and Stay Well* (Doubleday and Company, Inc., Garden City, New York, 1959), p. 19.

<sup>216</sup> Ansel Keys and Margaret Keys, *Eat Well and Stay Well*, pp. 14-15.

<sup>217</sup> Ansel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 19. While the Keyeses’ discussion of affluent diets marks a new chapter in the history of social anxieties about feast and famine, such concerns were by no means new. Charles E. Rosenberg, “Pathologies of progress,” *Bulletin of the History of Medicine* 72, no. 4 (1998): 714–30. On debates that run back to the 18th century between those who wonder whether “the World will run out of food” and their “cornucopian” critics, see Belasco, Warren. *Meals to Come: A History of the Future of Food*. 1st ed. University of California Press, 2006.

health to a precision science.<sup>218</sup> But it also reflects the Keyeses' progressive agenda, since they seek to undercut their opponents' rhetorical appeals to our past and natural history as guidance against present change. Thus they dismiss simple evolutionary accounts of how humans ought to or ought not to eat:

“Even if we argue along elementary Darwinian lines, natural selection would not necessarily force man to evolve toward a diet that is best for his later adult health. That man successfully increased his numbers for a thousand generations on a diet containing as much meat as he could get is no proof that he *needs* meat in his diet or that he would not do better by a more scientific choice of the amounts and kinds of foods to eat. Finally, the diet of Americans today is far from the diet of their ancestors, even those of the last century. Our modern diet has not been tested by natural selection operating over a long series of generations.”<sup>219</sup>

In other words, so the Keyeses argue, we have moved well beyond our evolutionary past and find ourselves in a wholly new place, a place where only careful scientific testing can make sense of the dietary problems of an affluent society and serve as a guide to healthier eating.

What surfaces repeatedly in their narrative is a more complicated picture of self-deceit. Though they note that “[t]he appetite is normally a good guide as to how much to eat,” they warn that “it can be deceived by rich foods,” that overabundant fats and calories can be “concealed by skillful cookery,” which only later becomes an apparent problem when the fat appears on one's body.<sup>220</sup> Indeed, more than our non-adaptive bodies or material affluence, the Keyeses suggest that the source of present dietary excess lies in the deception of consumer advertising. This was a period when many were concerned about the way in which commercial interests used mass

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<sup>218</sup> Keys, for example, was particularly dismissive of “tension” explanations, which posited that rising incidences of heart disease might be due to the greater degree of tension people experience in civilized settings and work stress. Keys noted that such arguments were empirically tautological and therefore scientifically suspect. Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, pp. 32-35.

<sup>219</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 134. The use of the term “tested” at the end of this passage resonates with the statement by Paul White above about nature providing epidemiologists with a natural laboratory.

<sup>220</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 14.

media to manipulate consumers. Only two years before the Keyeses' book came out, Vance Packard's *The Hidden Persuaders* gained widespread public attention by chronicling how advertising utilized psychological techniques and motivational research to shape consumers' desires to purchase goods. Keys's concern, common for the period, was with the power of advertising to shape the consumers' tastes, and his and his wife's cookbook can be understood as an effort to counter such manipulations. The Keyeses criticize that "Great skill and effort goes into persuading us that everyday should be made a feast day by buying, and eating, more of this and that food once reserved as a treat for the rich." Moreover, it is only this consumerism (balanced by scientific knowledge) that distinguishes us from the primitive man in how we choose our foods:

Our own opinions about what we should or should not eat have the same basis [as primitive peoples] plus the influence of advertising and an increasing reflection of the reports from modern scientific studies on nutrition. We are bombarded with nutritional propaganda which, whether commercial or truly educational by intent, purports to be "scientific." And it unquestionably influences our choice of what we buy and eat.<sup>221</sup>

Thus it is with cynicism that the authors jest, "The fat of the land (literally) is ours, and if we have any doubt about the nutritional virtue of our diet we "play it safe" by gorging on animal protein and a daily dose of vitamin pills."<sup>222</sup>

In contrast to these marketing excesses and deceptions, the Keyeses deploy a style of modesty, appealing to the reader's "sensibility." Thus they contend, "We do not propose to lead a campaign to persuade everyone to change his diet. [...] If your logic and personal bias and the best advice you can get elsewhere leads you to agree with our conclusions, the next step is

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<sup>221</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 19. Here the Keyeses are also identifying an ambiguous and therefore troubling boundary between scientific "education" and commercial "propaganda."

<sup>222</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 19. This evocative phrase, "the fat of the land," was recurrently used during the period in accounts of Keys's research and findings. It originates from the Bible, *Genesis* 45:17-18 (King James Version).

practical application.”<sup>223</sup> The authors’ hope to persuade the reader through appeals to his or her own rational sense and the familiar golden mean—all things in moderation—as opposed to emphasizing Ancel Keys’s special expertise. In this respect the Keyeses’ book draws upon a self-help trend in diet advice the origins of which several historians have identified with a post-Victorian middle-class search for restraint and self-control in a society of abundance.<sup>224</sup> Faced with what writers today playfully refer to as “the omnivore’s dilemma” or a “dietary cacophony” of food choices, the search for self-restraints and self-discipline, in a society with few to no natural constraints, itself becomes a lifestyle statement and expression of one’s cultural distinction.<sup>225</sup> Keys hopes that the new diet science, rather than advertising, might serve as a guide to his readers in their efforts to forge a new taste for healthy eating.

A tricky issue in *Eat Well and Stay Well* for its authors was thus whether heart disease, obesity, and other such ills of excess, were limited only to the affluent, or whether they were a problem for all members of an affluent society. The important role of class in the emerging

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<sup>223</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 15. Here I will only briefly draw your attention to the “his” in the Keys’ book. The imagined subject of the public health campaign at this time would be a man, not a woman, as Keys believed that it was particularly men who were more likely to suffer a heart attack. On the other hand, we can probably assume the intended lay reader of the cookbook was a woman, as women were widely presumed to be the home cooks, principal shoppers, and therefore the target audience of public education campaigns about food or cookbook literature.

<sup>224</sup> Hillel Schwartz, *Never Satisfied*. Stearns, *Fat History*, p. xii, 54-55, 62-65: “The concern about weight was in this sense a clear cultural construct, prepared by earlier nutritional interests and certainly supported by science, but by no means some inevitable consequence of fashion or even a more sedentary style of life. Its timing and fervor owed much to the need for a target to balance changes in consumerists and sexual standards and a perceived challenge to middle-class work ethic.” While there are undeniable connections between the Keyeses’ style of advice and the broader cultural trends that Stearns explores, I am arguing that Ancel Keys’s diet and health measurement program added a new and distinctive dimension to understandings of dieting and health following World War II.

<sup>225</sup> On the “omnivore’s dilemma” and “dietary cacophony,” see Fischler, *L’omnivore*, 1990. On its more recent usage, see Michael Pollan, *The Omnivore’s Dilemma: A natural history of four meals*. Univ California Press, 2006. This is a critical aspect of Claude Fischler’s original point about the omnivore’s dilemma that is lost in Michael Pollan’s more popular treatment of it. The increasing popularity of self-restraint narratives like Keys’s, in a period when modern conveniences largely remove natural constraints, suggests that such narratives provide a new expressive potential, a kind of cultural capital. Cf. Bourdieu, *Distinction: A social critique of the judgement of taste*, 1984. Whereas for Pollan, the omnivore’s dilemma, in a modern “corn-ucopia” works as a kind of false promise, the illusion of choice. Fischler, from a cultural studies perspective, and Ancel Keys from a public health advocacy perspective, are here more concerned about the cultural consequences of having a diet of abundance, and how we might shape eating habits through a new socialization.

epidemic can be seen in how class shaped Ancel Keys's sampling methods in the Seven Country Study, and in how reports of business executives "dropping like flies" inspired Keys's initial hypotheses. For these reasons, and because the fundamental problem of eating too much seems intuitively to be a problem only for those who can afford to do so, the message that emerges from Keys's public statements about heart disease was that it was a "disease of the affluent." (Indeed, it was regularly labeled as such.) However, Ancel Keys believed that the emerging epidemic of heart disease was only the tip of the iceberg, that executives were the proverbial canary in the coalmine. Thus they argued in *Eat Well and Stay Well* that atherosclerosis is "a great health problem that menaces all Americans, not only the captains and would-be captains of enterprise. [...] In any case nearly all Americans have become prosperous enough today to acquire coronary heart disease."<sup>226</sup> In other words, America has reach a level of affluence that the health consequences of overeating should be a concern for all classes, not reserved for the wealthy. (And, it would follow, *Eat Well and Stay Well*'s message should appeal to all types of readers.)

When wedded to Ancel Keys's scientific credentials and experiences studying heart disease, the Keyeses' "discovery" of the Mediterranean diet made for an attractive new message about what to eat. In the foreword, Paul D. White noted that what was unique about this diet book was its authors' experience and expertise in epidemiology and biochemistry, and that "It is a happy blending of the scientific aspects of nutrition, the hazards of overnutrition, and the pleasures of the table."<sup>227</sup> One ad for the book more dramatically (and more tellingly) promoted it as a "Do-it-yourself" book on how to stay alive."<sup>228</sup> The book also launched Keys and his diet-

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<sup>226</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 33.

<sup>227</sup> Ancel Keys and Margaret Keys, *Eat Well and Stay Well*, p. 7.

<sup>228</sup> Ad in "Eat Well and Stay Well" Scrapbook, "Ancel Keys Scrapbooks, 1946-1955," Ancel B. Keys & LPH papers, Minneapolis, Minnesota.

heart thesis further into the public spotlight. In 1961, *Time Magazine* did a cover story featuring Ancel Keys, colorfully titled, “The Fat of the Land.” Keys’s message to the public: “Eat less fat meat, fewer eggs and dairy products. Spend more time on fish, chicken, [...] Italian food, Chinese food, supplemented by fresh fruits, vegetables and casseroles.” This was years before the counterculture would allegedly revolutionize our diets with its advocacy of ethnic, “non-white” foods.<sup>229</sup> Keys was popularly dubbed “Mr. Cholesterol,” and the first edition of his and his wife’s book sold more than a hundred thousand copies. Indeed, Ancel and Margaret Keys used the royalties from the book to purchase a home outside of Naples, Italy, where they would live half of the year from then on.

## Conclusion

In 1959, the same year that Keys and his wife published their best-selling diet advice book, another unlikely best seller was published that crystallized postwar America’s self-consciousness about its increasing material affluence and the manifold ways such wealth challenged traditional American values. John Kenneth Galbraith’s economic treatise, *The Affluent Society*, argued that many of people’s basic assumptions about society and how to manage the economy rested on our having long existed in a condition of survival. Such ideas, according to Galbraith, were outmoded in an affluent society, where the challenge wasn’t production meeting needs, but rather the proper distribution of goods *throughout* a society.<sup>230</sup> It

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<sup>229</sup> “Medicine: The Fat of the Land,” *Time*, January 13, 1961, <http://www.time.com/time/magazine/article/0,9171,828721,00.html>. Belasco, W. J. *Appetite for Change: How the Counterculture Took on the Food Industry*. Cornell University Press Ithaca (USA), 1993. H. A. Levenstein, *Paradox of Plenty*, 2003.

<sup>230</sup> J. Kenneth Galbraith, *The Affluent Society*. Houghton Mifflin, 1958. Galbraith’s influence on Keys, though likely, is difficult to trace. In a 1979 interview, Keys referred to Galbraith’s 1977 work, *The Age of Uncertainty*, when reminiscing on his own college studies in economics, and on his formative decision to switch from economics to zoology in the 1930s. Given the widespread popularity of *The Affluent Society* upon its publication, and Keys’s



was in this wider cultural context that Keys raised warnings about the role of diet in diseases of the affluent. The problems of wartime scarcity had helped to make the problems of postwar abundance more striking. Affluence had become a new problem for the nutrition profession to attend to, and affluent diets, either over-rich with fat or engineered for health, a new subject for inquiry. Keys was emphatic on this point, that Americans' diet had changed, increasing the incidence of chronic degenerative diseases like heart disease, and that there was a need for experts like him to search for some remedy that would address this new problem.<sup>231</sup> Keys and other diet scientists were staking out a professional claim to solving dietary problems of abundance, not just problems of scarcity.

One of the most enduring contributions of Galbraith's book was its coining of the phrase "conventional wisdom," which he defined as those "paradigms on which a society's perception of reality are based," in which people "invest heavily [...] and so are heavily resistant to changing them."<sup>232</sup> This chapter has described Ancel Keys and others' efforts to rupture the conventional wisdom of the times, that obesity or HD were inherited or an inevitable life event, while also describing the birth moment of the diet-heart thesis, an understanding of the relationship between diet and heart disease that has become the new conventional wisdom. The way the CVD epidemic was discovered would come to help to forge many of the entrenched assumptions about

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background in economics, it is likely that he read it. But here I can only make zeitgeist claims about the cultural preoccupation with America's affluence and Keys and his nutrition peers' research focus on fats and overeating.

A more interesting, though equally remote connection, is Galbraith's personal ties to the nutrition profession. His wife, Catherine "Kitty" Galbraith was the granddaughter of famed nutritionist Wilbur Olin Atwater, inventor of the calorimeter and popularizer of the scientific management of diets through nutritional measurement.

<sup>231</sup> Not all of his peers at that time supported this claim, and indeed, we will see in the next chapter the reaction from other scientists and other public critics to Keys's diet-heart thesis. Even today skeptics like Michael Pollan or Gary Taubes question the foundations of such a turn in dietary advice, something I will discuss in greater depth in the conclusion. M. Pollan, "Unhappy Meals," *New York Times* (2007); Gary Taubes, *Good Calories, Bad Calories: Challenging the Conventional Wisdom on Diet, Weight Control, and Disease*. Knopf, 2007.

<sup>232</sup> John Kenneth Galbraith, *The affluent society*, 1958.

dietary risk that persist up to present: for example, the belief that cardiovascular disease is a disease of affluence (male, upper middle class, white), and therefore a disease of volition.

What helped to make the diet-heart thesis become conventional wisdom was not its mere initial scientific discovery. Indeed, historians have argued convincingly that there was popular and scientific advocacy of dieting to lose fat, and even low-fat diets, which predate WWII.<sup>233</sup> Ancel Keys and his peers' specific contribution to this story was to bring discussions of diets, fatty foods, and heart disease within a "biomedical platform," a mixed program of rigorous instrumental measurement, applied medical modeling, or in short, a scientific system of accounting for the relationship between diet and health.<sup>234</sup> The diet-heart thesis was not simply a cultural expression of perennial societal doubts about the fruits of civilization or affluence. It was also a program for transforming what at one time might have been largely moral debates about excessive consumption of individuals into a sustained scientific research agenda about redefined medical health and bodily needs for populations.<sup>235</sup> And what gave the diet-heart thesis its widespread and sustained influence over the second half of the twentieth century was this organizational labor that went into transforming the thesis into an institutional program of scientific inquiry and public reeducation. By reframing what was once considered to be a natural consequence of aging or of familial constitution as a growing and urgent epidemic, Keys and others prepared the stage for public health reform.

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<sup>233</sup> Stearns, *Fat History*, pp. 38-47. Stearns argues that existing literature on the history of dieting gives two causation for the emergence of fat-consciousness in modern Western cultures: 1) Christian roots in abstinence, and the 2) commercial revolution (p. 51). But Stearns adds that the success of the anti-fat movement was also because it, 1) reflected a "mixed skein" of groups, especially doctors and fashion-setters, who came together in anti-fat campaign, and 2) the growth of more affluent white collar workers, and therefore, growth in incidence of fatness and its ensuing problems.

<sup>234</sup> Cf. P. Keating and A. Cambrosio, *Biomedical platforms*. MIT Press, 2003.

<sup>235</sup> Stearns, *Fat History*, pp. 25-26. Though arguably the medical concern was layered on top of pre-existing anti-fat social prejudice. For a model on the multi-layeredness of scientific fact with existing social interpretation, see Fleck, L. *Genesis and development of a scientific fact*. (T. J Trenn, Transl.). University of Chicago Press, 1981.

Yet differences would emerge among Keys and his peers about how best to govern the diets of an affluent society. Ancel Keys's most prominent exercise in popular diet advice, he and his wife's book, follows a tradition in self-help literature, a form of persuasion rather than paternalistic coercion. However, as a text, it presupposes an audience with sufficient leisure and affluence to choose the foods they eat and to prepare the recipes Keys and his wife suggest. In other words, it supposes a situation of choice, and thereby prescribes personal responsibility. Others, on the other hand, were advocating large-scale public health initiatives similar to fluoridation, or industry innovations such as food additives. However, these raised the prospect, regularly voiced by critics, of bypassing citizens' choices as consumers to determine what is in the food they eat, as these interventions were potentially invisible to the consumer.<sup>236</sup>

Determining which of these modes of governance was the best response to the emerging science of diet and heart disease would become a matter of pressing institutional concern. For following closely on the heels of Keys and others' health proclamations were a whirlwind of new foods and food advertisements. New health claims about foods would divide regulators in the Food and Drug Administration and health organizations like the American Heart Association and American Medical Association over what to do about the emerging mass-marketed health food economy.

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<sup>236</sup> Critics would often referred to fluoridation as unnecessary "mass medication." Christopher Sellers, "The Artificial Nature of Fluoridated Water: Between Nations, Knowledge, and Material Flows," *Osiris*, Vol. 19, *Landscapes of Exposure: Knowledge and Illness in Modern Environments* (2004), p. 196.

## **Chapter 2**

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### **Faux Food Fight: The FDA “Standards of Identity” and the New Diet Foods 1960 – 1968**

*Who shall decide when doctors disagree, And soundest casuists doubt, like you and me?*

— FDA Commissioner Herbert L. Ley, Jr., 1969, quoting Alexander Pope, *Moral Essays*, Epistle III “Of the Uses of Riches,” 1733.<sup>237</sup>

*Styles in medicine change almost as often as women’s clothes. The health panacea of today becomes the deadly nightshade of tomorrow. Most of the coronary experts are now frightening their patients with the terrors of cholesterol. Today’s fat man is torn between gluttony and survival. He is warned that if he does not shed his excess blubber he is halfway to the mortuary.*

*The foods that are recommended today are as palatable as a steady diet of wet blotters. Eggs are poison, and rich people who used to sneer at margarine are now lapping it up as though it were worth eating.*

*Last night, I had a typical cholesterol-free dinner: baked squash, skimmed milk, and gelatin. I’m sure this will not make me live any longer, but I know it’s going to seem longer.*

— from Groucho Marx, *Memoirs of a Mangy Lover*, 1963.<sup>238</sup>

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<sup>237</sup> By “doctors” Pope meant scholars, but Commissioner Ley in his presentation, “The Doctor, the Patient, and the FDA,” to the American College of Legal Medicine, July 13, 1969, was implicating uncertainty among physicians. Speech found in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>238</sup> Marx, Groucho. *Memoirs Of A Mangy Lover*. Da Capo Press, 1997 [Original print 1963], pp. 33-34. Marx goes on to describe an anecdote where a doctor, unable to treat a boy for fallen arches yet “in need of some extra money for another year at medical school,” gives the boy a tonsillectomy.

Buried on page 37 of the Friday, October 21, 1960 edition of the *New York Times* was the following report on new foods consumers could expect to find on the shelves of their local supermarket:

“Two companies have this week ushered into widespread distribution margarines containing, for the first time, corn oil in the liquid state as a major ingredient. The products are an obvious attempt to answer the increasing concern over the relationship between saturated fats and heart disease.”

The article went on to describe how both Corn Products Company, manufacturer for Mazola oil, and Standard Brands, makers of Fleischmann’s corn oil margarine, were positioning the new products for the mass market and denied any insinuations that the special margarines were intended as dietetic products.<sup>239</sup> The news story was hardly front-page, headline material.

Americans were more likely to be concerned about the presidential debate that evening between Vice President Richard M. Nixon and Senator John F. Kennedy, which would be the fourth and final of the historic “Great Debates,” the first presidential debates aired live on television. Yet the article signaled what would be the beginning of a new era in the marketing of foods as health products. The new kind of margarine synthesized two dramatic transformations in America’s food supply following World War II: 1) advances in food processing technologies and food chemistry, allowing for the rapid reformulation of food recipes, and 2) the diversification in marketing to an affluent America with a taste for novelty, including a taste for new wonder diet products.<sup>240</sup> The news story also foreshadowed a dramatic, though largely backstage institutional debate over what ought to be the proper framing of dietary risk and what should be the proper place for “educating” the public about such risks.

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<sup>239</sup> Nan Ickeringill, “Food: New Margarines” *New York Times* (Oct. 21, 1960): p. 37.

<sup>240</sup> On the broader shift to “designed obsolescence” and “market segmentation” following World War II, cf. Cohen, *Consumer’s Republic*, 2003. On the special role of social scientists in this “mobilization of the consumer,” see Miller & Rose, “Mobilizing the consumer,” 1997.

This chapter examines how Ancel Keys's diet-heart thesis and call for diet reform was taken up by health organizations and regulatory institutions and thus reframed as a public policy matter: the regulation and management of risk and its proper communication to the public. The direct agent of institutional change in this story was the flood of new diet foods released onto the market in the 1960s, which exploited the new science of "negative nutrition" and tested the existing regulatory system's handling of the labeling and marketing of foods. This chapter therefore describes these new foods and the way that industry positioned them through advertisements and labeling, as well as industry's direct efforts to appropriate physicians and physician organizations into their campaigns. These new marketing techniques raised questions for medical associations: How best to handle profiteering from new medical knowledge? How to stake a position on the politics of responsibility for disease treatment versus prevention?<sup>241</sup> For the organizations, these questions touched upon professional ethics central to defining medicine's authority as trustworthy, impartial, and warranting deference to its expertise.<sup>242</sup> This chapter focuses on the two key organizations concerned with Keys's diet-heart thesis at this time,

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<sup>241</sup> Both Greene and Brandt have shown how pharmaceutical and tobacco companies during this period were directly shaping the science of risk assessment and epidemiology, on the one hand, and product development on the other. Greene, J. A. *Prescribing by numbers*, 2007. Brandt, *The cigarette century*, 2007. It is important to keep this blending of industry and public health science in mind. For food companies, new scientific understandings offered opportunities in new marketing strategies for product differentiation and niche marketing.

<sup>242</sup> Garrety makes the case that the promotion of the diet-heart thesis and related preventive programs represent an example not only of the profession's specific world view, but also of "medical dominance," where "the activities through which members of the medical world attempt to preserve their world's integrity and legitimacy." In this vein, she argues:

"Members of medical worlds are also constantly engaged in upholding the boundaries which separate legitimate medical knowledge and practice from the activities of so-called 'quacks' or unorthodox health practitioners. This boundary work is carried out through policy statements and articles in the medical and popular press."

Garrety, K. "Social worlds, actor-networks and controversy: The case of cholesterol, dietary fat and heart disease." *Social Studies of Science* 27, no. 5 (1997): 750. By reducing promotions of the diet-heart thesis to a simple story of a professional power grab, medicalizing food, she ignores the institutional motives and concerns of the FDA with regards to health claims on food. As will become clearer in Chapter 4, with the introduction of nutrition labeling, the FDA was as concerned about the manageability and fairness of claims as it was about the validity of the public health policy. In this sense, the quantifiability of Keys and other's claims would become important in the incorporation of the diet-heart thesis into the FDA's focus on standardizing the food market and creating rational classification distinctions.

the American Heart Association (AHA) and the American Medical Association (AMA), and their different positions in these debates.

Once the scientific debates moved from the “marketplace of ideas” out into the actual marketplace, however, the questions of what was a risky food, for whom, and how that risk ought to be labeled landed in the domain of the U.S. Food and Drug Administration (FDA), the chief U.S. food and drug safety regulatory agency. This chapter thus introduces the FDA, provides a background of its institutional framework and the food “standards of identity” regulatory style it used before the 1960s, in order to explain how it reacted to the new diet foods and the role of activist physicians in promoting new diets. The FDA’s authority rests largely on two principles: its mission to “protect the consumer” and its capacity as an “expert institution.” This chapter describes the agency’s difficulty determining the legitimacy of the diet-heart thesis, and in particular, whether to classify it as a message best limited to specialists and special populations, doctors and their patients, or open it up to mass markets and to the American public more generally. While partly an exercise in “double boundary work,”<sup>243</sup> in particular which group, the AHA or the AMA, the FDA should listen to, this chapter shows that the FDA’s decisions were more directly constrained by institutional conventions, such as legislative distinctions between “foods” and “drugs,” and by a learned regulatory pragmatism—both a form of institutional inertia and a kind of agnosticism when faced with scientific dispute and uncertainty—where the FDA (and much of the food industry) errs on the side of maintaining the *status quo*, since that is the system under which its regulators have the greatest familiarity and experience.

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<sup>243</sup> Adjudicating between what (or who) constituted legitimate or established science and what was still uncertain science or worse, “nutrition quackery.” On “boundary work” in science more generally, see Gieryn, T. F. “Boundaries of science.” In *Handbook of science and technology studies*. S. Jasanoff and et. al, 393–443. Thousand Oaks, CA, Sage Publications, 1995. On the kind of double boundary work, or “co-production” between the sciences and law, see Jasanoff, S. *The Fifth Branch*, 1990.



Whereas Ancel Keys and others imagined a new society where all individuals must exercise a measure of preventive care with their diets, because everyone is “at risk,” regulators at the FDA clung to an older notion of the normal and the pathological, seeing their mandate in terms of protecting “ordinary” consumers as opposed to “special” cases such as patients. This chapter thus follows the diet-heart debate as it moved out of scientific circles into the world of economic markets, and examines how the new understanding of food risk (and responsibility) destabilized the FDA’s existing framework for managing the public-private spaces and flows of diet and health information, education, and marketing. What emerged from this clash of the new sciences and old institutional frameworks was the regulation of a new economy where health and risk would become a part of the everyday lexicon of food.<sup>244</sup>

### **The Organizational Synthesis: Should the Diet-Heart Thesis Go Public?**

By the end of the 1950s, Keys and his fellow proponents of the diet-heart thesis had succeeded in drawing public attention to the new science linking growing rates of heart disease to the affluent American diet. As evidenced by publications like Keys’s popular diet advice book, *Eat Well, Stay Well*, they had even begun to popularize the new understanding of dietary

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<sup>244</sup> Here I have characterized the “clash” between the FDA and the new foods and sciences as what is a recurrent dualist conception in legal and business histories: the clash between economic “growth” (of private industries and markets) and social “order” (as set by public, governmental regulations). Keller, M. “Business History and Legal History.” *The Business History Review* 53, no. 3 (1979): 295–303. Below, however, I will argue that this dualism falsely assumes that the two, government and industry, are separate realms. Instead I hope to build on Viator’s model of “contrived competition,” which shows how business and industry are interrelated and embedded institutions, and characterizes regulation as a “market structuring” device: “The regulatory relationship between business and government can best be viewed as indirect, acting most powerfully through markets and politics. In other words, government regulation shapes the structural characteristics of the market in which a firm does business. Such changes, in turn, create vested interests in protecting or changing the regulatory status quo, and these interests organize and compete analogously in the political arena.” Viator, R. *Contrived competition: Regulation and deregulation in America*. Belknap Press, 1994, p. 21. Firms (as do regulators) thus operate in two environments: the market and political arena.

I will show that the market pluralism and growth in diet products in the 1960s was not so much an exogenous threat to the FDA as it was a strategy by industry directly developed within the existing food standards regime. New foods would only generate new value because of the constraints of the FDA’s regime.

risk in order to get Americans to change their eating habits. However, it was at the end of 1960 when the American Heart Association (AHA) released its report, “Dietary Fat and Its Relation to Heart Attacks” that they began to translate these individual efforts into a concerted organizational program. The publication of this report, and its widespread coverage in popular press raised a question that would be heatedly debated over the course of the 1960s among professional organizations, and eventually with regulatory bodies, chief among them the Food and Drug Administration: to whom should the diet-heart thesis message be targeted, narrowly just to patients or broadly to the American public, and, by extension, what are the most appropriate platforms or mediums for that message? On one side of the debate was the AHA, advocating a more progressive approach—to advertise the message directly to the public through mass media—, on the other side were organizations like the American Medical Association (AMA) and the National Academy of Science’s Food and Nutrition Board,<sup>245</sup> who (at least initially) argued that such information was best left between a patient and his doctor.

The American Heart Association was founded in 1924 by six cardiologists seeking to increase the national organization of the field and encourage the sharing of research findings. Among the founding members was Paul White, the cardiologist specialist who had helped Keys in his network building in Europe. In 1948 the Association reorganized, broadening its scope and added a staff with people skilled in business management and communication. In the same year it debuted to the public on a radio show fundraiser contest, thus beginning its subsequent function as a fundraising organization for heart research and CHD-related public health campaigns. Over the course of the 1950s, the AHA began to broaden its focus on preventive

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<sup>245</sup> The FNB being the science advisory bodied that advised the FDA on such matters.

cardiology and the use epidemiological data, in part as an attempt to increase its public visibility through preventive care campaigns.<sup>246</sup>

As early as August 1957 the American Heart Association had published a report in its leading journal, *Circulation*, reviewing the state of knowledge on “Atherosclerosis and the Fat Content of the Diet.” The report was commissioned to address an already significant public demand for preventive diet advice, as well as redress activities that the Association felt threatened its mission to ensure an objective and balanced pursuit of knowledge about the relationship between heart disease and diet: “On the one hand, some scientists have taken uncompromising stands based on evidence that does not stand up under critical examination. On the other, certain industrial groups appear to believe they can suppress the problems by advertising campaigns.” The committee that drafted the report was composed of respected figures in the field — Irvine H. Page, Fredrick Stare, A.C. Corcoran, Herbert Pollack and Charles F. Wilkinson, Jr.— though all generally moderate to conservative in their views of the diet-heart thesis as it was shaping up at the time.<sup>247</sup> Predictably the report struck a note of caution, stating “To date there is no incontrovertible evidence” for a relationship between “the fat content of the average present-day North American or north European diet” and the genesis of atherosclerosis.

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<sup>246</sup> “History of the American Heart Association,” last visited May 7, 2011:

<http://www.americanheart.org/presenter.jhtml?identifier=10860>; Moore, W. W. *Fighting for life: the story of the American Heart Association, 1911-1975*. American Heart Association Dallas, 1983.

<sup>247</sup> Irvine Page, of the Cleveland Clinic, was president of the AHA at this time, and already well known for identifying serotonin and his research on hypertension. Fredrick Stare, whom I discussed in the previous chapter, was active in the nutrition research community, and would become (in)famous for his ties to food industry, in particular the Sugar Industry in the 1960s, and cereal companies in the 1970s. At this time Page was quick skeptical of Keys’s findings and claims, and had even been quoted in a 1957 article as saying that CHD statistics were not convincing because of “poor methods of reporting, understaffed health departments, and dubious autopsy proceedings,” and that there was not enough evidence to warrant “wholesale tinkering with the American diet.” Clark M. “Fats – not proved guilty.” *Newsweek* 20 May 1957; 49: 33-5. Also quoted in, Garrety, “Dietary Policy, Controversy and Proof: Doing Something versus Waiting for the Definitive Evidence,” 2006. Available online at: <http://ro.uow.edu.au/commpapers/452/>, pp. 9-10.

Yet it did advocate that Americans utilize “nutritional common sense” and emphasized the importance of further investigation.

A critical concern of the 1957 Report was differentiating between the message directed to the general, healthy public and those actions that doctors might take with patients they were already treating. The 1957 Report was careful to note that “results of clinical studies on patients and experimental studies on animals are not necessarily applicable to healthy individuals.” Moreover, it raised doubts about one of Ancel Keys’s main arguments for a public health intervention: that the American diet had changed over the course of the last few generations in a manner that would explain changes in incidences of coronary heart disease. The report noted that “the proportion of animal and vegetable fats in the diet has remained relatively constant,” and that studies claiming that the fat content of the American diet had increased were based on U.S. Department of Agriculture “food availability” tables which did not account for actual use of foods and discarded fats (in waste). The report concluded by noting that the current evidence suggested that high fat consumption was a credible factor for coronary heart disease, but not definitive enough to warrant changes in the dietary habits of the general population. In an editorial written to introduce the special issue of *Circulation*, Herbert Pollack concluded: “Altering the dietary habits of a large population group is fraught with a great many dangers. Our knowledge of nutrition is not sufficient at this time to anticipate what ultimate results would happen if the public were encouraged to alter radically their basic dietary patterns.”<sup>248</sup>

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<sup>248</sup> The report did stipulate that “These conclusions obviously apply to the general population, and not to patients or individuals with a strong family history of early deaths from cardiovascular disease, who are being observed with some regularity by their physician. Here, the newer concepts of nutrition readily suggest various type of diet therapy that may prove useful to certain patients.” In fact, it was the challenge of how to get the message out to physicians treating patients, without unduly exciting a healthy public, which concerned many members of the AHA. In March 1959 meeting minutes of the AHA Council of Community Service and Education, for example, Herbert Pollack resisted calls to broaden the recommendations to the general public, but recommended that a special booklet be prepared specifically to advise physicians on implementing low fat dietary regimes. “AHA Nutrition Committee meeting minutes” American Heart Association (AHA), private archives, Dallas, Texas.

The AHA report, “Dietary Fat and Its Relation to Heart Attacks and Strokes,” issued on December 10, 1960 and published in *Circulation* in January of 1961, took a less equivocating tone. It opened with the confident statement that: “Current available knowledge is sufficient to warrant a general statement regarding the relation of diet to the possible prevention of atherosclerosis.” Unlike the 1957 Report, which qualified epidemiological data with clarifications that correlation did not prove causation, and that populations studies did not indicate risk for individuals, the 1960 Report presented cross-population studies as important “clues” to a relationship between diet and atherosclerosis, and then launched directly into consideration of different kinds of diets and their likely effects on the pathology of cardiovascular disease. Perhaps most significant, the 1957 Report consisted of 13 pages of discussion, weighing the facts about fats alongside other culprits (carbohydrates and proteins, genetics), whereas the 1960 statement was a mere two and a half pages in length, focused entirely on the science of fats and cholesterol in diets.<sup>249</sup> The committee membership of the 1960 Report had also changed. Irvine Page and Fredrick Stare remained, but it now included Edgar V. Allen, Francis L. Chamberlain, Ancel Keys, Jeremiah Stamler. Two of the new committee members, Ancel Keys and Jeremy Stamler, were openly and actively committed to the diet-heart thesis, and were likely strong influences on the Report’s more decided tone.<sup>250</sup>

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<sup>249</sup> Page, I. H., E. B. Allen, F. L. Chamberlain, A. Keys, J. Stamler, and F. J. Stare. “Dietary fat and its relation to heart attacks and strokes.” *Circulation* 23 (1961): 133–136.

<sup>250</sup> Science journalist Gary Taubes has recently singled out this 1960 AHA report as the turning point in the history of the diet-heart thesis, the moment when the thesis was elevated from scientific hypothesis to institutional fact and thus conventional wisdom. Taubes, *Good Calories, Bad Calories*, 2007. To make this claim, and to build a conspiratorial narrative which he uses to debunk low-fat diet claims, Taubes overstates the importance of the addition of Keys and Stamler to the 1960 AHA committee and overlooks the many other cardiologists and epidemiologists that were advocating the low-fat diet message. Indeed, in *Fighting for Life: The Story of the American Heart Association*, the AHA’s official history, they cite the 1957 Report as the turning point in the organization’s policies for encouraging low fat diets, not the 1960 Report. Moore, W. W. *Fighting for life: the story of the American Heart Association, 1911-1975*. American Heart Association Dallas, 1983. Moreover, the “Appendix I” of the 1960 Report lists research that supported the new policy conducted by dozens of investigators in the interim years, among them members of the 1957 committee, Stare, Pollack, and Page, refuting Taubes’s implication that

Despite the Report's more aggressive tone and recommendations, and its committee's more activist membership, it did not pretend to represent closure on the subject, emphasizing at times that "there is as yet no final proof that heart attacks or strokes will be prevented by [a reduction in blood cholesterol by dietary means]." Indeed, the conclusion continued to assume that reduction or control of fat consumption would occur under "medical supervision," and a final list of "Who in particular should modify the fat content of his diet" was still limited to three "coronary-prone" groups: people who were overweight, men with strong risk factors for cardiovascular disease (such as a family history of heart disease, elevated blood cholesterol levels or high blood pressure, or who lead "sedentary lives of relentless frustration"), and those who had already had one or more atherosclerotic heart attacks or strokes.<sup>251</sup>

Particularly of note, however, in the 1960 Report was an "Appendix II" discussing in greater depth the "Different Kinds of Fat in the Diet." The appendix mentioned the varying levels of saturated versus poly-unsaturated fats in different kinds of foods, noting that saturated

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Keys and Stamler were somehow acting alone or were a minority at the time (at least within the AHA community), and that it was merely the change in committee composition in 1960 that led to the AHA's change in position.

While Taubes's account of the history of low-fat diet science is clearly slanted, it is interesting for how he depicts a kind of institutional momentum in science and medicine, what he and fellow science skeptic journalist John Tierney call an "informational cascade," where an early institutional or organizational endorsement gradually, through repeated citation, becomes a self-referencing scientific truism. Tierney, John, "Diet and Fat: A Severe Case of Mistaken Consensus," *New York Times* (Oct. 9, 2007), p. F1. I will return to this critique in the conclusion, but mention it here to highlight a difference between narrating the discovery of the diet-heart thesis as an individual act versus its consecration and promulgation through organizational synthesis.

<sup>251</sup> Karin Garrety, in her history of the cholesterol controversy, also makes much of the change in tone from the 1957 to the 1960 AHA Report, foregrounding the peculiar line, "leading sedentary lives of relentless frustration," and like Taubes, highlighting the addition of Keys and Stamler to the committee. However, the Report's direction to people "leading sedentary lives of relentless frustration," which would seem to be broad enough to incorporate a wide swath of Americans, not just the "ill," was very clearly situated within a category of persons who were deemed to be "coronary prone," and not intended for the "ordinary" healthy person. Similarly, Garrety does not explain why it was that Page and Stare, who only a couple of years before disparaged Keys's diet-heart thesis, are now here willing to be co-authors of the 1960 statement cautiously endorsing it. Garrety, "Dietary Policy, Controversy and Proof," 2006.

The mixed message of the 1960 Report illustrates that the debate during this period was not merely one of scientific uncertainty as to the facts of the diet-heart thesis, but was, for the scientists and physicians perhaps more significantly, a debate over the most proper way to translate that knowledge into advice to the American public and professional practice for physicians. As this Chapter chronicles, it was on this latter issue that more physicians diverged, and where specific individuals such as Irvine Page would continue to express doubts, even in the face of compelling scientific certainty, for fear that advocating changes would invite unintended consequences.

fats were atherogenic while poly-unsaturated may be beneficial, and even implying a hierarchy of foods that ranged from good to bad: “Poly-unsaturated fat is highest in the nonhydrogenated liquid vegetable oils; next in the lightly hydrogenated vegetable oils; then in margarines, shortenings, and lard; and is lowest in beef and dairy fat.” In a move that would invite trouble with the FDA, the appendix closed by stating: “It might be well for the manufacturers of fats and oils to indicate for the consumer by label declaration the appropriate fatty acid composition of the final product in terms of the three main types of food fats—saturated, mono-unsaturated and poly-unsaturated.”<sup>252</sup> While these statements were ostensibly directed to patients and at-risk groups, they would fast become the centerpiece of a new wave of marketing promotions geared for mass markets.

The difficulty the AHA faced was that there was the immense public interest, one could even say a public consumption of cutting edge scientific knowledge on how to reduce one’s risk of heart disease since the publicity over Eisenhower’s heart attack in 1955. The AHA had crafted the 1960 Report aware that it would be quickly picked up in the popular press and reported widely, beyond an audience of physicians.<sup>253</sup> Indeed, the popular coverage of the AHA statement would leave lay audiences with the impression that the Report was more definitive in its endorsement of low fat diets, and that, as much as patients, the average reader had an interest in taking note of the news. *Time Magazine*, in article titled, “Fat in the Fire,” noted that it was

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<sup>252</sup> Page, Allen, Chamberlain, Keys, Stamler, & Stare. “Dietary fat and its relation to heart attacks and strokes.” *Circulation*, 133–136. What is interesting about this last sentence is that as late as February 26, 1960 the AHA’s Nutrition Committee had endorsed the FDA’s 1959 Statement, discussed below, restricting the use of “articles offered to the general public for the control or reduction of blood cholesterol levels.” “Minutes of Meeting/ Nutrition Committee/ Council on Community Service and Education of the AHA,” p. 2 (Feb. 26, 1960), AHA Central File.

<sup>253</sup> The release of the 1960 Report directly to the press represented a new strategy of managing the media for the AHA. Previously the AHA published its reports first in peer journals, specifically *JAMA* and *Circulation*, since there it would best reach its presumed audience, physicians and medical researchers. Following the leak of an earlier report, “Cigarette Smoking and Cardiovascular Diseases” (published in 1960), the Association adopted a policy of immediate release of reports to the public. “Minutes of Meeting / Central Committee / February 27, 1961” AHA Central Files, pp. 28-29.

significant that the Association “finally gave its blessing to the anti-cholesterol crusade.”<sup>254</sup> All news accounts made much of the predictably negative reactions of organizations like the National Dairy Council, whose products (whole milk, butter, cream, cheese) stood to lose sales if consumers took note of saturated fats, and of the glowing statements for producers of unsaturated fats, such as vegetable oil companies.<sup>255</sup> Ancel Keys, one of the alleged “crusaders,” and also one of the statement drafters, publicly called the Report a compromise that contained “some undue pussyfooting.”<sup>256</sup>

Other physicians were not so confident, and two other professional organizations, the American Medical Association (AMA) and the National Academy of Sciences Food and Nutrition Board, would endorse much more conservative positions. In 1962 the American Medical Association found itself managing a problem of mixed messaging. In August of 1962, the AMA published a report, “The Regulation of Dietary Fat,” which it had developed in coordination with members of the AHA, and which cautiously endorsed the new research on the diet-heart thesis, but which the AMA carefully prefaced with the caveat: “This report is intended to serve as a guide to assist the physician [...] It is not a recommendation for the general public.”<sup>257</sup> In October, in response to what it saw as a mischaracterization of its August report, having “touched off a new food fad among do-it-yourself Americans,” the Association issued a press release titled, “Latest Food Fad is Wasted Effort.” The language of the statement was strikingly dismissive of any popular adaptation of the diet-heart thesis. The report claimed that

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<sup>254</sup> “Medicine: Fat in the Fire” (1960, December 26). *Time*. Retrieved from <http://www.time.com/time/magazine/article/0,9171,895155,00.html>

<sup>255</sup> Below I will discuss the ways that both groups attempted to capitalize off of or minimize the commercial impact of the report on both new foods and traditional ones.

<sup>256</sup> Keys framed it as an unfortunate case where the AHA was trapped in its duty to duly report the facts in a commercial atmosphere of distortion and financial interest: “The A.H.A. had to get the facts out. A deal like this includes a great deal of commercial pressure. People in the meat, dairy, butter, and oils industries have billions at stake. They’re very unhappy. The vegetable oil people are delighted. We couldn’t care less.”

<sup>257</sup> The AMA Council on Food and Nutrition, “The Regulation of Dietary Fat: A Report of the Council,” *JAMA* Vol. 181, No. 5 (Aug. 4, 1962): 139-157.



“willy-nilly substitution of a few food items without overall control of the diet accomplishes little if anything in reducing cholesterol,” and cautioned, “The American diet did not happen by accident. It resulted from much accumulated research and experience,” and should thus not be tampered with lightly.<sup>258</sup> The AMA was using this appeal to the wisdom of diet tradition and collective experience to caution against any sudden or rash shift in dieting.

In December, William Darby, the Chairman of the AMA Council on Foods and Nutrition, published an editorial in *JAMA* with the intent of clarifying the seemingly conflicting statements. Darby emphasized that the two positions could be readily reconciled. The August report was intended only to advise physicians, whereas the October statement simply reflected the Association’s concern that the earlier report had been inappropriately publicized to the public, encouraging people to change their diets. Darby reiterated the Council’s support for the new diet-heart science, but emphasized that any diet change should be taken only under the supervision of a doctor.<sup>259</sup> In part the AMA’s more conservative approach to the question of how to translate the new knowledge of diets into practice reflected its broader professional constituency. Many of its physicians were not so focused on the emerging heart disease epidemic as on proper infant care or even the prevention of deficiency diseases, and were therefore much more cautious about changing the message on conventionally healthy diet staples like milk. But the AMA also had a specific concern during this period with protecting the authority of the individual physician to exercise discretion in treating patients. As is discussed below, the FDA was at this time negotiating with the AMA over how to redefine prescription drugs and drug labeling without interfering with the association and profession’s carefully guarded role in

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<sup>258</sup> “Latest Food Fad Is Wasted: News release from the American Medical Association,” (Oct. 12, 1962), found in the binder “Polyunsaturates1-1957-1963” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>259</sup> William Darby, “Diet and Coronary Atheroma,” *JAMA* Vol. 128, No. 13 (Dec. 29, 1962): 88-89.

shaping physician training and standards of practice. Harry Marks, for example, describes how the FDA treaded lightly when regulating the warning label of one drug in 1961, Chloramphenicol, noting: “there is a need for the continuing education of the physician ... This, of course, is a responsibility of the leaders of medicine and not of the Food and Drug Administration.”<sup>260</sup> The AMA could thus be seen as sustaining its broader policy of leaving patient dietary concerns off the common product label and left directly to the physician.

The National Academy of Sciences’ Food and Nutrition Board published two “Report[s] on Fat” during this period, one in 1958 and a second in 1962 following the controversy surrounding the AHA and AMA statements. While the Food and Nutrition Board reports would not have nearly the same public visibility or impact on popular opinion as those of AHA and AMA, they are worth mentioning because of the Board’s role at the time as the official science advisory body to the FDA on such matters.<sup>261</sup> The Food and Nutrition Board’s 1958 report illustrates a decidedly more conservative take on the ‘cholesterol controversy’ than those of either the AHA or AMA. The report argued that “it is premature and often presumptuous to implicate fat intake as the sole responsible factor when there are so many other possible unmeasured factors that may have an important influence” and that “the data [on fats causing atherosclerosis] are so incomplete and conflicting that it is impossible to draw conclusions.” Four years later, despite the other two organizations’ new statements and numerous new studies on diet and heart disease in the interim years, the Food and Nutrition Board decided to simply reprint the earlier report, rather than rewrite it. The Board noted that its “committee decided that

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<sup>260</sup> As quoted in, H.M. Marks, “Making Risks Visible: The Science & Politics of Adverse Drug Reactions,” in Jean Paul Gaudillière and Volker Hess (eds.), *Ways of Regulating: Therapeutic Agents between Plants, Shops and Consulting Rooms* (Max-Planck-Institut für Wissenschaftsgeschichte, Preprint 363, Berlin 2009), pp. 115-116.

<sup>261</sup> The Food and Nutrition Board was established in 1940 within the National Academy of Sciences Institute of Medicine to study the “safety and adequacy of the U.S. food supply” and provide “guidance to policy makers and the public about the application of nutrition and food sciences to improve human health.” For more about the organization, see the FNB’s official, last visited on April 18, 2011: <http://www.iom.edu/About-IOM/Leadership-Staff/Boards/Food-and-Nutrition-Board.aspx>.

there was insufficient new information on the subject to justify rewriting.” The 1962 FNB Report on Fat left in the 1958 message that “Direct evidence linking the level of fat in the diet with the level of plasma cholesterol, and this in turn with incidence of atherosclerosis, is presently scanty.”<sup>262</sup>

Unlike the AHA and AMA, the Food and Nutrition Board drafted its report with a very different institutional concern in mind than physicians’ professional practice or how best to convey a public health message. The Food and Nutrition Board saw its audience as government regulators. It is this shift in audience which explains passages in both the 1958 and 1962 Reports which situate the diet-heart thesis within a longer history of diet faddism and nutrition quackery. In its discussion of “Hypotheses on Initiation of Atheroma,” the report warned:

“Any hypothesis centering on an atherogenic toxin in diet as the cause of atherosclerosis must recognize that modern technology is not the culprit. Atherosclerosis is not a disease of modern man, but has been recognized in its present form for several thousand years. Furthermore, it is present in people existing exclusively on natural unprocessed foods.”<sup>263</sup>

Here the board was framing its analysis with an awareness of marketing claims common in the dieting market that many “diseases of civilization” owed to America’s unnatural, processed diet. In the report summation, titled “Whither the American Consumer,” the report reiterated a line that would become the FDA’s formal position on the diet-heart thesis for the decade to come:

“The American diet is believed to be as nearly adequate as any enjoyed by civilized man. [...] There is nothing in the history of nutrition that should persuade man to give up reasonableness and moderation in his choice of foods.”<sup>264</sup>

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<sup>262</sup> National Research Council (US). *The Role of Dietary Fat in Human Health: A Report of the Food and Nutrition Board*. Natl Academy Pr, 1958, p. 20-21.

<sup>263</sup> National Research Council. *The Role of Dietary Fat in Human Health*, 1958, p. 19.

<sup>264</sup> The Food and Nutrition Board’s report did make one specific recommendation for any continued research on the diet-heart thesis, that greater specificity be used in the language: “designation of specific fatty acids must replace the non-definitive use of the terms “animal” or “plant” and “saturated” or “unsaturated” fatty acids.” (p. 25). This statement remained in the 1962 reprint. Many investigators in the diet-heart thesis camp agreed with this need for precision whole-heartedly, and it became an important part of Keys, Stamler, and others’ research agenda from the

The FDA would cite this report, along with the AMA's, to defend its position that a clear scientific consensus on the matter of health claims for foods was lacking.

Despite the Food and Nutrition Board's recalcitrant position, by the mid 1960s the debate among most scientists was less over whether the diet-heart thesis was probable or compelling enough to be considered in the treatment of patients, than over whether there was sufficient grounds for making broad public statements about food and diet which would have dramatic, and potentially unintended market consequences.<sup>265</sup> In June 1964, the American Heart Association took a clear position on this debate, announcing that it now formally recommended the general American public should reduce the amount of fat they eat and undertake "reasonable substitution" of vegetable oils containing polyunsaturated fats for the animal fats currently in the diet. The AHA emphasized in its statement "there [wasn't] proof yet that lowering cholesterol levels by changing the kinds of fats in the diet will lower the risk of heart disease." Instead, the AHA was exercising a "therapeutic calculus" that the risks of not acting in the face of such "a pressing public health problem" were greater than the risks of broadening the health message.<sup>266</sup>

The AHA's move ensured that the question of whether to act dominated the Second National Conference on Cardiovascular Disease. The conference, held November of that year in

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late 1950s up to the mid 1960s. The argument for precision here in the report was probably more addressing loose usage in advertisement than among medical researchers.

<sup>265</sup> A more accurate statement would be that scientists largely agreed on several of the key causal claims of the diet-heart thesis, but some awaited definitive studies that proved modifying diets would reduce incidences of cardiovascular disease. One way to make sense of this dispute is by classifying the kinds of scientific arguments being made about diet, blood serum cholesterol, and incidences of CHD. In her historical analysis of the debate, Garrety nicely parses the diet-heart thesis into a chain of causation with three links: "(1) that higher serum cholesterol levels are associated in some way with an increased risk of CHD, (2) that serum cholesterol levels can be reduced by modifying the fat and cholesterol content of the diet, and (3) that a cholesterol-lowering diet will reduce the risk of developing cardiovascular disease." Garrety, "Dietary Policy, Controversy and proof," 2006, p. 3. It is this third link that scientists had failed to prove by the end of the 1960s, and which continues to be disputed up to present.

<sup>266</sup> "Heart Association Stirs UP a Controversy Urging Public to Alter Intake of Fats," *Wall Street Journal* (June 10, 1964), p. 6. On "therapeutic calculus," see Pernick, M. S. "The calculus of suffering in nineteenth-century surgery." *Hastings Center Report* (1983): 26-36; Pressman, J. D. *Last resort: psychosurgery and the limits of medicine*. Cambridge Univ Pr, 2002.

Washington, DC and attended by over 500 scientists, was intended to reach a consensus on what was now known about cardiovascular disease and to outline future research needs. Consensus was still lacking. Among the participants and panelists, Jeremiah Stamler and Fred Epstein represented the position taken by the AHA. Stamler argued that whether to implement action programs to address possible “risk factors” should be based on a “calculated best judgment,” and Epstein added that “while we don’t know if [action programs] would be helpful, we know they won’t be harmful.” Other participants were more cautious. Edward Ahrens noted that when faced with a tough problem, one is always tempted to do something; however, sometimes it is better to do nothing. Irvine Page, in summarizing the results of the conference discussions, noted the disagreements and cautioned:

There is still a powerful drive to bring the ‘fruits of research’ to the people before the fruit is ripe. Indeed, some of this fruit will taste strangely like an unripe persimmon.

[...] I think Adam had a similar experience when he bit into the proffered apple.

Page instead argued that “The time should be past when we waste precious years in futile clashes of opinion,” and that disagreement should be settled by further research.<sup>267</sup>

In their efforts to develop tools to help standardize best practices in the treatment of heart disease among physicians, the AHA and AMA unwittingly opened up a debate about how far these practices should be carried. For the AHA, the result was to broaden the platform with which it sought to spread the new message of low fat diets; for the AMA, the result was to retrench and attempt to clarify the boundaries between physician care and a layperson’s self-treatment. In part the calculus of whether to act on a public scale, balancing risk versus benefit, was dependent on the emerging picture that the epidemiological science painted as to whether all

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<sup>267</sup> “Informational Memorandum, Subject: Second National Conference on Cardiovascular Diseases, November 22-24,” Hill & Knowlton, Inc. found in the binder “4.Polyunsaturates2-1964” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

or most healthy people are “at-risk,” or only certain “high-risk” groups. Given that terms such as “risk factors” had only entered the professional lexicon in 1961, this kind of risk thinking and population decision-making was still new and for many physicians highly suspicious.<sup>268</sup>

The debate was also an organizational calculus about where to place responsibility, in doctor-managed patient care versus with the informed healthy consumer. Changes in how consumers consumed scientific information, consumers seeking to self-medicate, were already resulting in new organizational practices (e.g. the AHA and AMA public press release), reflecting public health’s education-centered strategy.<sup>269</sup> From the perspective of those advocating the new policy, such as Epstein and Stamler, the potential damage introduced by the health messages was merely economic, while the benefits to those at risk, health and longevity, were enormous. They could afford to dismiss industry concern about the economic consequences. The FDA could not, and the problem of health quackery would come to shape how the agency addressed the debate.

### **The FDA’s “Standards of Identity” System and Campaign Against “Nutrition Quackery”**

<sup>268</sup> Indeed, the AHA’s official history of this period noted, with the intent of highlighting its portentous significance, how a member at the November 1960 Assembly Panel suggested it was more appropriate to use the term “reducing risk” of heart disease, rather than prevention of heart disease. The article classically attributed with coining the phrase “risk factors” is W. B. Kannel et al., “Factors of Risk in the Development of Coronary Heart Disease—Six-Year Follow-Up Experience: The Framingham Study,” *Ann. Intern. Med.*, 1961, 55, 33–50.

<sup>269</sup> Harry Marks downplays the importance of the organizational synthesis in his account of how the diet-heart thesis was incorporated into rational therapeutics. In his words:

“... it comes from my conviction that reformers were influenced less by the writings of public intellectuals or the irresistible forces of bureaucratization and professionalization than by intellectual traditions and circumstances particular to the local world of academic medicine. [...] Perhaps that is why my scientists seem far more hostile to corporate America than prevailing historiography would predict; why their organizations are far less effective and enduring than proponents of the “organizational” synthesis might expect; and why my postwar bureaucratic state is far less heavy-handed (or effective) in furthering the cause of a rational therapeutics than neoliberal critics of the regulatory state might allow.”

Marks, H. M. *The progress of experiment: science and therapeutic reform in the United States, 1900-1990*. Cambridge Univ Pr, 1997. Here I am not arguing that it was out of bureaucratic obligation that the FDA ended up following the AHA or AMA’s reports, but rather out of its concerns with their public authority and how organizational syntheses, more so than individual scientists’ proclamations, carried weight (reputation/power), could be cited (endured), made news (reached broad audiences), changed shopping patterns (affecting markets), all having consequences in mass markets which the FDA had to address.

Alexis de Tocqueville famously claimed that “Scarcely any political question arises in the United States that is not resolved, sooner or later, into a judicial question.” Such was the case for the professional debates over whether the diet-heart thesis, and health claims on foods more generally ought to be broadcasted to the public through public and private mass media. For the Food and Drug Administration, the debate was not limited to questions about the accuracy or efficacy of the health messages alone, but had to be balanced against the probability of market distortions of any given health message. To understand the FDA’s early response to debates over the diet-heart thesis, it is necessary to situate the “cholesterol controversy” in a much longer history of diet fads. From the FDA’s perspective, it was difficult to differentiate the low-fat message of the diet-heart thesis from other popular health messages from a long line of nutrition quackery and diet sensationalism. Moreover, the question of whether to broaden the health messages about ordinary foods also touched upon the agency’s classificatory system for regulating foods versus drugs. In the course of addressing this new diet controversy, the FDA struggled with how best to translate the new diet claims into terms which best matched its existing institutional practices.

The Food and Drug Administration had been regulating food labeling concerns since at least the 1906, when the Pure Food and Drug Act gave the Bureau of Chemistry of the USDA, the FDA’s predecessor, the authority to seize or take action against any interstate commerce in misbranded and adulterated foods, drinks, and drugs. These powers were greatly expanded and further formalized with the passage of the 1938 Food, Drug, and Cosmetic Act (commonly abbreviated FDCA), which established “standards of identity” for all mass produced foods, and created classificatory distinctions between foods, drugs, and cosmetics with the understanding that each product category might warrant a different standard of administrative scrutiny. Several

key enforcement styles emerged from this post-depression era system. First, the emergence of “preventive enforcement,” or the shift away from waiting for food hazards to appear and then litigate, towards establishing guidelines for what the FDA considered to be good industry practices thereby avoiding food scandals.<sup>270</sup> Second, the 1938 Act emphasized “labeling” as the site at which compliance or abuse would be policed. As mentioned in the introduction, much of the FDA’s authority to police the market centered on what actors in that market said, what the food or drug products “purport to be,” rather than on what actual impact the products had.<sup>271</sup> Products which falsely represented themselves, even if they were innocuous, could be removed from the market as “misbranded.” Over the course of the 1940s and 1950s, courts were generally very deferential to the FDA’s interpretation of what constituted false representation on labels, and much of this activity centered around whether the agency believed a product to be a food, a drug, or a cosmetic by virtue of how it was marketed and to whom it was sold.

Courts also gave the FDA wide latitude in determining what it believed to be “labeling.” In 1948, the Supreme Court heard a case determining whether articles in circulation with food or drug products, not just the packaging but also informational pamphlets, could be considered “labeling.” In *Kordel v. United States*, the Court considered the plaintiff, Lelord Kordel’s argument that the FDA could not reclassify products because of promotional materials provided with them, but ought to be restricted to just what was stated on the package. Kordel was a Polish American nutritionist who had several books and gave popular lecture tours on the value of various vitamins, minerals, and herbs, and, since 1941, began marketing a variety of health products. The agency seized Kordel’s products alleging that they were misbranded because circulars and pamphlets distributed to consumers by vendors or displayed in stores carried

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<sup>270</sup> John P. Swann, “A Perspective on FDA Oral Histories,” on FDA website, last visited August 4, 2010: <http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/PerspectiveonFDAOralHistories/default.htm>.

<sup>271</sup> This language of “purported to be” coming from the section 403(g) of the Food, Drug, and Cosmetic Act.



statements which misled consumers and had not been approved by the FDA. The Court ruled in favor of the FDA arguing that the statutory phrase, “accompanying such article” did not restrict the agency to items physically attached: “No physical attachment one to the other is necessary. It is the textual relationship that is significant.” The distinction between “labels” and “labeling” in the *Kordel* case broadened the platform of “labeling” to any source of information (e.g. accompanying pamphlet, book, or shelf label or poster) that changes how a consumer might interpret a product label. It recognized the intertextual nature of modern advertisement campaigns. The case also clarified that, “Every labeling is in a sense an advertisement,” and that not only the Federal Trade Commission (FTC), but also the FDA had jurisdiction over advertisements which shaped a product’s branding.<sup>272</sup>

The Food and Drug Administration’s approach to policing the quality of food through labels rested upon a system of establishing “standards of identity.” These took the form of “time honored recipe standards” with fixed common names (such as “peanut butter” or “tomato soup”), and were to be promulgated for all mass-produced foods. As one later critic of the system noted, “Legislators explicitly analogized processed foods purchased in the market to their home-made counterparts.”<sup>273</sup> This system was intended to prevent fraud—cheap imitation or “knock-off” products—by bringing order to the food supply, rationalizing product lines for easier

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<sup>272</sup> *Kordel v. United States*. 335 U.S. 345 (1948). Difficulties determining what could be “labeling” reflected the problem of regulating materials which sat at the intersection between advertisement and marketing and education and knowledge. In 1951, a district court declined to hold that a book constituted labeling even though it was circulated with certain food products and made claims about them that could potentially bear on how the consumer understood the products. *United States v. 8 Cartons, more or Less, Molasses*, 97 F. Supp. 313 (W.D.N.Y. 1951). Yet, in 1965 a circuit court held a booklet was labeling because the vendor showed it to an undercover FDA inspector when trying to sell honey. *United States v. 250 Jars ... “Cal’s Tupelo Blossom U.S. Fancy Pure Honey,”* 344 F.2d 288 (6th Cir. 1965). As discussed in Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 99-102.

<sup>273</sup> The notion to use common recipes was set during the Congressional discussion of the 1938 FDCA, where one member noted: “The government has had difficulty in holding such articles as commercial jams and preserves and many other foods to the time honored standards employed by housewives and reputable manufacturers.” H.R. Rep No. 2139, 75th Congress, 3rd Session (1938). See also, Merrill, R. A., and E. M Collier Jr. “Like Mother Used to Make: An Analysis of FDA Food Standards of Identity.” *Columbia Law Review*, 74 (1974): 561.

surveillance. In some sense, what standards of identity sought to establish was a rational, simple market where all that an ordinary consumer needed from food labeling, to know what she was buying, was the name of the product. It reflected a 1930s New Deal era strategy of providing consumers a “fair deal” by introducing scientific management into the administrative regulation of the marketplace,<sup>274</sup> and it could accurately be characterized as an attempt to “govern life by standards.”<sup>275</sup>

To implement these standards the FDA sought to determine what would be a common understanding for each food product and then encode that into published agency standards that industry would have to follow. Starting in 1940, but then picking up again after the end of World War II, the FDA held public hearings for classes of food standards, where companies could present their comments on proposed standard recipes, seeking permission for variations in the quantities of ingredients, while also advocating or attacking the allowance of new synthetic additives. Much of this testimony rested upon establishing what it was that consumers believed to be a customary recipe for a given food. For example, a central debate for the hearings on peanut butter was over the minimum percent peanut content, and whether the standard should include glycerin, commonly used to make peanut butter more spreadable; while for ice-cream

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<sup>274</sup> Wang, 2005. The FDA’s mandate for setting food “standards of identity” was officially established by the 1938 Food, Drug, and Cosmetic Act, the statute that continues today to be the foundation of legislative authority for the FDA.

<sup>275</sup> Thevenot, L. “Postscript to the Special Issue: Governing Life by Standards: A View from Engagements.” *Social Studies of Science* 39, no. 5 (2009): 793. While the intent was in part to make FDA standards a passage point for manufacturers, a point of control where the FDA could enforce quality, the introduction and use of standard recipes also reflected regulators’ sincere belief that the average American’s food market at the time was fairly uniform and thus amenable to this kind of orderly classification. Goodrich, who was FDA Chief Counsel during this period, would later say of the food standard hearings: “Remember, they were products of the Depression, and were products of economics in keeping up the food supply. Today, the interest is in all these new products with new names, but that was one of the things that the standards were supposed to get away from. [...] And maybe today the economics are not what they were then, and the standards were too stringent. But I don’t go along with this business that it’s an appropriate idea to put a whole bunch of stuff on the label and think people can make a judgment on that product from those label statements.” “Transcripts: William W. Goodrich, Office of General Counsel, 1939-1971,” on the FDA Oral History website, last visited on May 8, 2011: <http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm#Food%20Standards%20--%20William%20Campbell>

standards there were extended discussions about what minimum percent milk-fat should be required.<sup>276</sup>

The hearings were highly polemical and, for certain products, establishing standards that industry and consumer interest groups could agree upon could drag on for years. The hearings from 1940 to 1941 on canned fruit, for example, became contentious over the issue of whether the standard would include not only sugar cane (sucrose) but also corn sugar (fructose) as the sweetening agent. Secretary of Agriculture and then Vice President Henry A. Wallace, who was from Iowa, was a staunch supporter of corn sugar, whereas the sugar cane industry argued that use of corn sugar would constitute a deception on their customers.<sup>277</sup> The hearings also became a space where certain citizen's interest groups could rally public opinion. Ruth Desmond, a housewife and "concerned citizen," sat through ten years of standards hearings regularly voicing her opinions about FDA rules and whether they reflected the common consumer's interests. She formed the Federation of Homemakers in 1959, and published a quarterly newsletter that was sent to the federation's members. During the peanut-butter hearings she captured headlines for her snappy critiques of company attorneys, arguing peanut butter with less than 95% peanuts should best be called "cold cream." For this she was later dubbed the "peanut butter grandmother."<sup>278</sup> Indeed, following the debacle of the bread standards hearings, which ran from 1941-1943 and 1948-1950, and hinged on the issue of how to establish vitamin enrichment standards for flour, the FDA created a Public Affairs Specialists office, whose mission was both

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<sup>276</sup> Junod, S. W. "Food standards in the United States: the case of the peanut butter and jelly sandwich." In David F. Smith, Jim Phillips. *Food, science, policy and regulation in the twentieth century: international and comparative perspectives*. Routledge, 2000, pp. 167-188. Keep in mind that up until World War II, milk-fat was a positive, desirable attribute of dairy products.

<sup>277</sup> "William W. Goodrich, office of General Counsel, 1939-1971" as found on the FDA website, last accessed August 4, 2010:

<http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm>.

<sup>278</sup> Carole Sugarman, "Peanut Butter Grandmother; Remembering Consumer Activist Ruth Desmond," *Washington Post* (Oct. 5, 1988), p. E3. See also, Merrill & Collier. "Like Mother Used to Make" *Columbia Law Review*, p. 561.

public outreach and to assess consumers' evolving understandings of standard foods and incorporate them into the agency's policies.<sup>279</sup>

This system of labeling imposed a severe moral order on the American food supply. If food standards represented the norm, deviations from them could bring stiff penalties in the form of undesirable labels. Any foods that contained what the FDA determined to be substitute ingredients—for example, so-called “filled milk,” which is milk with vegetable fats substituted for the dairy fat, or low-fat substitutes, such as artificial dairy-creamers—would be labeled ‘imitation,’ implying they were inferior to the “authentic” standard product. Furthermore, nonstandard ‘imitation’ products also had to carry an ingredient label, while standard foods did not. The ‘imitation’ label was intended to address what regulators called, “economic adulteration.” This was when producers substituted a cheaper, often synthetic ingredient in place of the natural “normal” one. The concern was not food poisoning, but rather that the introduction of these similar, yet cheaper quality products would trick consumers into mispending their money, and by extension cheapen the quality of their food supply. The concern with economic adulteration was a platform with which officials policed the line between the natural and artificial, and authenticity and novelty.

Federal courts showed the FDA an enormous amount of deference at this time in how it chose to interpret consumer confusion. In 1943, the Supreme Court ruled in what is known as the Quaker Farina case that, should manufacturers experiment with the “selection of the various nutritive elements and combinations of elements on the basis of economic and merchandising considerations,” it would likely lead to an increase in the diversity of vitamin enriched foods. The concern in the case was whether the FDA had the power to restrict vitamin enrichment

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<sup>279</sup> Linda Bren, “Public Affairs Specialists on the FDA's Front Line,” *FDA Consumer* (Nov./Dec. 2002), pp. 31-35.

levels to those it stated in established food standards, or whether companies like Quaker Oats could independently vary the enrichment levels based on whether they saw a market for that. The Court ruled that “Such [market-driven] diversity would tend to confuse and mislead consumers as to the relative value of the need for the several nutritional elements” thereby “imped[ing] rather than promot[ing] honesty and fair dealing in the interest of consumers.” In other words, according to the court, “diversity” in the marketplace could itself be taken as a source of confusion which the FDA was entitled to remedy.<sup>280</sup> In the words of one FDA regulator at the time, “The new standards thus brought order out of chaos and insured that those cereal foods when sold as ‘enriched’ would be better designed to meet consumer expectations of benefit.”<sup>281</sup>

Part of the concern was that consumers “read between the lines,” often overinterpreting what was stated on the labels or what was *not* on the labels, and were thus susceptible to implied health claims and other deceptive marketing techniques. The Supreme Court therefore noted that the purpose of identity standards “was not confined to a requirement of truthful and informative labeling” but was to “reflect a recognition by Congress of the inability of consumers in some cases to determine, solely on the basis of informative labeling, the relative merits of a variety of products superficially resembling each other.” It was for this reason that the FDA could declare any or all products not meeting its standards to be “imitations,” even enriched foods which producers might argue were “better” than the standard. Yet critics complained that this wide judicial berth blurred the line between the FDA’s clear mandate under the 1938 legislation to “protect” consumers from false claims, and what they saw as the FDA’s current practices which

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<sup>280</sup> *Federal Security Administration v. Quaker Oats Company*, 318 U.S. 218 (1943).

<sup>281</sup> C.W. Crawford, “Ten Years of Food Standardization,” paper to be delivered at the spring meeting of the Food Industries Advisory Committee of the Nutrition Foundation, Hershey, PA on May 19, 1948, found in Food and Drug Administration (FDA), Records of. Record Group 88. General Subject Item 1A. Food Tech, Food Standards, Nutrition Labeling, 1924-78.

bordered on educating consumers as to what the agency believed was a healthy and sound diet.<sup>282</sup>

This boundary between consumer protection and consumer education, and the question of whether it was the place of government, food manufacturers or third-party health profession organizations to police it, would prove to be a tricky one for the FDA, particularly as food marketing increasingly incorporated a style of “educating” consumers about cutting edge scientific research and public health campaigns.

Debates over the enrichment of foods in the 1940s, and the “low fat” or “low cal” foods of the 1950s and 1960s, touched upon another classification challenge for the FDA, one which further underscores its division between ‘the normal’ and ‘the pathological’. One of the growing food markets were “special dietary” foods, foods that a sick person was prescribed by her doctor to help her recover from an illness. These “special dietary” foods fell into a borderline category under U.S. food law. They were not intended to act upon the body, nor “cure” a patient, in the sense that a drug would, but doctors might utilize them for their special nutritional or health properties. This class of foods included products for diabetics, such as artificially sweetened diet-foods, and specially engineered low-calorie foods for obese patients. These foods ran afoul of the FDA’s rigid policy against the use of explicit or even implied health claims on food labels. For this reason, “special dietary foods” were given a distinct standard, and required to carry an information panel describing the nutritional properties (generally the quantity of vitamins). This panel was for patients and doctors, not intended for a lay audience.

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<sup>282</sup> Fredus N. Peters, “Industrial and Legal Viewpoints: Are Standards of Identity Assets or Liabilities in the Food Industry,” *Food Technology*, pp. 583-590. One senior food engineer at Quaker Oats complained: “Nowhere in the Hearings [for the 1938 FDCA] does it appear that the Congress considered the public’s need for education relative to dietary requirements as constituting a basis for the promotion of honesty and fair dealing. The promotion of health and the promotion of honesty and fair dealing may have some relationship, yet it is clear they are not the same thing” (p. 587). In some sense this observation reveals the extent to which the economic and social contexts for dieting had dramatically changed since the 1938 FDCA had passed.

The FDA's distinction between standard foods and special dietary foods helped preserve the agency's fundamental division between "food" and "drug," the two having a very different burden of proof for establishing safety and efficacy.<sup>283</sup> One particularly controversial example was the classification of vitamin supplements as foods for special dietary purpose instead of as drugs. The FDA staff reasoned this classification would result in more ingredient disclosure (listing all ingredients, not just active ones).<sup>284</sup> However, the classification would have important consequences for who could sell them, grocers, pharmacists, or physicians.<sup>285</sup> While the stakes were huge for determining product markets and marketplaces, the FDA's rationale was that some consumers needed more protection than others. In 1930, FDA Commissioner Dunbar, addressing an audience of canners and wholesale grocers, warned, "The magic words 'health giving' are today the most overworked and loosely applied in the advertising lexicon. [...] Do you want the consuming public to get the idea that they should turn to this particular delicacy only when in unsound physical condition? Don't you want your product to appeal to the well rather than to the invalid class?"<sup>286</sup> This presaged a distinction that was at the core of the FDA's policies regarding controls on health foods: distinguishing between the normal and the pathological consumer.

The food-drug divide sat at the center of the FDA's longstanding concern with nutrition quackery, selling ordinary products as if they had magical health properties.<sup>287</sup> In part, it reflected a bureaucratic preoccupation with what should be the proper scope of "tinkering" with

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<sup>283</sup> Termini, R. B. "Product Classification Under the Federal Food Drug and Cosmetic Act: When a Food Becomes a Drug." *J. Pharmacy & L.* 2 (1993): 1.

<sup>284</sup> "William W. Goodrich, office of General Counsel, 1939-1971" as found on the FDA website, last accessed August 4, 2010: <http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm>

<sup>285</sup> I describe the history of this debate further below.

<sup>286</sup> As quoted in Young, J. H. "Historical aspects of food cultism and nutrition quackery." In *Food Cultism and Nutrition Quackery*. Uppsala, Sweden, Almqvist and Wiksells, 1970, p. 18.

<sup>287</sup> Young, *American health quackery: collected essays*. Princeton University Press; Hutt, P. B, and P. B. II Hutt. "History of Government Regulation of Adulteration and Misbranding of Food, A." *Food Drug Cosm. LJ* 39 (1984): 2.

America's food supply. When vitamin enrichment technologies began to appear in the 1930s, the FDA as well as professional medical organizations like the AMA treated such enrichment with skepticism – whole foods and a balanced diet were adequate tools for delivering nutrition. Over the course of the 1930s, public health successes like Joseph Goldberger's campaign against pellagra through the use of a brewer's yeast (later discovered to supply B vitamin niacin) and private successes like the use of iodized salt for preventing goiter helped to generate widespread interest in the potential for such large-scale programs using nutrients as cures. The government's shift in policy during WWII, when President Franklin D. Roosevelt implemented a rule that the military would buy enriched bread products in order to redress the scandal of poorly nourished army recruits, led both the AMA and FDA to acknowledge some potential in the public health interest in enriching basic staples.<sup>288</sup> The FDA developed the policy that fortifying foods with vitamins was acceptable under two distinct contexts: the restoration of vitamins to foods where processing may have removed them, and limited enrichment of certain staple foods with vitamins deemed to serve a public good, such as vitamin B and D.<sup>289</sup>

Despite this concession to certain forms of enrichment, the FDA actively sought to constrain vitamin enrichment for fear that its use in the marketplace might lead to a “horse race” towards higher and higher levels. Beginning in the late 1950s the FDA started a campaign against “health quackery” with the intent of curtailing any industry or patent medicine efforts to promote excessive vitamin dosing. In 1961, the AMA and FDA held a “Joint National Congress on Medical Quackery” to draw attention to the problem of pseudoscientific medical products.<sup>290</sup>

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<sup>288</sup> Pat Swan, “Goldberger's War: The Life and Work of a Public Health Crusader (review),” *Bulletin of the History of Medicine* 79, no. 1 (2005): 146.

<sup>289</sup> Controls on vitamin labeling were still quite strict, limiting statements about enrichment to the standard product's name (“enriched flour”) and prohibiting additional nutrient declarations or health claims.

<sup>290</sup> Down the street from the Second National Congress on Medical Quackery, the National Health Federation sponsored a “Congress on Health Monopoly.” There, a former FTC Commissioner stated: “Freedom of Choice is the



Moreover, FDA Commissioner George P. Larrick, the commissioner from 1954 to 1962, and Kenneth L. Milstead, Deputy Director of the FDA's Bureau of Enforcement, gave a series of public speeches on the subject of medical quackery, including nutrition quackery over the course of the first half of the decade. A central platform of the campaign was that by and large the public didn't need to worry about the nutritiousness of America's food supply. As Commissioner George Larrick put it in a 1961 "Report on Quackery":

"Especially significant in my opinion is the success we have had in sustaining misbranding charges against the nutritional "big lie" - - that the American food supply is impoverished and nutritionally deficient."<sup>291</sup>

This "big lie" was most likely what the Food and Nutrition Board had in mind in its 1958 report on diet and heart disease when it defended America's abundant food economy. The agency also adopted a policy, what became known as the "jelly bean rule," of not allowing enrichment on foods it deemed to be candy or snack food and of little other nutritious value.<sup>292</sup>

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American heritage. Personally, if I like to take two yeast tablets I want no damned bureaucrat breathing his fluoridated breath down my neck." As quoted in Young, *Medical Messiahs*, p. 431.

Fluoridation was at this time the most commonly invoked example by critics of a government imposed public health initiative. Critics often referred to it as unnecessary "mass medication." Christopher Sellers, "The Artificial Nature of Fluoridated Water: Between Nations, Knowledge, and Material Flows," *Osiris*, Vol. 19, *Landscapes of Exposure: Knowledge and Illness in Modern Environments* (2004), p. 196. Such was the widespread awareness of the debates over fluoridation that the 1964 film *Dr. Strangelove* parodied the popular concern. The crazed General Jack D. Ripper identified fluoridation as a "Commie conspiracy," where, since 1946, "A foreign substance is introduced into our precious bodily fluids without the knowledge of the individual. Certainly without any choice."

<sup>291</sup> George P. Larrick, "Report on Quackery from the FDA," delivered to the AMA/FDA National Congress on Medical Quackery October 6, 1961, p. 6, as found in "FDA Speeches" in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. Young, J. H. *American health quackery*, pp. 97.

<sup>292</sup> The rule would invite complaints from producers who felt that FDA staff used it arbitrarily to enforce their own standards of what was "good" or "bad" to eat. In *United States v. 119 Cases ... "New Dextra Brand Fortified Cane Sugar*, a district court noted that "the real basis of the Government's objection to the sale of fortified sugar is the notion that sugar is not a preferable vehicle for distributing vitamins and minerals." The court ruled against the FDA arguing the FDCA "did not vest in [the FDA] the power to determine what foods should be included in the American diet; this is the function of the marketplace." 231 F. Supp. 551 (S.D. Fla. 1963), as quoted in Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 233. In 1966, American Bottlers of Carbonated Beverages protested standards which excluded enrichment on soft drinks, but allowed it for fruit drinks, including some citrus drink products containing less than 10% fruit juice. See "Lack of Fortification Provision for Soft Drinks hit by ABCD" *Food Chemical News* (August 29, 1966), p. 6, as found in the binder "SpecialDietaryFoods\_1\_66-7\_66" in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

Many experts saw nutrition quackery as a problem unique to affluence, and a problem of choice. Suggesting that prosperity and faddism went hand in hand, in a 1961 interview AMA's Dr. Philip White said:

“People are able and willing to seek the easy way out. Today they have the money and leisure time to indulge themselves, and they have been conditioned by the dramatic progress of medicine in the past few decades to believe that almost any pill, capsule or tonic is a miracle drug. People are disease conscious, and their fears about disease set them up for exploitation by the pseudo-scientific huckster.”<sup>293</sup>

Some argued that such tonics and diet fads were a kind of “insurance” which wealthier consumers had a right to engage in. But for the medical profession such alternative medical therapeutics threatened to water down professional standards which the AMA had only just begun to consolidate. In his history of “Health Quackery” in 20th-century America, *The Medical Messiahs*, FDA Historian James Young described the AMA’s “continuous, relentless, excoriating critiques” against America’s long string of quack medical products as one of professional medicine’s defining concerns. The AMA had gained some degree of professional autonomy and self-regulation by forging a relationship with the FDA in policing the marketing of sham self-help treatments.<sup>294</sup>

So recurrent were certain forms of nutrition quackery, that by the early 1960s FDA regulators had taken to promulgating a list of four common nutrition “myths” in wide circulation. First, that all diseases were due to improper diet. This myth was evidence of the dramatic and visible public health successes of the previous two decades. In some sense vitamin-deficiency had emerged alongside the germ theory as a popular, culturally accessible explanation for illness. Second, the theory that “soil depletion,” the sapping of American soil of its chemical richness or

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<sup>293</sup> “The Fat of the Land,” *Time*, January 13, 1961, <http://www.time.com/time/magazine/article/0,9171,828721,00.html>.

<sup>294</sup> Young, J. H. *The medical messiahs*, 1967.

the use of chemical fertilizers by industrial farming, was resulting in less nutritious foods. Third, that modern food was overprocessed, stripping foods of their nutritional value. Here the FDA walked a fine line, allowing industry to use nutrition fortification for restoration but publicly denouncing quacks who generalized this principle to include all processed foods. The fourth myth was the popular distortion of the comparatively new scientific idea of “subclinical deficiencies,” nutrition deficiencies at such levels low levels as to cause mild, possibly chronic health problems without becoming a full, clinical illness. Quacks would sell products which they claimed alleviated vague feelings, such as chronic tiredness, that were caused by a diet insufficiency.<sup>295</sup>

FDA regulators publicly characterized the battle against quackery as one of applying modern standards of efficacy to nutritional claims, trusting experts to sort good medical science from bad medical quackery. Thus Kenneth Milstead argued, “The importance of education in dealing with quackery can be no more appropriately stated than was stated over three centuries ago by Spinoza when he said:

“He who would distinguish the true from the false,  
must have an adequate idea of what is true and false.

[...] While the public is being furnished with a vast amount of educational information on health subjects, it is not equipped to determine what is true and what is false.”<sup>296</sup> But the FDA faced its own difficulties determining this line, as could be seen in the case of the debates between the AHA, AMA, and Food and Nutrition Board over the “cholesterol controversy.” Under such

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<sup>295</sup> Apple, *Vitamina*, p. 128. Milstead, “The Food and Drug Administration’s Program Against Quackery,” p. 5. The concept of “subclinical deficiencies” is in many respects like the concept of risk factors discussed in Chapter 1. “Subclinical deficiencies” raise the prospect of invisible illnesses, the diagnosis of which called for expert training and authority.

<sup>296</sup> K.L. Milstead, “The Food and Drug Administration’s Program Against Quackery,” delivered to the Yonkers Academy of Medicine, Yonkers, NY (May 16, 1962), p.12, as found in the “FDA Speeches” Files in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

circumstances of scientific uncertainty, it relied on institutional mechanisms for certifying who were credible authorities, and exercised administrative discretion to shape a conservative or progressive policy.<sup>297</sup> In this case, the conservative option was to restrict diet and health claims to products targeting patients, special dietary foods, and leave it to the doctor's discretion to determine whether an individual's risk warranted a change in diet.

The campaign against nutrition quackery was also wrapped up in problems of how to establish modern procedural standards for regulatory science. For the FDA and AMA, the cholesterol controversy was a sideline concern to a much larger problem at the time: how to improve standards and controls on medical practice with the use of potent drugs that could carry dangerous side effects for some consumers. In 1962, the FDA and AMA were renegotiating the rules on regulatory oversight of prescription drugs as a consequence of the Kefauver Harris Drug Amendments, which required the FDA to determine whether drugs were effective, not just safe.<sup>298</sup> The Amendments were passed in the wake of the thalidomide scandal. Since the 1950s, physicians had used a new sedative thalidomide in the treatment of pregnant women to combat morning sickness. In 1961, reports of birth defects in babies whose mothers had been prescribed the sedative led to a ban on the drug's use and investigations into its safety.<sup>299</sup> The scandal not only drew Congressional attention to how the FDA regulated pharmaceuticals and drug approval, but also drew attention to the variability of drug prescription practices among physicians and whether there should be direct oversight of physicians' use of prescription drugs.

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<sup>297</sup> In other words, the FDA played an important institutional role in the medical profession's "boundary work." Gieryn, "Boundaries of science." 1995. Jasanoff, *The Fifth Branch*.

<sup>298</sup> For a history before the 1962 Act of the FDA's use of new drug applications (NDAs) as a leverage point (along with its powers to interpret misbranding) in controlling safety and efficacy concerns in the pharmaceutical industry, see Carpenter, *Reputation and Power*, pp. 165-171.

<sup>299</sup> More than 10,000 babies were born with serious defects worldwide as a result of exposure to thalidomide. For the FDA, the thalidomide scandal was a partial success story. Medical officer Frances Kelsey had resisted industry pressure for approval from 1960-1961, and thus no American babies suffered the alarming side effects which occurred around the rest of the world. Timmermans, S., and V. Leiter. "The redemption of Thalidomide: standardizing the risk of birth defects." *Social studies of science* 30, no. 1 (2000): 41-71.

Before the Kefauver Amendments, the FDA restricted its regulatory focus to pharmaceutical producers, leaving it to physicians organizations to ensure that prescription practices were reasonably standard and followed best practices. Rather than give prescriptive statements about what physicians could do, the FDA instead occasionally sent “Dear Doctor” letters advising physicians about new adverse reactions that had come to light. The Kefauver Amendments formalized the FDA’s authority to control more than just the safety of the drug to also require a formal evaluation of the appropriateness of a particular therapeutic usage, called a “therapeutic indication.”<sup>300</sup> The FDA was now in the awkward position of trying to dictate how drugs ought to be prescribed, weighing the risks and benefits for specific kinds of patients, without telling physicians and physician organizations how to do their job. The decisions of both the AMA and FDA to initially restrict diet claims to physician discretion was framed by this broader concern with establishing medical efficacy. If drugs were now facing stricter scrutiny for claims, both the FDA and AMA were invested in keeping “foods,” which continued to face a much lower burden of proof, as carefully distinct from “drugs” as possible.

When low fat diet advice books and new health products appeared in the late 1950s, the FDA simply applied its experience with nutrition quackery to this new fad. In 1959, the FDA released a statement on “common food fats and oils” and their relation to control or reduce blood cholesterol levels. The statement took a very conservative position on the diet-heart thesis, noting “the role of cholesterol in heart and artery disease has not been established,” and that it was the opinion of the FDA that any labeling claims, direct or implied, that link such foods to a preventive diet and that were “offered to the general public” would be deemed misbranded.<sup>301</sup>

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<sup>300</sup> Greene, *Prescribing by numbers*, pp. 131, 161-164.

<sup>301</sup> “Status of Articles Offered to the General Public for the Control or Reduction of Blood Cholesterol Levels and for the Prevention and Treatment of Heart and Artery Disease Under the Federal Food, Drug, and Cosmetic Act.” 24 *Federal Register* 9990 (Dec. 10, 1959).

And when the AHA 1960 Report appeared, the FDA adopted the position that the evidence was still unclear, consumers ought to ignore the preliminary findings for the moment, and discussion of whether to adopt modified diets should be between a doctor and his patient. Milstead gave a 1961 speech, “Food Fad and Nutrition Quackery,” directly challenging the AHA’s move to publicize the diet-heart thesis and criticizing ads with implied health claims that encouraged consumers to associate polyunsaturated fats with foods good to eat. Milstead voiced the agency’s official position:

“We believe that the prevention and treatment of artery and heart disease is a medical problem for the medical experts. Laymen are not qualified to either recognize or treat such serious medical conditions.”<sup>302</sup>

Milstead would give numerous similar speeches in the early 1960s on nutrition quackery, where the cholesterol scare and related ad campaigns would feature as one of his recurring examples.

Yet the FDA’s position on the “cholesterol controversy” reflected the still uncharted waters it was forging with medical professionals on how new standards about medical knowledge and product efficacy ought to work in food and drug markets. For diet-heart thesis advocates, like Jeremiah Stamler, the FDA’s go slow approach to the food labeling debate was frustrating. In 1960 Stamler wrote the agency disapproving of the FDA’s 1959 policy statement and its conclusion that “There is no conclusive evidence” relating elevated blood serum cholesterol to coronary heart disease. Stamler cited a substantial literature to the contrary. But more poignantly, Stamler noted the contradiction in the FDA’s policies, when the agency claimed, on the one hand, “The role of cholesterol in heart and artery disease has not been established,” and yet that same year approved the drug Triparanol (MER/29) for general medical distribution, a drug whose purpose was to lower blood serum cholesterol and thereby reduce the

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<sup>302</sup> K.L. Milstead, “Food Fads and Nutrition Quackery as Related to Dairy Products” (April 10, 1962), pp. 12-15, as found in the personal archives of Hutt, Peter Barton.

risk of heart attacks.<sup>303</sup> This double-standard by the agency, allowing doctors to use a drug to treat cholesterol levels in patients, but denying health messages to the same effect on more public platforms like food labels, could only be reconciled by the agency's bureaucratic preoccupation with delegating risk and responsibility. The diet-heart thesis was adequately established for doctors to act on it, but not a lay public.

### **Information Vegetable, Animal, and Mineral<sup>304</sup> – The New Health Foods**

Food companies did not wait for medical professionals and regulators to settle these questions. Two days after the American Heart Association issued its 1960 Report, Wesson Oil quoted the AHA statement in seven column advertisements that would appear in 205 newspapers across America. Mazola Corn Oil quickly follow suit. The dramatic impact that the sudden “cholesterol craze” had on the American food supply was summed up in the following excerpt from a September 1962 Newsweek article on “Death-Defying Diets”:

“Housewives these days carefully select corn and other vegetable cooking oils from the grocers’ shelves. The use of corn oil in making margarine has zoomed from ‘negligible’ in 1957 to 90 million pounds in 1961. Safflower, a thistle-like, oil-producing plant, has turned into a booming Western crop. Main reason: Safflower oil, once used mainly in the U.S. as a paint base, is 25 per cent richer in polyunsaturates than corn oil.”<sup>305</sup>

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<sup>303</sup> “December 21, 1960 Letter to O.L. Kline, from Jeremiah Stamler” found in the binder “5.Polyunsaturates3-1965” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. The Merck drug triparanol would soon be at the center of scandal over industry drug safety testing and the balance of drug benefits against risks. In 1961 as the drug was coming on the market, Merck disclosed to the FDA that the drug had certain toxic side effects in lab tests on rats and dogs. The company would eventually be taken to court over the findings and the drug removed from the market. The “triparanol fiasco” as one cardiologist would later call it, led many other companies to halt their research on cholesterol lowering agents. Steinberg, D. “An interpretive history of the cholesterol controversy, part V: The discovery of the statins and the end of the controversy.” *The Journal of Lipid Research* (2006): 1399-1351. On triparanol and history of cholesterol lowering drugs at this time, see also Greene, *Prescribing by numbers*, pp. 159-164.

<sup>304</sup> Line from the “Major-General’s Song” in Gilbert and Sullivan’s *The Pirates of Penzance*, and the inspiration for the “20 Questions” game.

<sup>305</sup> “Next, a Death-Defying Diet?,” *Newsweek* (Sept. 24, 1962), pp. 89-92.

It was testimony to the popular authority that scientific organizations held, the widespread preoccupation with heart disease at the time, and the dramatic impact these science reports and self-help remedies could have on food markets and agricultural landscapes. The two kinds of foods, in particular, emerged from the new science of “negative nutrition” to push the boundaries of the FDA’s rigid system of food standards: vegetable oil based products, especially margarines, and artificial sweeteners. (These ads were a sort of precursor to “direct to consumer,” or DTC advertising for medical marketing.)

The first of these to run afoul of the FDA food standards regime were the artificial sweeteners, which serve as a class of foods initially marketed strictly to patients, in particular diabetics, and were only subsequently broadened out to a mass public. The first artificial sweetener, saccharine, was discovered in 1879, and manufactured for use in food production and medicine as early as the 1890s. Its questionable palatability (a bitter, slightly metallic aftertaste) and reputation among regulators as a suspicious food chemical substitute and possible adulterant made it the subject of much early regulatory scrutiny and limited its use in the food supply.<sup>306</sup> In the 1910s, the U.S. Department of Agriculture Bureau of Chemistry, the predecessor of the FDA, established the policy of classifying products which used saccharine as a “drug.” This fit with its profile as a substance largely used by diabetics to supplement their sugar-free diets, though occasionally used by food processors in non-significant levels and with “non-nutritive” intent to

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<sup>306</sup> Saccharine was used during this period to restore flavor in medicines and manufactured foods such as canned fruits. The “father” of the FDA, Harvey W. Wiley, was especially wary of the use of saccharine in both foods and drugs, and made it an early target of investigation under the new 1906 Pure Food and Drug Act. This led to what is often considered the first direct presidential intervention in matters of federal food regulation, when President Theodore Roosevelt called Wiley in to his office in 1908 upset with Wiley’s efforts to ban the chemical. Roosevelt was considered himself to be diabetic, and noted that “Dr. Rixey [his personal physician] gives [saccharine] to me every day.” He then famously retorted to Wiley: “Anyone who says saccharin is injurious to health is an idiot.” Harvey Young, “Saccharin: A Bitter Regulatory Controversy,” In *Research in the Administration of Public Policy*. Washington, DC: Howard University Press, 1975. Suzanne White Junod, “Sugar: A Cautionary Tale” found on the FDA website:

<http://www.fda.gov/AboutFDA/WhatWeDo/History/ProductRegulation/SelectionsFromFDLIUpdateSeriesonFDAHistory/ucm091680.htm>, last accessed Feb. 19, 2011.



help restore sweetness in canned foods products. With the 1938 Food, Drug, and Cosmetic Act, saccharine was rebranded a “special dietary” food, still intended for specialized medical markets for diabetics and obese patients.<sup>307</sup>

All of this changed in the 1950s with the appearance of a second artificial sweetener, cyclamate. Cyclamate was discovered in a University of Illinois lab in 1937, the patent for which was first purchased by DuPont, and then by Abbott Laboratories. Initially Abbot Labs intended to use the artificial sweetener to mask the bitterness of certain drugs. However, starting in the mid-1950s the company sought GRAS (“generally recognized as safe”) status for the additive in order to sell it in the special dietary foods market. In this period, under the presidency of Ernest H. Volwiler, Abbott was shifting its focus away from strictly pharmaceuticals, diversifying its product lines into the food market.<sup>308</sup> Cyclamate’s greater palatability (not as bitter as saccharine) made it possible to market it beyond those customers who were in “need” of an artificial sweetener. In 1958, Abbott Labs rolled out its new brand product, Sucaryl, a combination of cyclamate and saccharine, launching an intensive advertisement campaign in food technology and medical journals encouraging Sucaryl’s use in widely marketed diet products.<sup>309</sup>

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<sup>307</sup> Murray D. Sayer, “Artificial Sweeteners—Their Impact on the Food Laws,” *Food, Drug, Cosmetic Law Journal* (February 1966), pp. 111-123. The growth in diabetic products was initially driven by a growth in patients. There was a new growing diabetic patient population, and thus a market for special diets for diabetics, as a result of the introduction of penicillin. Feudtner, J. C. *Bittersweet: Diabetes, insulin, and the transformation of illness*. The University of North Carolina Press, 2003.

<sup>308</sup> Ernest H. Volwiler, interview by James J. Bohning at Lake Forest, Illinois, 18 August 1986 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0050). Abbott Labs expansion into vitamins in the 1920s had proved very profitable for the company.

<sup>309</sup> Abbott geared an elaborate ad campaign not only considering the “final consumer,” but also incorporating other food processors and manufacturers. Abbott developed a Sucaryl logo, which it included in ads which ran in popular magazines and newspapers emphasizing that consumers “Can’t taste the difference” between Sucaryl sweetened products and their higher-calorie competition. The company then ran ads in trade journals asking manufacturers, “Have you seen your latest free advertising?” They then encouraged food companies not only to use Sucaryl, but to include the “Sweetened with Sucaryl” logo on their products, thereby capitalizing off of Abbott’s promotion (and further reinforcing it). Cf. Yates, J. “How business enterprises use technology: Extending the demand-side turn.” *Enterprise and Society* 7, no. 3 (2006): 422.

The Food and Drug Administration initially viewed this product expansion as a direct evasion of its efforts to separate standard staple food products from “special dietary” foods intended to be taken under the care of a physician. The Food and Nutrition Board, the FDA’s principal scientific advisory source at the time, noted that the new sweetener had not been tested for broad, daily consumption, and that this shift in marketing could warrant a reconsideration of the artificial sweetener’s calculus of risk. Advisors felt it was one thing for diabetics to consume medicinal or special diet products with the new chemical, it was quite another for otherwise healthy dieters to do so.<sup>310</sup> In part, the regulatory concern over the shift in markets for saccharine and cyclamate was due to a shift in the packaging and the uses of Sucaryl. When Sucaryl was first publicly announced, Abbott President Dr. Volwiler said it would only be sold to the public in tablet form through drug stores or in bulk, powdered form to bakers and canners.<sup>311</sup> Towards the end of the 1950s, however, several regional businesses had found new ways to utilize sweeteners in platforms not so strictly medical in form. In 1957 Benjamin Eisenstadt designed a sugar packet and started to sell a saccharine powder mixture, trademarked under the name “Sweet’N Low,” which customers could use to more easily sweeten their drinks.<sup>312</sup> Cyclamate also began to appear in regional diet sodas, like No-Cal, marketed first locally to sanitarium patients, and then regionally.<sup>313</sup> Since the FDA’s strategy of rationalizing food and drug markets often focused on controlling the spaces of consumption—whether ingredients were prescription or not, could be sold in pharmacies or supermarkets, or could appear in one—, a shift in the packaging of a controlled ingredient like cyclamate could dramatically alter the make-up of its

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<sup>310</sup> National Academy of Sciences Archives: B&A: FNB, 1954-1957: “Com on Artificial Sweeteners: Ad Hoc Policy.”

<sup>311</sup> “New Sweetener Allows Diabetics to Enjoy Pies, Canned Food, Candy,” *Evening Times*, Cumberland MD (May 25, 1950), p. 8.

<sup>312</sup> Cohen, Rich. *Sweet and Low: A Family Story*. 1st ed. Farrar, Straus and Giroux, 2006.

<sup>313</sup> Benjamin Siegel, “Sweet Nothing—Triumph of Diet Soda” *American Heritage* (June/July 2006), found online and last accessed, August 19, 2007: <http://www.americanheritage.com/articles/web/20060619-soda-diet-tab-diet-coke-diet-pepsi.shtml>.

imagined consumer base, particularly by changing the levels of exposure, thereby changing the calculus of risk that regulators adopted when reviewing products.

These shifts in packaging and products paralleled a shift in how Sucaryl products were marketed. Initially, they were only marketed to diabetics and overweight or obese patients. By the mid-1950s, Abbott Labs Sucaryl advertisements were targeting the “diet-shopper,” using an ambiguous language which reinforced the product’s status as a dietetic good but suggested its consumer base was growing beyond patients. For example, one ad campaign noted “She can’t (or shouldn’t) use sugar-sweetened products,” recognizing that not all of its customers were diabetics who must avoid sugars.<sup>314</sup> The ads played to the “alert shopper” who, being especially attentive to health concerns, would seek out products that used the recognizable artificial sweetener brand. In 1958 RC Cola Company released Diet Rite, the first nationally marketed artificially sweetened soda, though it initially sold as a special dietary food.

In the early sixties, artificial sweetener use expanded dramatically when soda manufacturers began to release diet products to a national market. The FDA decided in 1962 to allow for a broader marketing of artificially sweetened sodas without the diabetic proviso. But the FDA was less clear about whether to allow use of both artificial and “nutritive” sweeteners in the same product. The concern was that diabetics might purchase these “low cal” products with the misunderstanding that they were appropriate for no cal diabetic use. The FDA maintained a distinction between “technological use” of artificial sweeteners (in canned foods, to restore flavor), which did not need to be labeled, versus “special dietary use” (in foods intended for low-calorie diets). Following this easing of the rules for marketing, companies marketing products quickly broadened the target audience for their diet goods. RC Cola began marketing Diet Rite to

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<sup>314</sup> *Food Technology* (March 1955).

mass markets. In 1963, the Coca-Cola Company began to sell TaB Soda to its diet-conscious (but otherwise healthy) consumers. TaB came in a bright pink can and was very explicitly marketed to women.<sup>315</sup> Abbott Labs shifted from generalized messages about the competitive advantages of Sucaryl, and honed its trade journal advertisements to highlight Sucaryl's potential value in canned fruits, diet sodas, and salad dressings. By 1965 cyclamate and other artificial sweeteners were mass-marketed in diet sodas like Royal Crown's Diet Rite Cola, who ran one ad that asked, "Who's drinking all that Diet-Rite Cola? Everybody."<sup>316</sup>

The second category of new foods were margarines and cooking oils, which serve as an example of a class of foods previously viewed as cheap substitutes that were now being remarketed as value-added diet foods purporting to have lower saturated fats or vegetable fats in place of animal fats. It was these foods which were most directly transformed by Ancel Keys and his peers' discoveries on the links between diet and incidences of heart disease.<sup>317</sup>

While the FDA eventually came to adopt standards even for margarine, this faux food had long been subject to special taxation and peculiar food composition and packaging laws, because it competed with the more natural (and allegedly more nutritious) butter.<sup>318</sup>

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<sup>315</sup> Ben McGrath, "Tab Scare," *New Yorker* (Feb. 6, 2006).

<sup>316</sup> The diet shopper was only one of several growth markets soda companies were targeting. One soft drink firm's report showed that "Negroes make up 11 percent of the population but consume 17 percent of the soft drinks." For this reason, major soft-drink companies and bottlers paid special attention to "the Negro market." Ted Sanchagrin, "Battle of the Brands: Soft Drinks," *Printer's Ink* (April 9, 1965): 21-25.

<sup>317</sup> Margarines and vegetable oils were not the only foods to be reengineered to meet this new health demand. In 1964 the FDA seized "Miracle Eggs" marketed for their "1-2-1" ratio of polyunsaturated to saturated fatty acids composition. The diet eggs were made by feeding hens specially modified diets. "FDA Seizure action," *Food Technology* (June 1964), p. 79. The Keyeses also discussed the prospects for low-fat feed animals in their 1959 book *Eat Well and Stay Well*. Keys & Keys, *Eat Well & Stay Well*, pp.135.

<sup>318</sup> The product has also inspired a whole line of studies on the ways that regulation distorts economic markets, ever since it was cited as an example of the capture thesis in Stigler's classic essay on "The Theory of Economic Regulation," discussed below. Stigler, G. J. "The theory of economic regulation." *The Bell journal of economics and management science* 2, no. 1 (1971): 3-21. Cf. Ball, R. A, and J. R Lilly. "The menace of margarine: The rise and fall of a social problem." *Social Problems* 29, no. 5 (1982): 488-498; Dupré, R. "If It's Yellow, It Must be Butter": Margarine Regulation in North America Since 1886." *Journal of Economic History* 59, no. 2 (1999): 353-371. It should be noted that in addition to its lower price and its alleged low-fat health properties, margarine also held an

“Oleomargarine” was developed and patented by a French chemist in the 1860s as a cheap, synthetic substitute for butter and other shortenings. Because it was often marketed aggressively and fraudulently to appear like butter, even dyed yellow, many state legislatures passed laws restricting its sale as a form of economic adulteration or requiring it be clearly labeled. (In Wisconsin, for a time, margarine had to be dyed blue to distinguish it from its natural analog.)<sup>319</sup> In the early twentieth century, critics of margarine focused on its lack of nutritiousness, citing experiments which showed it lacked many of the newly discovered vitamins which milk and butter seemed to contain. By the late 1920s, manufacturers were able to use new enrichment technologies and the newer knowledge of nutrition to add vitamins A and D to margarine, thus largely allaying this criticism. Oleomargarine was initially made using beef tallow. By the 1930s and 1940s, margarine was increasingly made with processed vegetable oils, first with coconut oil and then with cottonseed and soybean oils. The shift was strategic. By producing with these oils margarine manufacturers were allying themselves with cotton and soybean grower associations, who had strong political clout in legislatures. This shift would also prove providential when Keys’s research on vegetable versus animal fats began receiving publicity in the 1950s. The greatest PR boon to margarine occurred during World Wars I and II, when shortages of butter led governments to ease restrictions on the substitute, and the popular consumption of margarine boomed.<sup>320</sup> Yet the 1950s would be the decade when consumption of margarine first surpassed

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advantage over the natural competitor butter in convenience, namely spreadability, and because its shelf-life was longer.

<sup>319</sup> Though on this issue of natural color, historian Harvey Young notes that butter, too, was eventually dyed so as to compete with margarine, since it could naturally range from white to yellow depending on how cows were fed and the season. Young, J. H. “The Fielding H. Garrison Lecture. ‘This greasy counterfeit’: butter versus oleomargarine in the United States congress, 1886.” *Bulletin of the History of Medicine* 53, no. 3 (1979): 407-408. The most common requirement was that margarine not be dyed, though many manufacturers sold it with a packet of the yellow dye for users to add after purchase.

<sup>320</sup> Ball, R. A, and J. R Lilly. “The menace of margarine: The rise and fall of a social problem.” *Social Problems* 29, no. 5 (1982): 488–498. Young, “This greasy counterfeit,” *Bulletin of the History of Medicine*; Scrinis, G. “Sorry, Marge.” *Meanjin-Carlton* 61, no. 4 (2002): 108-115.

consumption of butter, evidence that many consumers now thought the substitute was even better than the real thing.

The Mazola and Wesson Vegetable Oil advertisements mentioned at the beginning of this section, which appeared in popular magazines towards the end of 1960, carried a panel comparing the relative amounts of polyunsaturates in different vegetable oils. The ad built on the widespread media attention surrounding the AHA report earlier that year. The Mazola ad was one of many ads for margarines and vegetable oils which sought to capitalize on the sudden public concern about dietary fats and their relationship to cardiovascular disease. Over the course of the decade, these ads reflect both a progression in the target of the marketing campaigns and a cultural shift in the notion of risk.

Initially ads emphasized the role of doctors in shaping their customers' interest in low fat or good fat foods, telling consumers to "ask your doctor" about these new scientific findings. A critical strategy early on was therefore to target doctors, and ads would run in medical journals such as the *Journal of the American Medical Association*. Such ads might mention the "P/S ratio"—one of the common buzz words at the time over the diet-heart thesis, referring to the ratio of polyunsaturates to saturated fats—or try to link familiar nutritional concepts to the newer diet science. They also exploited press announcements on the latest science research, building implied health claims around studies showing vegetable fats, and later certain vegetable oils more than others, as being healthier than animal fats.<sup>321</sup> This initial strategy exploited "diagnostic

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<sup>321</sup> Keys was at this time engaged in experiments with Francisco Grande Covián and Joseph T. Anderson experiments measurements of changes in the cholesterol level of mental health patients on strictly controlled diets, with fats varied and calories held constant, Keys, Anderson and Grande developed their equation to predict the average change in serum cholesterol level from the percentage of total calories consumed daily from polyunsaturated, monounsaturated, and saturated fats and dietary cholesterol. Ancel Keys & Francisco Grande, "Role of Dietary Fat in Human Nutrition, III. Diet and the Epidemiology of Coronary Heart Disease," *Am J Public Health*. 1957 December; 47(12): 1520–1530. Ancel Keys, Joseph T. Anderson, & Francisco Grande, "Diet-Type (Fats Constant) and Blood Lipids in Man," *J. Nutr.* 1960 February; 70(2): 257. Ancel Keys, Joseph T. Anderson, & Francisco Grande, "Serum Cholesterol Response to Changes in the Diet," *Metabolism: Clinical and Experimental*.

creep” by drawing doctors’ attention to the new diet-heart thesis, to expand the niche of patients who were relevant to the new understanding of risk and thereby expand the consumer market for diet products.<sup>322</sup>

As the diet-heart thesis debate continued, margarine and vegetable oil health claims evolved, as did their targeting, so that by the end of the decade ads now focused on a mass-market. One 1967 margarine ad ran in the *Journal of the American Medical Association*, presumably to target an audience of medical professionals. But the same ad was then referenced in another ad that ran in popular journals, informing lay audiences that this was “what doctors are reading in their medical journals today.” It was the start of a mass marketing campaign for selling cutting edge medical knowledge of foods to diet-savvy consumers.

Yet the most paradigm-shifting aspect of the diet-heart thesis was that people who were healthy today still had future risk of developing heart disease. A 1968 ad for Fleischmann’s diet margarine spelled out this new medical understanding of diet and risk for its customers: “More and more doctors are coming to the conclusion that the best time to deal with coronary disease is thirty or forty years before it is likely to occur. That is why they are recommending good dietary habits [...] not only for the heart patient, but for the people of *all age groups*.”<sup>323</sup> In other words, healthy consumers, even children, had an incentive for purchasing and consuming diet foods and health-promoting food products. By the end of decade, these campaigns would invert many age-old assumptions about novel foods: imitation foods were arguably even better than the real thing and “special” dietary foods were meant for all.

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1965 July; 14(7): 747-787. These would be lead to the “Keys equation.” These studies and others by D. Mark Hegsted at Harvard generated significant publicity and fueled the interest in P/S ration ads and sales of safflower oil. Corn oil producers even ran ads touting corn oil over coconut and olive oils.

<sup>322</sup> Cf. Greene, “Releasing the flood waters,” 2005.

<sup>323</sup> “Is there a heart attack in his future” Advertisement for Diet Fleischmann’s in *JAMA* (Nov. 4, 1968).

### Imagining the “Ordinary Consumer”

Under the “standards of identity” system, the FDA understood its mission to protect consumers as an effort to keep up the division between a normal mass-market for everyday foods and a special, marginal market for dietary products and drugs. Ordinary or staple food standards were calibrated to what regulators imagined to be the “ordinary consumer.” The term, “ordinary consumer,” is not my own, but is actually the phrase used by lawyers, judges, and FDA regulators to discuss how to determine what was a reasonable enforcement standard. The legal sense of this concept emerged out of reforms in tort law. At the beginning of the 20th century much of the food market operated under the old common law principles of *caveat emptor*, buyer beware, and “privity,” an understanding of contract law where the warranty or responsibility for a breach in contract rests on a close, mutual, or successive relationship between the two parties, such as buyer and seller.<sup>324</sup> As the relationship between buyers and sellers, and especially the chain of producers, distributors, and consumers, became increasingly distant and abstract, the use of these principles placed enormous and hazardous responsibilities on the ultimate consumer. Over the first half of the century, courts increasingly loosened these standard and held companies liable even in cases where there was no direct contractual or product exchange between the plaintiff and the defendant. Such was the transformation in tort law and liability that by 1960 a leading legal scholar declared the “assault upon the citadel of privity” nearly complete. Sellers of food and drink were now held in strict liability (as opposed to just liability for negligence) to the ultimate or end consumer.<sup>325</sup>

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<sup>324</sup> The majority ruling in *Lochner v. New York* (1905) is a classic articulation of this older view of buyer seller contractual law.

<sup>325</sup> Prosser, W. L. “The Assault Upon the Citadel (Strict Liability to the Consumer).” *Yale Law Journal* 69, no. 7 (1960): 1099–1148.



Two legal tools evolved out of these debates over legal liability and responsibility to temper strict liability and which administrative agencies used to set policies on enforcement standards. The first was “the consumer expectations test,” or reasonable expectations standard. This test holds that a producer is only liable for a product when the product is deemed “dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics.”<sup>326</sup> In the food standards hearings and legal cases on labeling, FDA and industry plaintiffs would argue their positions in terms of how they believed an ordinary consumer would receive a new labeling policy. The second was the recognition that “puffery,” extravagant promotional claims, statements of opinion and value, used in advertisement should not be held to the same standards of truth in advertising as factual statements about the product. Again the concern was with what an ordinary consumer would recognize as puffery, as Judge Learned Hand’s canonical explanation of the puffery defense:

“There are some kinds of talk which no sensible man takes seriously, and if he does he suffers from his credulity. If we were all scrupulously honest, it would not be so; but, as it is, neither party usually believes what the seller says about his own opinions, and each knows it.”<sup>327</sup>

The FDA was thus regularly faced with the challenge of establishing the line between what was promotional but acceptable puffery, and what could be construed as informational or educational and thus subject to scrutiny of medical truth claims.

Determining a proper enforcement standard rested upon regulators’ imagination of a consumer’s capacity to make an informed judgment about the fit of a product or the assumption of risk. (This, in turn, required constructing what was “common sense” and who was the kind of

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<sup>326</sup> Phillips, Jerry J. “Consumer Expectations.” *South Carolina Law Review* 53 (2002 2001): 1047.

<sup>327</sup> As quoted in, Goretzke, C. “Resurgence of Caveat Emptor: Puffery Undermines the Pro-Consumer Trend in Wisconsin’s Misrepresentation Doctrine, The.” *Wis. L. Rev.* (2003): 172.

person that possessed common sense.) The “ordinary consumer” was situated somewhere between an “overly credulous” consumer, of particular concern when regulating health products, and the “skeptical” consumer. Take, for example, a passage from one contemporary discussion of this standard:

“The ordinary purchaser standard by its very nature excludes overly skeptical and overly credulous purchasers. However, some products by their very nature attract credulous purchasers. In such situations the ordinary purchaser may be extremely credulous in comparison with most men or most consumers. Credulous purchasers are prevalent among the buyers of drugs and devices, although certain health foods and cosmetics may also attract them.”<sup>328</sup>

For this reason, regulators paid special attention to which products should be classed as foods and which as drugs, and applied these classifications according to those whom the labels allegedly addressed.<sup>329</sup>

Product classification therefore functioned as a proxy measure for determining different standards of protection for consumers based on the kinds of services sought. The “ordinary consumer” standard deployed for foods could be contrasted with stricter regulatory enforcement standards in special or marginal cases, such as the standards for “special dietary foods,” or the FDA’s emerging concern during this period with labels for products targeting pregnant

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<sup>328</sup> Forte, W. E. “Ordinary Purchaser and the Federal Food, Drug and Cosmetic Act, The.” *Va. L. Rev.* 52 (1966): 1467. Court decisions from 1940s through 1970s would swing like a pendulum between standards focused on “that ‘vast and unthinking’ multitude who when making a purchase do not stop to analyze,” in *United States v. 62 Packages ... 48 F. Supp.* 878, 887 (W.D. Wis 1943), as quoted in Merrill and Collier, p. 594, to “purchasers who are of normal capacity and use that capacity in a common sense way,” in *United States v. Pinaud, Inc.* 800 F.2d 1129, known as the “ordinary person” standard. See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 111.

<sup>329</sup> Indeed, FDA regulators repeatedly emphasized this gullible feature of consumers in the market for drugs. Milstead would regularly quote Oliver Wendell Holmes: “There is nothing men will not do, there is nothing they have not done to recover their health and save lives.”

K.L. Milstead, “The Food and Drug Administration’s Program Against Quackery,” as found in the “FDA Speeches” Files in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

women.<sup>330</sup> Since the passage of the Durham-Humphrey Amendment in 1950, the FDA made a legal distinction between “over the counter” drugs and “prescription” drugs. Part of that distinction was that prescription drugs had to be clearly labeled with the proviso, “Caution: federal law prohibits refilling without prescription,” to help keep their market use segregated.<sup>331</sup> With the Kefauver-Harris Drug Amendments in 1962, there was a focus on package instructions for over-the-counter drugs. Harry Marks shows how the creation of this special category of products—which would only be marketed to physicians, and not consumers more broadly—freed industry from potential liability concerns that would arise if companies placed patient-use instructions and warnings labels on certain drugs. The creation of the category “prescription drug” reflected the medical profession’s interest in protecting therapeutic claims while also consecrating the authority of the physician over patient treatment. It was a debate about the need for “specialized knowledge” for certain product lines.<sup>332</sup> The FDA was caught between professional organizations like the AMA which saw special dietary foods as a category of

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<sup>330</sup> For a discussion of how the FDA’s concern with the ‘exceptional consumer’ shaped its later policies on food safety and cheese production, see Paxson, “Post-Pasteurian Cultures,” 2008, p. 36. Indeed, in addition to the FDA’s troubles setting drug standards (in the wake of the thalidomide scandal) for special minority groups like pregnant women, it was also exploring ingredient disclosure policies which would respond to concerns about allergies. For a view on allergies and food law in this period, see Richard Strichartz, “Allergy and Food Products Liability: *Damnum Absque Injuria?*,” *Food Drug and Cosmetic Law Journal* (July 1955), pp. 408-423.

<sup>331</sup> “William W. Goodrich, office of General Counsel, 1939-1971” as found on the FDA website, last accessed August 4, 2010: <http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm>.

<sup>332</sup> For a history of how drug firms sought stricter FDA standards for a new category of products, “prescription drugs,” see Marks, H. M. “Revisiting ‘the origins of compulsory drug prescriptions’.” *American journal of public health* 85, no. 1 (1995): 109; Marks, H. M. *The progress of experiment*, 1997. Marks has argued that the FDA’s efforts historically to discipline physician practice through information disclosures have been a failure. Marks, 2009. He makes a compelling case that the FDA’s labeling policies repeatedly end up protecting physician autonomy, rather than policing physician abuse of prescription drugs, such as so-called ‘off-label use’. However, Marks misses (or ignores) the fact that the FDA’s regulatory authority has historically been directed at food and drug manufacturers, not physicians, and at products, not practices. Seen in this light, the FDA’s tactic of “making risks visible” through controls over labeling has had a very substantial impact on food and drug markets. That said, his work on drugs is interesting for comparison for it offers, in many respects, an inverse history to the one given here for foods. Prescription drugs are expected to have an acute therapeutic effect, worth risking side-effects for the ill, though perhaps not for the healthy; whereas healthy foods’ effects are understood to be more diffuse, though almost never (immediately) hazardous to the ordinary consumer. Prescription drugs establish a professional gatekeeper, the physician, and are thus recognized as an object of expertise; on the other hand, the category of food is intended to be self-evident to the average person.

product restricted to the purview of physicians, and food companies and a growing number of consumers who felt they had a right to the information so as to make their own risk decisions.

Embedded in these discussions about ordinary consumers were also social assumptions about consumers' class, gender, race, education level, and (what would come to be called) their "lifestyle." During this period, the ordinary consumer regulators generally had in mind for foods was a middle-class, educated housewife. It was the consumer of America's postwar "affluent society," who was more concerned about food quality than price. This was a shift away from the 1930s New Deal preoccupation with working-class shoppers.<sup>333</sup> The ordinary consumer was presumed to be educated enough to recognize common foods and know how to create a balanced diet,<sup>334</sup> but was also presumably healthy, and therefore did not need to self-medicate by way of special diet foods. Diet food ads targeted largely white shoppers, and often focused directly on women and their concerns. The concern over heart disease, however, focused largely on aging

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<sup>333</sup> Cohen, *Consumers' Republic*, 2003. In fact, a later FDA chief counsel, Richard Merrill, would complain in a coauthored 1974 review of the food standards system that the FDA willfully ignored how consumers regularly chose price over nutritional quality:

"Recipe standards have traditionally reflected the agency's conviction that it knows what foods are good for people and what foods match consumer expectations. The agency's implicit assumption has been that consumers expect foods that the FDA regards as 'good.' Aside from the difficulties of measuring consumer expectations, it is far from obvious that all consumers want only the high quality foods endorsed by the agency. Many prefer to purchase less costly, albeit lower quality, foods." Merrill &

Collier. "Like Mother Used to Make," *Columbia Law Review*, p. 607.

<sup>334</sup> This household labor has to be understood in the context of a broader shift towards convenience in home cooking. As one 1950s trade journal observed:

"More women than we think want basic help on the standard foods which we have taken too much for granted for years. No wonder she has gone for the packaged mixes, canned meats, macaroni-and-cheese dinners, baby foods and a score of others which cater to this demand for the pillar items built to save time. Living is becoming more informal. [...] Party meals are still popular, but they much be handled with dispatch and less effort because bridge, canasta, television or movies are just around the corner.

What has happened can be summed up by saying that the food manufacturers, processors, distributors, and all other handlers are learning how they can remove many laborious tasks in the kitchen, put on the table better foods in shorter time, and yet maintain the pride of the homemaker in her special privilege of feeding her own family well."

A.A. Schaal, "Consumer Trends in New Food Products for Homemakers," *Food Technology* (January 1952), p. 14.

men, so ads increasingly also attended to concern about women's men, their husbands and their children.<sup>335</sup>

The introduction of new technologies for distributing food products and new ways of reformulating and recombining foods exacerbated the FDA's efforts to rationalize the market. The introduction of Sweet'N Low, mentioned above, for example, brought artificial sweeteners to a whole new demographic of consumers. In a 1953 letter from the FDA Commissioner Crawford to the coordinator of the NAS FNB, Crawford noted:

The existence of these products on the market in substantial quantity brings up a serious problem of keeping their distribution channeled to people who know what they are and want them, and to prevent such products from being supplied for the staple articles consumed by the bulk of the population who need the caloric intake they are getting, or who need to have their diet selected by experts. The problem is very much more difficult than the comparable one of keeping dangerously potent drugs channeled to those who need them. To obtain these, a physician's prescription is required and this can be filled only at drugstores who employ licensed pharmacists.

The problem was not only one of assigning expert gatekeepers. Crawford also worried over how the placement of these products might suggest they were not for special consumers:

Many grocers segregate such articles and others intended for special dietary use in a clearly identified area of their stores. Other grocers intermingle such articles with staple foods and in such cases the consumer who wishes the staple article is likely to overlook differentiating labeling on the special dietary article, even when it is conspicuous.<sup>336</sup>

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<sup>335</sup> Though as early as the 1940s, trade journals were advising merchants on "appealing to men," and ads were increasingly targeted to the "family unit" rather than just the woman as housewife and homemaker. Cohen, *Consumers' Republic*, 2003, p. 313-314. The ads focused on the diet-heart thesis seemed to follow this trend towards market segmentation, but still framed food shopping as women's work even though heart disease was framed as a male affliction.

<sup>336</sup> Sept. 1, 1953 Letter from Crawford to Williams, found in the "NAS-NRC B&A: FNB, 1954: Com on Artificial Sweeteners: Ad Hoc Policy Meetings" of the NAS FNB archives. Crawford's concern with grocers would arguably be compounded by the market transition to supermarkets. As one legal analysis observed, grocers had a direct and influencing relationship on their customers' choices, whereas supermarkets exercised a less personal and more indirect influence, in the form of shelf placement. Grocers acted as a visible middleman at the store, much like pharmacists, whereas supermarkets were designed to get rid of this extra personnel. Forte, W. E. "The Ordinary

Disputes during this period over where vitamins could be sold also illustrated this concern with controlling the spaces of consumption of health goods. From the 1930s through the 1950s pharmacist organizations fought to keep vitamin sales restricted to pharmacies and out of supermarkets, arguing that they were more like drugs than foods.<sup>337</sup> By 1965, however, pharmacies had largely lost this market battle as supermarkets surpassed drug stores in the sale of diet foods.<sup>338</sup> The disputes over the proper *place* for self-treatment, in popular common spaces like the supermarket or in specialized medical spaces like pharmacies, centered on how to ensure that consumers received legitimate expert counseling before getting access to the product, or whether or not such counseling was even needed.<sup>339</sup>

In addition to controls on the spaces where products were purchased, the FDA was concerned with the spaces in which *information* about food and drugs traveled. The FDA was suddenly tackling prescription drug advertising, learning on the job, and was thus more attentive to the ways food producers were pushing the boundaries between medical products and food in their advertising campaigns. To drive home its argument that consumers were “misled” by the new diet-heart thesis health claims, for example, the FDA contracted a consumer studies firm,

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Purchaser and the Federal Food, Drug and Cosmetic Act.,” *Virginia Law Review*, 52 (1966): 1467. Supermarket managers were split in opinion on the issue of whether to place dietetic foods in a special section “for maximum convenience for shoppers” or place like diet merchandise with like regular merchandise to improve the “volume” of transaction. “Diet Foods Demand Up, Managers Told,” *Supermarket News* (11/1/65), p. 16.

<sup>337</sup> The battle over which kind of retailer could sell vitamins began in 1939, when Kroger Grocery announced it would carry them in their stores. Druggist, concerned about losing control over this important source of revenue, immediately organized to argue that vitamins were like drugs and should therefore only be sold in pharmacies. As Apple shows, druggists ultimately lost this battle because they were not able to convincingly argue that vitamins warranted this special control, nor did they have the professional medical authority of physician groups. Apple, *Vitamania*, pp. 54-84.

<sup>338</sup> Philip Nelson, “Finds Supers Lead in Diet Foods Sale,” *Drug News Weekly* (Sept. 20, 1965), p. 11.

<sup>339</sup> Again, on this regulatory concern with controlling spaces, see Silbey, “Architecture of Authority,” 2003. In part this focus on whether or not to trust patients-as-consumers with self-treatment reflected a growing professional anxiety, starting in the mid 1950s and peaking in the 1970s, resulting from studies that showed high rates of drug prescription non-compliance among patients. Jones, D. S. “Technologies of compliance: Surveillance of self-administration of tuberculosis treatment, 1956–1966.” *History and technology* 17, no. 4 (2001): 279–318. Physician’s organizations and regulatory oversight institutions were thus particularly focused on how the changing spaces of food and drug consumption might shape compliance for better or for worse.

ARB Surveys, in the summer of 1963 to poll consumers, “a representative sample of 780 adults throughout the United States,” on health claims on different sources of dietary fat and cholesterol. The report, “Public Understanding of Labeling Regarding Oleomargarine, Cooking Oils, and Related Foods,” showed that several prominent ad slogans, including advertisements which emphasized “polyunsaturates” in conjunction with “ask your doctor,” or implied claims such as “better for you because it’s made from 100% golden corn oil,” led a “substantial proportion of people to infer that there were “material medical benefits to be derived using the products so advertised.” Because the FDA believed these products alone would not have specific health properties advertised, it used this survey as evidence that advertisements were misleading consumers.<sup>340</sup>

The FDA therefore initially rejected efforts to mass market vegetable oils and margarines for their health-promoting properties. According to the agency, such claims were an inappropriate message for mass marketing. An FDA press publication in October of 1963 noted, “There is no sound scientific basis for the current diet fad theory that hardening of the arteries or strokes can be prevented simply by adding unsaturated fats to the otherwise unchanged ordinary diet. TV advertising for food products is not a good source of medical advice on such matters.”<sup>341</sup> Since most consumers were healthy, the FDA did not believe they would benefit from such alarming risk information. Those consumers who did require special dietary foods were best directed to their personal doctor.

By 1965, in light of the growing popularity of the new diets and continued medical support for them, the FDA began to reconsider its position, also reexamining its notion of what

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<sup>340</sup> ARB Surveys, Inc., Public Understanding of Labeling Regarding Oleomargarine, Cooking Oils, and Related Foods, A study conducted for the FDA (New York, August 1963), found in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>341</sup> “Your Money and Your Life.” *FDA Publication* No. 19, October 1963, p. 14.

an ordinary consumer might reasonably think about it. In response to requests by prominent physicians that the FDA implement some sort of labeling system which would allow them to assist patients in following special diets, in May of 1965 the FDA proposed to maintain the current restrictive policy on health claims, but to allow factual declarations of the fatty acid content of foods (the amount of grams of each kind of fatty acid). In March of 1966, however, the FDA retracted the proposal pending further study.<sup>342</sup> The retraction now was less a reflection of the agency's position on the validity of the special diets and diet foods, and had more to do with its institutional commitments to maintaining a simple clear line between foods and drugs.

In part, the stakes were institutional: should consumers be empowered by new scientific information to take dietary decisions into their own hands or would this subvert the role of doctors to handle scientific uncertainty when treating patients? The FDA was adjudicating the line between professional and lay, but also public and private interests: are health claims information, education, or marketing? But the debate was also an argument about what was meant by an "ordinary" consumer and "risky" food. Was an ordinary consumer "healthy," and therefore ought not to be concerned about this kind of hypothetical, future risk? Or, as would become the paradigm, did all consumers have some right to know about the potential that eating certain foods carried for developing heart disease and other chronic degenerative illnesses? Healthism, in this new paradigm, was being re-conceived as a kind of personal taste and lifestyle, rather than medical exception,<sup>343</sup> and thus appropriate for market segmentation and "puffery" rather than special medical truth.

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<sup>342</sup> See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 212.

<sup>343</sup> It also marked a return to the ancient sensibility about personal tastes and the individualized weighing of risks, captured in the saying by Lucretius: *quod ali cibus est aliis fuit acre venenum*, what is food to one person may be bitter poison to others. Lucretius, *De Rerum Natura*, iv. 637.



### No Longer “Nature’s Perfect Food” – Reframing Traditional Foods

If the public press about the diet-heart thesis and marketing of ‘negative nutrition’ were generating markets for new diet foods, they were also having devastating consequences for certain traditional foods. The U.S. Secretary of Agriculture Orville Freeman, when interviewed in the 1962 documentary, “The Fat American,” noted with alarm that “During 1961 the American people ate some three billion pounds less of dairy products than they did during 1960.” Secretary Freeman blamed the “cholesterol controversy” for hurting the dairy industry and forcing the USDA to acquire substantial stocks of butter at high cost just to protect farmers. In highlighting the national economic cost of the cholesterol controversy and food fads, Freeman echoed what would become a refrain of trade associations seeking to discredit the new links between diet, affluence, and disease: that the “cholesterol scare,” as they dubbed it, falsely targeted America’s abundance and agricultural productivity as the source of the epidemic, and threatened some of America’s principal agrarian industries.<sup>344</sup> Here I examine just two trade groups, the American Dairy Association and Sugar Information, Inc., to illustrate the ways that traditional food associations sought to reframe their foods by contrasting their products’ “naturalness” and traditional reputation for being “wholesome” against the new competitors’ artificiality and faddism.<sup>345</sup>

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<sup>344</sup> Freeman continues in the interview by “there is very little solid evidence to support the fact that people shouldn’t drink dairy products. Quite the contrary, milk is still our most perfect food, and its an integral part of our economy.” CBS Reports, “The Fat American” broadcast on January 18, 1962, p. 25-26 of transcript as found in the binder “Polyunsaturates 1-1957-1963” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>345</sup> Two other groups, meat and egg producers, were also quite quick to respond to and try and discredit the diet-heart thesis. Unlike the dairy industry, however, the meat industry was slower to adopt the “meat is nutritious” campaigns, though they did emphasize it as a good source of protein (protein deficiency being a lingering preoccupation among nutritionists). They also began to breed leaner animals for leaner cuts of meat. But it wasn’t until the 1980s that meat industry started to attempt to market lean meats to diet conscious consumers. On this shift, see Chapter 5. Egg producers, as mentioned above in footnote 76, were some of the first to market “1-2-1” eggs higher in polyunsaturated fats. But the early hypothesis that dietary cholesterol might explain the diet-heart thesis would put egg producers on the defensive for decades to come.

The threat of the low-calorie craze and competition with artificial sweeteners was not taken lightly by the trade industry for sugar. The industry response to this artificial threat was to reinvent sugar as a traditional, wholesome, and natural product. If at one time sugar was a delicacy only to be found at the tables of the elite, by the twentieth century it had almost come to be seen as a staple in its own right. Such was the dramatic transformation in cultural meanings surrounding sweetness that historian Sidney Mintz would remark that the “the ancient relationship between starch core and flavor fringe” was fast being turned on its head.<sup>346</sup> Due to wartime shifts in the production and consumption of sweeteners during World War II, however, the market for sugar began to be affected by competition with artificial sweeteners and other “nutritive sweeteners” like corn syrup.<sup>347</sup> To address these new competitors, members of the U.S. sugar industry formed the Sugar Research Foundation in 1943, which would be “dedicated to the scientific study of sugar’s role in food and communication of that role to the public.” In 1947 the foundation renamed itself the Sugar Association with two divisions, the Sugar Research Foundation to support scientific research, and Sugar Information, Inc. to focus on public education and communication.<sup>348</sup> Over the next two decades Sugar Information, Inc. would play a visible role in promoting sugar’s “goodness” through large spread ads in most major periodicals and popular magazines.

The ad campaign for Sucaryl launched by Abbott Labs in the late 1950s prompted a heated counter-campaign by Sugar Information, Inc. In what could be called a “reinvention of

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<sup>346</sup> Mintz, *Sweetness and power*, p. 198.

<sup>347</sup> It should be noted that sugar trade associations weren’t only being assaulted by artificial competitors like cyclamate, but also with “natural” but novel sweeteners like corn syrup, which were backed by their own highly influential trade associations (many of whom were exploiting the new market for corn oil caused by publicity surrounding the diet-heart thesis).

<sup>348</sup> Sugar Association, “About Us” at <http://www.sugar.org/aboutus/>, Last Accessed: August 26, 2010.

tradition”<sup>349</sup> sugar industry ads sought to naturalize sugar consumption making it appear to be a part of long America tradition of eating sweets. Ads thus focused on the construction of sugar as a “natural” sweetener, and therefore more wholesome. An ad that ran in *Life Magazine* in 1957, right as Abbott Laboratories was promoting its Sucaryl campaign, said not to “involve yourself in bizarre, ‘wonder’ diets that are in conflict with sound nutritional principles.” Ads highlighted cyclamate’s synthetic, chemical nature by foregrounding the chemical name with questions like, “who ever heard of Sodium N-Cyclohexyl-sulfamate?” Instead, Sugar Information, Inc. argued “sugar helps control weight naturally.” Some ads appealed to notion of appetite satiety, calling sugar “quick energy” or describing an “appestat” model of metabolism where “Tucked away in your brain is a hunger switch” that sugar could help turn “from ‘on’ to ‘off’.”<sup>350</sup> Ads also targeted dieters. One ad argued for the “importance of sugar... in family meals... in reducing diets,” since “Nutritional findings show that your need for nature’s own sweetener is as deep-seated as the human body’s need for energy.”<sup>351</sup> Another described sugar as “the spoonful of prevention” for weight watchers. It “helps prevent you from overeating” because “It satisfies your appetite much faster than other foods.”<sup>352</sup> The irony of these campaigns was that the rise of sugar consumption was in large part due to the greater affluence of society. Yet to market sugar as healthy, Sugar Information, Inc. now had to brand it as traditional and natural rather than a symptom of civilization.

If the sugar empire’s strike back appeared transparently self-serving, the dairy industry’s countermovements to the cholesterol controversy were more complicated and compelling. Milk

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<sup>349</sup> Hobsbawm, E., and T. Ranger. *The Reinvention of Tradition*. Cambridge: Cambridge University Press, 1983.

<sup>350</sup> Sugar Information even published a booklet, “The Scientific Nibble,” explaining how sugar could help reduce one’s appetite. *Life Magazine* (January 15, 1957), p. 9. “Sugar Takes Aim at Synthetics,” Ad in *Good Housekeeping* (Jan. 1968).

<sup>351</sup> “The importance of sugar,” Ad in *Life Magazine* (April 16, 1956), p. 132.

<sup>352</sup> “Why so many weight-watchers find sugar the spoonful of prevention,” Ad in *Life Magazine* (Sept. 8, 1961).

had a long history of being constructed by nutritionists to be “nature’s perfect food.” Historian Melanie DePuis provides at least three explanations for how industry naturalized milk consumption. First, was the notion of milk’s nutritional “completeness.” Some arguments for this rested upon traditional theological appeals to milk’s historical importance (e.g. “the land of milk and honey”). Yet DePuis also describes the analogy cow milk drew to maternal milk at the start of the twentieth century in dairy industry campaigns to promote children drinking milk.<sup>353</sup> Milk’s “completeness” image helps explain industry’s reticence to selling less (milk fat) for more, discussed below. Second, there was the image of milk as a classic agrarian staple.<sup>354</sup> It was tied to nationalist sentiment that it was part of what made America strong, healthy, and competitive. Third, milk’s safety, its purity, was heavily regulated through laws on pasteurization, and thus the state was heavily invested in it.<sup>355</sup>

Each of these traditional defenses for milk surfaced in the Dairy industry’s attempts to diffuse the negative impact of the AHA’s 1960 Report. In 1962 the American Dairy Association attacked the diet-heart thesis and low fat diets as “a highly experimental treatment,” noting that “Eating [for healthy people] should be a pleasurable affair, not a medical treatment.” That year the Association spent a record \$7 million to advertise the positive attributes of dairy products, and promised to “deal more bluntly with the health issue.”<sup>356</sup> Following the American Medical Association’s October 1962 attack on the diets as a “food fad,” the dairy industry ran an ad in the

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<sup>353</sup> Paradoxically, it was for this reason that milk was one of the few early foods allowed to be vitamin enriched (vitamin A & D). DePuis 31-34, 107. DuPuis, E. M. *Nature’s perfect food: how milk became America’s drink*. NYU Press, 2002. On the scientific refashioning of milk as a “miracle food,” see also, Murcott, A. “Scarcity in abundance: Food and non-food” *Social research* 66, no. 1 (1999): pp. 322-327. As a beverage, milk was also a useful replacement for alcohol, and thus touted by temperance movements in the late 19th and early 20th century as a “healthy drink.” A century later opponents of soft drinks would adopt a similar tactic.

<sup>354</sup> DePuis, pp. 90-102. This DePuis describes as a common and enduring deception: “Despite its fresh, untouched appearance, fluid milk is an industrial food.” DePuis, p. 160.

<sup>355</sup> DePuis, pp. 172-176. While commenting on the social construction of milk a “perfect” food, DePuis observes that the “neoclassical notion of perfection [orderly markets]” is “the elimination of politics.”

<sup>356</sup> Peter Bart, “Advertising: Dairy Men Open Counter Attack,” *New York Times* (Aug. 7, 1962), p. 36.

New York Times heralding the “new and very important statement” from the AMA.<sup>357</sup> Not surprisingly the National Dairy Council opposed the FDA’s 1965 proposals to allow fatty acid labeling of foods.<sup>358</sup> The dairy industry also used the tactic of invoking milk’s unknown, yet-to-be-discovered nutritional benefits (a reference to the “completeness” image described above) as an argument for sticking with the real thing over artificial alternatives. Industry, however, had to cope with direct attacks on milk and its wholesomeness by leading physicians. Paul Dudley White was a particularly prominent critic of milk, repeatedly quoted in newspapers and magazines to the effect that earlier diet advice encouraging the youth to drink large amounts of milk may be responsible for the current epidemic of cardiovascular disease.<sup>359</sup> White was singlehandedly deconstructing milk’s completeness in an affluent society.

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<sup>357</sup> “Diet and heart disease... A New and Very Important Statement from the AMA,” dairy industry ad in *New York Times* (Nov. 20, 1962), p. 18.

<sup>358</sup> “National Dairy Council opposes fatty acid labeling of Foods,” *Food Chemical News* (Oct. 11, 1965), pp. 9-11.

<sup>359</sup> Paul D. White appears to have had a strong personal interest in the new heart disease epidemic and campaigns against milk fats. It is well known that his sister died of rheumatic heart disease, which he described as a motivation for his career in cardiology. Less well known was how White viewed his father’s death from coronary artery disease as a personal example of the epidemiological transition and changes in the burden of disease and diet advice. In 1968, White exchanged letters with a Massachusetts dairy farmer, a breeder of Guernsey cattle who worried that high fat producing “Guernsey and Jersey cattle will disappear from our economy” as a consequence of the cholesterol controversy. In his reply, White recounted the following personal story:

“I’ll tell a story now about my own father, who was turned down for insurance when he was a young man, so he told us, because he was too thin, and his own father had died of Tuberculosis in middle age. He himself was undoubtedly a candidate for such a disease then, in the 1880’s, and he was told by the doctors to go out and put on weight, or, in other words, to get fat, which he did conscientiously all the rest of his life until he died rather suddenly at the age of 71 on his way to see a patient. An autopsy showed a great extent of atherosclerosis involving his coronary arteries and his aorta. This autopsy was done by Timothy Leary, whom you may remember.

The point about this is that Father put on a pound or two of weight every year between the time he was a young man and the time he died. No one had warned him; no one knew enough, really, to warn him that this might not be good for him. The first ten pounds were alright, but then the next thirty or forty pounds were, doubtless, not alright. He put this weight on chiefly by drinking inordinate amounts of milk all through his life daily. I can remember him, even when he was seeing patients, going out between times to the kitchen and getting his bowl of milk repeatedly through the day, when I was a boy and at home, because his office was in the house. This is just an illustration of what we used to do, and what some young people still do, young fellows still drinking a quart or two or three of rich whole milk, and in the old days, as I did, taking a lot of chocolate ice cream sodas, and I am quite sure that this can be harmful. There must be some sort of compromise. I am drinking skim milk with pleasure, and I like cream and take a little of it, but I suppose we must compromise.”

The milk industry, like the government, however, was heavily invested in the economic assumption that milk fat was the source of value for dairy goods. Regulations on milk standards had been historically designed to prevent producers from skimming the milkfat off to sell in byproducts like butter.<sup>360</sup> Dairy farmers priced their milk goods based on the amount of fat. Moreover, strict legal restrictions were in place against the mixing of dairy products with alternate sources of fat. In 1923, Congress passed the Filled-Milk Act which prohibited the interstate sale of filled-milk products, milks, ice creams, and other dairy products made from skim milk reconstituted with fats from vegetable oils. Given the clear Congressional mandate against them, neither the dairy industry nor the FDA could easily pursue the development of vegetable-fat enriched milk products to meet the demand for the new diets. Despite these impediments, by the late 1960s dairy producers were openly discussing ways around the restrictions or ways to readjust pricing away from fat content. At the 1967 Annual Convention of the International Association of Ice Cream Manufacturers and Milk Industry Foundation, twenty five percent of the papers delivered were on the subject of imitation dairy products.<sup>361</sup> Dairy producers were also lobbying the FDA to finalize standards for 2% milk and other low-fat variations on milk.<sup>362</sup>

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“Jan. 25, 1968 Letter from Robert H. Morris to PDW” & “Jan. 30, 1968 Letter back to “Bob” Morris,” found in Paul Dudley White Personal Papers: Part VI: Box 35, Folder 6 “Diet/Nutrition, 1968-69” [Subjects and Topical Interests].

<sup>360</sup> See DuPuis, *Nature's Perfect Food*, p. 69. DuPuis makes an interesting case for why milk was promoted over cheese, because cheese was sold as a production overflow product, whereas farmers made profit on fresh milk (p. 115).

<sup>361</sup> Ken Howell, “Dairy Men Search for Solution to Non-Fat Products Competition,” *Supermarket News* (10/30/67), p. 23.

<sup>362</sup> Indeed, in their frustration with the FDA, the Milk Industry Foundation solicited help from Mark Hegsted in 1969, discussing the FDA's rejection of their proposed 2% standard. Hegsted replied that:

“I am pleased to see an attempt to modify some of the standards on dairy products. As I have stated elsewhere, the dairy industry in particular seems to have become so fenced in by protective legislation that they find it difficult to develop the kinds of products needed in the modern world. [...]

It seems pretty clear that the use of fat as a prime criteria for standardizing dairy products is an outmoded concept. Low fat and modified fat products are needed and current restrictions of the FDA on the standards and on labeling prevent or make it more difficult for many people to modify their diets in

Barred by legislation from loosening controls on filled-milk, in March of 1968 the FDA began to explore industry requests to pursue standards on imitation milk products marketed to diet-savvy consumers. Companies like Carnation had found by the late 1960s that they could market certain imitation milk products as value-added substitutes for milk. Since they contained no milk-based ingredients, they were not bound by filled-milk statutes and the FDA had to allow them so long as carried the imitation label. A market test of consumer acceptance for these new products revealed a surprising open-mindedness among consumers about all imitation products and linked it to consumers' experience with margarine:

For many, it was just a step from butter to margarine; from fluid milk to powdered milks. And once the imitation milk concept was initially understood, consumers described an even more graduated development; fresh milk, canned milk, dry processed milk, dry milk with "cream" to substitute milk with the animal fats replaced by vegetable and fruit oils.

We observed that attitudes toward margarine were the monitor for beliefs and expectations about imitation dairy products. If a consumer thinks margarine is healthier [...] she seemed more willing to initially accept any imitation dairy product<sup>363</sup>

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ways commonly recommended. The division of foods into those that are or are not "dietary foods" is also a doubtful approach when very large proportions of the population are continually counseled to modify their diets.

It is inconsistent to continually attempt to educate the public toward a reduction in calorie intake and to modify their fat intake and then prevent the production of products which allow this to be achieved more easily. It is particularly inconsistent to promote low fat milks and insist upon a high fat content of cottage cheese. [...] Not only should a low fat product be allowed but there should be attempts to lower it still more. There should also be a move to allow the production of similar products in which butterfat is replaced by appropriate vegetable oils.

The insistence of the FDA that products like a low fat cottage cheese be labeled "imitation" is, in fact, misleading. These are not imitation in any sense of the world [sic], and especially when compared to many, many other products on the market.

Of course, the continuing multiplication of products on the market does raise questions. It becomes increasingly difficult for the consumer to identify what he is eating. Whether there should be a vast increase in the number of food standards to cover all of these products may also be questioned."

"December 22, 1969 Letter from Robert H. North (Executive VP of Milk Industry Foundation) to DMH" and "December 30, 1969 response Letter from DMH to North" found in Papers of D Mark Hegsted: Folder "FNB: Food & Nutrition Board – Advertising Council 2 of 2": Box 15 "Committees" in Countway Library of Medicine Center for History of Medicine, Harvard Medical School, Boston, Massachusetts.

<sup>363</sup> Hugh Schwartz, "the Consumer Point of View on Imitation Dairy Products," pp. 8-9, as found in the binder "ImitationFood1\_1923-1967" in the personal archives of Hutt, Peter Barton.

Recognizing that there was no political or legal means to prevent these new products from being sold, dairy trade groups urged the FDA to establish standards for these milk substitutes that would require them to match the nutritional profile of milk.<sup>364</sup> The growing interest in imitation milk products prompted an editorial by the AMA Council on Food and Nutrition in a June 1969 edition of *JAMA*. In explaining what were “Substitutes for Whole Milk,” the editorial expressed the profession’s frustration with the increasingly byzantine procedures of the FDA’s standards approval system:

The substitution for whole milk represents the dawn of the day of technological manipulation of foods. [...] The speed with which they appear will frequently depend less upon technologists than upon attorneys in industry and government who will have to achieve amendment or repeal of existing food standards of identity.<sup>365</sup>

While the FDA deliberated on how to set standards, companies began test-releasing milk substitute products on the market. Schepps Dairy introduced its polyunsaturated milk product, Poly-Hi, regionally. The product was touted as the first and only fully polyunsaturated milk product. Unlike existing imitation milk products, Poly-Hi was being priced above the cost of regular milk.<sup>366</sup> In a further sign of how far imitation milk had gained government support and legitimacy, in 1969 the US Department of Agriculture, long a stronghold for dairy interests, announced awarding a research contract to Cornell University to study the “wholesomeness, nutritional value, flavor, texture, and functional qualities of approximately 100 imitation milks and their mixes.”<sup>367</sup>

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<sup>364</sup> “Substitute Milk,” *Consumer Reports* (January 1969), pp. 8-11.

<sup>365</sup> “Substitutes for Whole Milk,” *JAMA* Vol. 208, No. 9 (June 2, 1969), pp. 1685-1687. If the intent was that imitation milk offer a healthy alternative to regular milk, the AMA worried that there was no labeling incentive to discourage producers from using coconut oil, seen to be as unhealthy as animal fats in terms of levels of saturated fatty acids. In response to this concern, Ancel Keys was quoted as recommending housewives make their own cream substitutes by mixing corn oil, powdered skim milk, and water in a blender. “Coconut Oil Use in Imitation Milk Products Hit,” *Food Chemical News* (June 9, 1969), pp. 14-15.

<sup>366</sup> “Schepps Introduces Polyunsaturated Milk Item, Poly-Hi,” *Ad Age* (6/9/69), p. 112.

<sup>367</sup> “Ley Previews Imitation Milk Standard,” *Food Chemical News* (July 28, 1969), pp. 32-33.



If the FDA's consideration of opening up the imitation milk market was emblematic of the fall from grace of nature's perfect food, the FDA being forced to accept the legitimacy of "imitation margarine" was practically the precession of the simulacra. In 1964, the Frenchette brand decided to release a "low cal" margarine-style spread, called Demi to capitalize on dieter interest. Because margarine standards of identity required even special safflower-based margarines to have at least 80% fat by law, Demi would be explicitly marketed as an "imitation margarine" to avoid the margarine standards requirements.<sup>368</sup> The FDA seized Demi as an illegal, non-standard margarine. As the then Director of the FDA's Bureau of Regulatory Compliance reasoned:

An old mathematical concept goes like this: 'Things equal to the same thing are equal to each other,' Thus if margarine is in imitation or semblance of butter. By the law's definition, therefore, the so-called imitation margarine is margarine.<sup>369</sup>

The FDA argued that Demi was in effect "purporting to be" margarine. A New York district court, however, sided with Frenchette against the FDA on the seizure noting that there was no law against companies developing imitation margarines should they be willing to have their product carry the label.<sup>370</sup> In some sense the ruling was a sign of how margarine had come to be seen as a legitimate product on its own, not simply an imitation of butter. Demi was also a sign of how far the public's trust in certain FDA enforcement tools, like the imitation label, had fallen. Companies were now seriously exploring the feasibility of marketing imitation products as better than the standard ones.

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<sup>368</sup> "Frenchette's Demi Tested as Low-Cal 'Imitation Margarine'," *Advertising Age* (8/23/65), p. 66.

<sup>369</sup> Speech by Allen Rayfield given to the National Association of Margarine Manufacturers (June 10, 1964), as quoted in "Memorandum to Mr. Austern, Re: FDA Seizure of Imitation Margarine," found in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>370</sup> "FDA Loses Court Test on 'Imitation Margarine' Labeling," *Food Chemical News* (May 9, 1966), pp. 20-21. See also Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., p. 182, on *United States v. 865 Cases ... "Demi"* (1966).

### Reformulating the “Capture Thesis”

In 1971, U.S. economist George Stigler published what would become a canonical paper where he outlined how “as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit.” Among the many examples of this “capture thesis” was butter producers and the way they used the state to affect (suppress) sales of substitute products like margarine and filled-milk.<sup>371</sup> Stigler’s model of regulatory capture rested upon several assumed sources of power – money, political organization and the coherence of trade interests.<sup>372</sup> Ironically, just as he was writing his paper, the dairy industry’s control over public health regulation was being actively and successfully contested. Economists following Stigler’s model could argue that this shift in power was the result of margarine producers’ newly acquired economic influence since WWII, or because their industry was more organized and centralized than dairy producers, and thus better able to lobby. But what Stigler’s model fails to account for is the way in which agrarian notions about food production and traditionalist thoughts about “authentic diets” underlay regulators’ defense of dairy, and natural foods.<sup>373</sup> By the late 1960s,

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<sup>371</sup> Stigler, George J. “The theory of economic regulation,” p. 6. For one critique of Stigler’s account of margarine, see Miller, G. P. “Public Choice at the Dawn of the Special Interest State: The Story of Butter and Margarine.” *California law review* 77, no. 1 (1989): 83–131.

Some legal scholars at the time agreed with Stigler concerns with regulatory capture, particularly in regulation’s consequences, and used it to argue that food standards had similarly constrained the market competition of potentially beneficent foods. Richard thus argued using the case of the “humble soybean” that, despite being high in protein, low in fat, and easily “fabricated into virtually any form to resemble meats and vegetables in texture, smell, and taste,” the FDA’s traditional approach to food standards meant that making healthier substitute peanut butters, ice creams, or mayonnaise would not be marketable. Merrill & Collier. “Like Mother Used to Make,” *Columbia Law Review*, p. 602-603.

<sup>372</sup> The only two alternative explanations that Stigler saw to his “capture thesis” for the appearance of demand for regulation were 1) the view that regulation is instituted for the protection of the public and reflected popular demand for reform, or 2) that “the political process defies rational explanation.” Stigler could have found a fourth explanation in Weber’s concept of the “iron cage,” where rule systems take on an autonomous momentum. Here I argue for a modified, and slightly messier version of Weber’s account. The FDA, though heavily influenced by the food industry, and directly shaped by public health scandals of the hour, had developed over the previous half century a system of legal classification with institutional procedures for scientific advice which at times eclipses both popular and industry influence.

<sup>373</sup> I am arguing here for a need to reevaluate the capture thesis’s simplistic focus on markets and money, and consider the way that health-consciousness and new science knowledge reshape marketplace decision-making and

concern with “affluent diets” put that understanding to question. During this period, nature’s perfect food was displaced by its simulacra, in part because some consumers believed that the artificial was even better than the real thing. This section considers the tactics health food industries used to push the FDA to change its restrictions to reflect this new cultural understanding of food and diet.

The shift in FDA policy during this period was partly owing to a change in staff. In 1966, James L. Goddard, a public health servant hired out of the CDC, took over the FDA Commissioner position from Larrick. “Go-Go” Goddard, as staff called him, actively took on the pharmaceutical industry, initiating a contract with the National Academy of Sciences to run an efficacy review of pre-1962 approved drugs. He was the first “outside man,” hired from outside the FDA, put in charge of the agency and quickly developed a reputation as anti-industry, pro-public interest.<sup>374</sup> One of the signature shifts in style from Larrick to Goddard was an end to the speeches on “health quackery.” Goddard instead launched a series of speeches on consumers and consumerism. In these speeches Goddard emphasized the need to rethink the consumer’s ability to make health decisions for him or herself:

The public is considerably more sophisticated in its ‘health consciousness.’ [...] This is not to say, of course, that we have suddenly become a Nation of health experts, where each and every citizen is capable of diagnosing the difference between fact and fallacy.<sup>375</sup>

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regulation. Even more important, there is a need to explore the ways that industries utilize new scientific knowledge to lobby for changes in regulation.

<sup>374</sup> “Transcripts: William W. Goodrich, Office of General Counsel, 1939-1971,” on the FDA Oral History website, last visited on May 8, 2011: <http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm#Food%20Standards%20--%20William%20Campbell>. “Past Commissioners: James L. Goddard, M.D.,” last visited on May 7, 2011: <http://www.fda.gov/AboutFDA/CommissionersPage/PastCommissioners/ucm113528.htm>

<sup>375</sup> James L. Goddard, “Health and the Consumer” delivered at the annual meeting of the Food Industries of the Nutrition Foundation at Skytop, Pennsylvania (June 8, 1967), as found in the “FDA Speeches” Files in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. Another speech delivered by Goddard to the Democratic Women’s luncheon on May 13, 1968 registers a shift in the politicization of

The FDA, though expressing hesitation about completely opening up the health foods market, was now considering ways to re-regulate it so as to empower this new health consciousness. The agency had begun to explore the possibility of amending the “special dietary foods,” in a variety of areas including vitamin supplements and low calorie or low fat health claims, to allow their distribution to a mass market, but now with informative labeling designed for a generic consumer.<sup>376</sup>

In June of 1966 the FDA issued its “final” revision of special dietary foods. This ruling continued many of the Larrick-era principles in handling special dietary foods, addressing the “four great myths of nutrition,” and shifting from a “minimum daily requirement” standard on vitamin declarations to a “recommended daily allowances” (RDA) approach so as to discourage consumers from thinking they needed to consume some baseline of supplements.<sup>377</sup> The rules had provoked a fierce and negative response from industry. Companies’ first resort was to submit public comments critiquing the agency’s rules. The American Bottlers of Carbonated Beverages asked the FDA to delay the rules on artificial sweeteners until the agency had established its standard on artificially sweetened carbonated beverages. The American Dry Milk Institute objected to the FDA’s exclusion of instant breakfast products from the list of foods that could be fortified. The International Association of Ice Cream Manufacturers said the regulations would effectively ban the sale of artificially sweetened frozen desserts sold for the purpose of reducing body weight. And various pharmaceuticals complained that the vitamin standards did not reflect

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consumption, and also the impacts of the civil rights movement. Goddard referred to “the tragic events of this past Spring,” the MLK assassination, Goddard chooses to educate his audience on the food consumer demographics “The fact of the matter is that we deliver health services in a society that is about 70 % urban. [...] The conditions of life in the inner-city are not what the urban planners of a generation ago envisioned. [...]” “An Agenda for Consumers,” as quoted in an FDA News-release (May 13, 1968), pp. 2-3, found in the “FDA Speeches” Files in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>376</sup> Eugene H. Stevenson, “What is an Informative Label?,” *Journal of Amer. Dietetic Association* (April 1968), pp. 304-307.

<sup>377</sup> 31 *Fed. Reg.* 8521, 8525 (June 18, 1966) as quoted in Hutt, FDCL casebook, pp. 252-253.

the current scientific thinking at the National Academy of Sciences and set arbitrary intake levels. The comments reflected the plurality of food and pharmaceutical industry interests in special dietary foods in the late 1960s.<sup>378</sup> The variety of comments and companies affected by the new rules also portended badly for the FDA. The objections automatically stayed the regulations, and for the next two years the agency would be paralyzed by a flood of criticism on proposed reforms.

A second front for anti-regulation activity was the mobilization of popular sentiment against the agency. The FDA restrictions seemed to feed a common paranoia among avid vitamin consumers that FDA was a pawn for Big Pharma and that its restrictions on vitamin supplements were designed by big pharmaceutical companies at the expense of smaller distributors. Vitamin trade associations published pamphlets which fueled this concern. One colorful example is a fictional skit that the National Dietary Foods Association published in the *Washington Post*. The play was set in “A Dietary Foods Store, one of hundreds of such stores in America,” and featured several customers in dialogue with the store proprietors, alarmed to discover that their favorite products would soon be illegal. The customers drew comparisons between the FDA’s new rules on dietary products and prohibition, and illustrated the absurdity of the FDA’s policy by comparing it to prescribing standard clothes for all women. The play repeatedly framed the debate around the consumer’s freedom of choice and ridiculed the FDA’s positioning as “consumer protection.” In one typical exchange in the script the proprietor notes the FDA’s claim that there is no scientific basis for routine use of vitamins, to which one customer replies: “Must I provide my government with scientific proof that I need something?”

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<sup>378</sup> “Sebrell Says NAS Does Not Concur With FDA’s Regulations on RDAs,” *Food Chemical News* (May 25, 1966), pp. 6-8.

Can't I just want it?"<sup>379</sup> In these trade pamphlets, critics specifically singled out for ridicule the so-called "crepe label," a label statement the FDA would now require on all vitamin products stating that vitamins were not necessary for most people and that the American diet was adequate without such products.<sup>380</sup>

A third way that industry tried to influence regulatory policy was through meetings with the very expert advisors from whom the FDA drew its scientific authority. An interesting example of this can be seen through a series of meetings over the course of the 1960s between the AMA Council on Food and Nutrition and representatives from the Institute of Shortening and Edible Oils. The meetings illustrate how trade associations lobby medical associations and professionals in an attempt to shape policy, but also shows the limits of this strategy.

The Institute for Edible Oils and Shortening (ISEO) was a trade group that represents the refiners of edible fats and oils in the United States, member companies including Proctor & Gamble, Levers Brothers Company, Hunt-Wesson, and other major producers of salad or cooking oils and shortenings. Even though many of its members were benefiting from the public interest in the diet-heart thesis, even switching recipes to low-saturated-fat foods, the ISEO was up until the late 1960s largely focused on maintaining the regulatory status quo bias. Because of the huge impact the AHA-AMA debates were having on their members' business, beginning in 1962 the ISEO started to meet regularly with the AMA's Council on Food and Nutrition with the hope of being able to anticipate any changes in health policy and also express the food industry's concerns. The AMA's interest in the meetings was driven by the association's desire to expand

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<sup>379</sup> Later in the script another customer complains, "There's no use talking to the regulators. They are insulated from reality. If they had worked in this store—*where the action is*—for just a few days, they would have known better." National Dietary Foods Association, "Consumers Present to Congress Their View of the Consumer Protection Features of the Vitamin Volstead Act" published in the *Washington Post* (August 30, 1966), p. A21, as found in the binder "1.SpecialDietaryFoods\_1\_66-7\_66" in the personal archives of Hutt, Peter Barton.

<sup>380</sup> It will be discussed further below in Chapter 3.

its ties with industry, and also to better consider the economic impacts of the new labeling policies being devised by the FDA. In the earliest meetings, the physicians were clearly outgunned in terms of experience with food labeling and common advertising distortions. An August 1965 meeting, for example, started with the AMA members expressing their sincere interest in informative labeling on diet-heart claims. Over the course of the meeting, however, ISEO lawyers revealed many weaknesses in the labeling approach, such as how consumers might read between the lines on specific quantities or mistake a positive declaration on a food label as a license to eat as much of the food as they desire.<sup>381</sup>

The ISEO's arguments were not simply obstructionist. In a September 1965 meeting, trade representatives noted that "most industry members have made the jump from the old lard shortening products to the newer special shortenings." The reservations ISEO representatives expressed were instead about the degree and rate of change labeling might produce. The new shortening formulas were "less stable and do not perform as well," and that, while the technology for increasing the "ceilings on the amount of polyunsaturates that can be placed in a product" was "dynamic" and would likely improve, "this could not be forced overnight."<sup>382</sup> Following the meeting, the AMA Council drafted a letter to the FDA recognizing legitimate concerns that the FDA's proposed rules to allow might "disrupt the current balance between supply and demand for highly unsaturated vegetable oils" and lead to a "'fat power' race whereby each brand would strive for the highest content of polyenoic fatty acids."<sup>383</sup> The

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<sup>381</sup> "Afternoon session -August 5, 1965 - Special Committee Meeting with Dr. White and Dr. Johnson - AMA" as found in the binder, "5.Polyunsaturates3-1965" in the personal archives of Hutt, Peter Barton.

<sup>382</sup> "Memorandum, Re: Summary of Meeting Held in Chicago on September 24, 1965 Between the Special Committee of the [ISEO], and the Council on Food and Nutrition of the AMA...", p. 3, as found in the binder, "5.Polyunsaturates3-1965" in the personal archives of Hutt, Peter Barton.

<sup>383</sup> "COPY - Commissioner Food and Drug," p. 9, as found in the binder "6.Polyunsaturates4-1966-1967" in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

meeting with the ISEO had helped the AMA members to appreciate the dramatic and unintended consequences that a sudden shift in fatty acids labeling might cause for America's food markets.

By 1967, however, many AMA Council members began to show a clearer resolve for labeling and resistance to ISEO arguments to delay reforms. In a meeting between the two groups in February, ISEO representatives and members argued that labeling was neither helpful, nor necessary since industry was already slowly shifting to low saturated fat recipes. In a draft report, at the time, the AMA Council was considering whether to advocate for the creation of some symbol for healthy foods similar to a labeling approach used for animal feedstuff. The ISEO president, Malcolm Stephens, commented that there was a marked difference between farmers as consumers and end consumers: "The farmer is making decisions on a purely economic basis, whereas the Council is concerned with aiding the consumer's health through the individual feeding himself." Mark Hegsted, now in attendance in these meetings on behalf of the AMA Council did not yield to this argument believing that the Council "must start somewhere" and that "the public is pretty well educated already." What's more, Hegsted noted that if he had his way, "industry would be the group to assume the greater burden in this type of education." Stephens replied that he believed "the public is fairly uneducated in this area," though he recognized that "Industry realizes that it is living in a new age. As certain foods are proved to be better for the public, then industry will adjust." Another AMA member presented what he proposed to be a middle tactic, to establish information center for doctors. Discussion then shifted to another compromise approach: compositional labeling without allowing promotional claims.<sup>384</sup>

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<sup>384</sup> "Memorandum, Re: Summary of Meeting Held in Chicago on February 24, 1967 between the Special Committee of the [ISEO] and the Council on Foods and Nutrition of the [AMA]," p. 6-8, as found in the binder "6.Polyunsaturates4-1966-1967" in the personal archives of Hutt, Peter Barton. Stephens had just left the FDA in 1965, where he had been director of the agency's Bureau of Enforcement. He would be the ISEO president through



While the scientists were clearly concerned by the many unintended consequences the lawyers presented them, the more committed advocates of the diet-heart thesis remained committed to doing something. Mark Hegsted surprised the ISEO representatives when he indicated just how large an epidemic of heart disease he believed the nation was facing:

Mr. Meyer suggested that if the Council believes that the best approach is to treat patients with unsaturated diets, the labeling approach is not the best approach to achieve this objective. Dr. Hegsted replied that this depends upon the definition of who is a patient. Mr. Stephens asked whether the Council intends to go beyond doctors, and to go directly to the public. Dr. Hegsted said that he realizes that the Council may not fully agree with him, but that he believes that the information should go directly to the public. Mr. Carlin asked whether Dr. Hegsted was implying that there are 200,000,000 patients rather than just 40,000,000 patients. If this were true, the Institute must re-calculate the amount of linoleic acid necessary to achieve the Council's objectives, and would have to re-assess the impact upon agriculture and the economy. Dr. Hegsted said that he believes, that, at a minimum, all adult men are the population at which a change in the fatty acid composition of the diet- should be directed.

Meeting participants agreed that there were three approaches: 1) the "development of broad classes of special foods" (where the pitfall of variable amounts of linoleic acid from food to food, and thus misleading claims, could be avoided); 2) "detailed compositional labeling"; and 3) forego special labeling and "utilize special information to doctors and dietitians in lieu of labeling."<sup>385</sup>

Despite the ISEO representatives' invocation of caution and their appeals for delay premised on preserving the doctor-patient relation, the members of the AMA Council now

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to 1971, when it was taken over by Goodrich, who was FDA General Counsel at this time. "Obituaries: Mr. Stephens, FDA Official, Dies at 85," Washington Post (Jul. 7, 1992), p. B5. In Chapter 4, I discuss this "revolving door" between the FDA and industry.

<sup>385</sup> "Memorandum, Re: Summary of Meeting Held in Chicago on February 24, 1967 between the Special Committee of the [ISEO] and the Council on Foods and Nutrition of the [AMA]," p. 9, as found in the binder "6.Polyunsaturates4-1966-1967" in the personal archives of Hutt, Peter Barton. The third approach was dismissed by William Darby, the AMA Council chair, since he believed companies would use press to publicize doctor-centered information, thereby making it public and shaping mass markets.

subscribed to a risk factors model of heart disease and were no longer convinced that the diet-heart thesis could be restricted to just patients:

Dr. Darby then noted that well people need more information on product composition, as well as cardio vascular patients. The general public is demanding more and more information. Most of the physicians in the country are promoting special diets. The AHA, in particular, is strongly urging a broad change in the fatty acid composition of the general diet, and these are the specialists in the field and cannot be ignored. The Council therefore feels that the evidence is increasing, and that it is desirable to get more information in the hands of the public.<sup>386</sup>

Another AMA member present noted that since the Council and ISEO met the year before sentiment among medical professionals had changed.

The ISEO meetings had failed to change the minds of the members of the AMA Council. In 1968 the AMA Council would release a statement endorsing the diet-heart thesis for the public.<sup>387</sup>The concerns raised by ISEO representatives, however, would continue to haunt medical professionals, many of who were not entirely comfortable with letting patients take treatment into their own hands. One complaint raised by an ISEO member at these meetings was particularly prescient:

The public simply will not be able to understand compositional information. Moreover, the unfavored industries will take every possible step to protect themselves. They will put compositional information on the label with the hope that the public will become confused, and it is likely that the public will not be able to make an intelligent choice. [...] In general, this is simply putting too much in the hands of the public, which is not qualified to handle these matters.<sup>388</sup>

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<sup>386</sup> *Ibid.*, p. 10.

<sup>387</sup> The FDA decided to defer its decisions on the fatty acids labeling pending completion of a "National Diet Heart Study," a study that never was done. For more on this history, see the chapter, "You gotta have heart," from Marks, H. M. *The progress of experiment*, 1997. A Multiple risk factor intervention trial, or MRFIT, was done instead.

<sup>388</sup> At this point in the 1967 meeting, discussions became heated between Hegsted and those representing ISEO: "Mr. Cooper said that he believes the key to the problem is the economy, and that the Council must consider, in developing a practical program, the necessary economic and agricultural implications [of

Despite these lingering concerns, the FDA had also begun to seriously consider labeling reform as a solution to meeting public demand for diet information. Beginning in 1968 the FDA initiated another round of standards hearings on “special dietary foods” to survey all the positions of industry, medical professionals, and public officials, and to cover topics ranging from the fatty acids labeling debates to vitamin supplements and arguments over whether the average American’s diet was adequate without recourse to fortification and special diets.<sup>389</sup> The hearings, discussed in the next chapter, would be a public relations disaster.

## Conclusion

The popularization of the diet-heart thesis had a dramatic impact on the American diet. According to one industry assessment, in 1957, the year of the AHA’s first Diet and heart disease Report, animal fats represented about 45% of the total edible fats and oils consumed in food products, and the remaining 55% were vegetable fats. By 1966, less than a decade later, that proportion had shifted to 67% vegetable fat and 35% animal fats, and one trade association

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increasing demand for soybean linoleic oils over animals fats].” Dr. Hegsted replied by saying that 50% of all Americans today die from heart disease. He asked how long the American public will wait before doing something about this. Mr. Meyer replied that it is essentially a question of whether it is better to let this change in the fatty acid composition of the American diet evolve, or attempt to make an abrupt change.” One of the AMA Council members backpedalled, stating “the Council does not wish to change the dietary habits of the entire population, but rather just of potential coronary patients. The doctor is in the best position of evaluating exactly who constitutes potential coronary patients. [...] There is, however, insufficient information to show that every member of the public, including small children, should have a highly unsaturated diet. She commented, however, that she is probably the most conservative member of the Council in this respect.”

Darby then adopted a neutral stance by arguing that the Council was unqualified to consider economic impacts, and would limit its considerations to only the public health ramifications. “Memorandum, Re: Summary of Meeting Held in Chicago on February 24, 1967 between the Special Committee of the [ISEO] and the Council on Foods and Nutrition of the [AMA],” as found in the binder “6.Polyunsaturates4-1966-1967” in the personal archives of Hutt, Peter Barton

<sup>389</sup> Physicians’ interest in special diets as a treatment for heart disease continued to be framed by slow developments in the drug industry. By the late 1960s, preventive cardiologist Jeremy Stamler questioned whether changing Americans’ diet was even a feasible solution to the emerging CVD epidemic, but saw new pharmaceuticals as a more probable and promising solution. “Diets Not Part of Human Nature Drs. Say, In Urging Drug Use,” DTN (July 3, 1967), p. 41, as found in the binder “6.Polyunsaturates4-1966-1967” in the personal archives of Hutt, Peter Barton.

reported “This trend is continuing.”<sup>390</sup> Similar prognostications were being made with low-calorie soft drinks. A trade journal report at mid-decade noted that with only a few years on the market, artificially sweetened sodas had already captured 10% of the soft drink market, and some companies like Pepsi projected it would grow to 35% by 1970.<sup>391</sup> Much of this shift occurred backstage, in production, with industry adjusting its recipe formulas in anticipation of consumer demand. But much of it was a consequence of changes in consumer purchasing patterns, driven by the new marketing campaigns and popular press of scientific reports on preventing heart disease. By the end of the sixties, consumers were clamoring for more and better information on food products’ nutrition profiles, so that health conscious shoppers could exercise their own risk calculus in daily purchases.

The FDA’s response to the new diet foods and marketing campaigns could be characterized as the classic problem of trying to fit a square peg in a round whole. The FDA’s food standards system was born of a Fordist era that imagined a unified mass food market, albeit with special exceptions. As regulators reasoned, most Americans ate a pretty common diet of staple, whole foods. They therefore believed a standards system designed to render common foods “simple” and “legible” would be a fair and manageable way to maintain order in a food market increasingly threatened by industrial change.<sup>392</sup> The new diet foods, on the other hand, were born to a new postwar model of market segmentation, cultivating niche consumerism and product diversification. Yet to call the confrontation between the FDA policy and the new diet foods a “mismatch” is to miss the productive nature of the clash between the older regulatory

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<sup>390</sup> “November 22, 1967 Letter from Malcolm R. Stephens (President of the Institute of Shortening and Edible Oils) to Ancel Keys,” found in Binder “4. Polyunsaturates, 1966–1967” of Peter Barton Hutt’s Personal Archives at Covington & Burling.

<sup>391</sup> Ted Sanchagrin, “Battle of the Brands: Soft Drinks,” *Printer’s Ink*: p. 23.

<sup>392</sup> Here I deliberately invoke James Scott’s analytic language of “simplification” and “legibility” to allude to how this strategy in state control has a longer and broader history. Scott, *Seeing like a state*, 1999.

system and the newer understanding of food and risk. Food companies design food for regulatory regimes, not despite them. The new low-cal sodas and soft margarines were developed to exploit a margin of innovation and competitive advantage at the edges of regulatory boundaries. Food standards provided the structure and constraints within which industry sought to define its market segments.<sup>393</sup> The diversification of “taste” through the diversification of new product lines was a strategy companies were increasingly using in this “affluent society,” to create demand when consumers already had “the basics.”<sup>394</sup>

One important facet of that strategy of diversification was the widespread consumption of science. Science here had a double action in shaping public policy, acting through the media and thereby influencing public opinion on what was “good to eat,” and acting institutionally by directly shaping FDA policy. The 1960 AHA report—the subsequent “cholesterol controversy” news coverage of it and advertising appropriations thereof—helped to steer thousands of Americans to vegetable oil and margarine aisles of the supermarket, and through that fad ensured that the FDA had to take seriously the consideration of this new diet claim. When doctors disagreed, the FDA had to decide, and erred on the side of maintaining the status quo. But the FDA’s authority as an institution built on scientific expertise also made it particularly accountable to science organizations. Accredited professional groups like the AHA and AMA held a special influence on FDA policy. As medical associations increasingly came to endorse the diet-heart thesis, the FDA’s hesitation was due not so much to its distrust of these organizations as to the clash of frames between the new scientific conceptualization of risk (all

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<sup>393</sup> This is why trade associations like the ISEO were unsure about whether back progressive calls for new rules on fat labeling, to risk the dramatic change in the market which FDA-sanctioned composition labeling would have brought, even while they continued to support their trade constituents’ borderline ads.

<sup>394</sup> For a wider context of market segmentation in the 1960s, cf. Cohen, *Consumers’ Republic*, 2003.

people are potentially at risk, not just the ill)<sup>395</sup> and the agency's existing legal convention and compartmentalization of "foods" versus "drugs."<sup>396</sup>

The diet-heart thesis and the new diet foods also had a dramatic impact on notions of the American consumer. A shift occurred in this decade in the conceptualization of food information, particularly diet information, and consumerism more broadly as democratic rights (of the public), and not just privileges (of elite experts). In March of 1962 President John F. Kennedy presented a message to Congress declaring a "Consumer Bill of Rights." Among the rights that Kennedy espoused was "the right to be informed," or what would later popularly be called the "consumer's right to know."<sup>397</sup> The focus on labeling in the 1962 Kefauver-Harris Amendment mentioned above was not limited to pharmaceuticals, but became a common policy approach to addressing concerns over consumer trust across sectors. In 1964 Congress passed the Fair Packaging and Labeling Act, which, though focused mostly on weights and measures fraud, would dramatically standardize food packaging practices, and a year later, in 1965, the Tobacco Labeling Act, which started the long and problematic history of cigarette labeling.<sup>398</sup>

In the message Kennedy laid out the ideological foundations for why this new consumerism would be, at its core, a truly democratic endeavor: "Consumers, by definition,

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<sup>395</sup> Cf. Dumit, J. "Drugs for life." *Molecular Interventions* 2, no. 3 (2002): 124.

<sup>396</sup> Thus "boundary work" is not an adequate explanation here as to why the FDA came to change its procedures. Throughout the debate the FDA respected the credentials of the AMA as a legitimate scientific organization, and yet even when the AMA came around to advocating the diet-heart thesis, the FDA felt its hands were tied on food labeling. For the FDA, the difference between foods and drugs was not just a difference in the epistemological status of foods as safe or risky. It was also an institutional concern over what was the most expedient means to control the spaces of consumption. Cf. Silbey and Ewick. "The architecture of authority," pp. 77–108. The marketing of foods as healthy or unhealthy broke down the institutionally segregated spaces of drug markets and food markets.

<sup>397</sup> This right Kennedy articulated as the right "to be protected against fraudulent, deceitful, or grossly misleading information, advertising, labeling, or other practices, and to be given the facts he needs to make an informed choice."

<sup>398</sup> Allan Brandt describes how cigarette labeling was eventually put to use by industry to blame smokers or their "knowledgeable assumption of risk" and thus personal responsibility for health problems. Brandt, *The Cigarette Century*, 2007.

include us all.”<sup>399</sup> One popular treatise on American advertising put it in starker terms: “The American citizen’s first importance to his country is no longer that of a citizen, but that of a consumer. Consumption is the new necessity.”<sup>400</sup> The turn to product labeling in many ways continued a much older progressive movement concern with liberal protections on “market transparency.” But it also portended the beginning of a new understanding of who was the “ordinary” consumer. The new consumer was one that could not only handle more (health) information, but demanded it. The turn to labeling would become a reframing of individual and governmental responsibility and of the public-private divisions of labor for maintaining healthfulness.

While the trend in this decade was towards a politicization of matters of food and diet, the fact was that most of the debates in this chapter occurred within a small community of actors. Aside from the food product ads and science reports that appeared on TV or in popular journals, these public policy debates about labeling did not engage the public directly, much less invite the public’s feedback. (Indeed, the public in this chapter was largely present only as consumers acting through their purchases.) This would soon change. At the close of the decade, a series of public scandals would make nutrition an urgent and visible matter of national concern. The scandals would transform the FDA and ultimately even bring the “standards of identity” regime to an end.

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<sup>399</sup> Cohen, *Consumer’s Republic*, 2003, p. 345.

<sup>400</sup> Otis Pease, *The Responsibilities of American Advertising* (1958), as quoted in Young, *Medical Messiah*, p. 145.

## **Chapter 3**

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### **Transitions:**

**Hunger, Affluence, and the Politics of**

**Institutional Accountability**

**1968 – 1972**



*It is not necessary to advertise food to hungry people, fuel to cold people, or houses to the homeless.*

— Kenneth Galbraith, *American Capitalism*, 1953.<sup>401</sup>

*Poverty is not a uniquely American disease, but Americans have a uniquely optimistic way of dealing with it. In the twenty years from the end of World War II to the mid-sixties, we hid our disease in the attic of the national consciousness and almost convinced ourselves that it did not exist. We concealed it with phrases like “the affluent society” and “the highest living standard in the world,” and we covered it with booming production, consumption and employment statistics. We exported the goal of American prosperity to under-developed nations. But poverty would not be concealed.*

— Committee on School Lunch Participation, *Their Daily Bread*, 1968.<sup>402</sup>

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<sup>401</sup> In the chapter from which this quote is extracted, “The Unseemly Economics of Opulence,” Galbraith is arguing against the tendency to describe all economic activities as serving some necessary end, but rather, as he later argues in *The Affluent Society*, analysts need to recognize that America’s luxurious economy has fundamentally changed the relationship between producer and consumer in questions of meeting needs and wants. Interestingly, Galbraith repeatedly uses, to great humorous effect, the example of the cigarette ad to illustrate the “wasteful” qualities of the new economy:

“Not even the genius of the adman has been wholly equal to the task of proving that the paper, ether and skills employed in, say, cigarette advertising are related to any urgent public need. As with cigarette advertising so, presumably, with highway billboards, redundant service stations, glossy packages, bread that is first denatured and then fortified, high-pressure salesmanship, singing commercials and the concept of the captive audience. All, in one way or another, are apparently the result of incentives which guide the energies of men not toward but away from maximum social efficiency. Few would insist that the activities are in response to any very pressing desire of the American people. This is the criterion of efficiency of the competitive model. By this standard the American economy is undoubtedly a wasteful one.”

Galbraith, J. Kenneth. *American capitalism: the concept of countervailing power*. Transaction Publishers, 1993, pp. 96-97.

<sup>402</sup> The opening from one of a series of reports, discussed below, which received enormous publicity in 1968, and which made the continued existence of hunger in America a national issue. Jean Fairfax, Chairman. Committee on School Lunch Participation, *Their Daily Bread*, Atlanta, Ga., McNelley-Rudd Printing Service, Inc.

In 1970, noted anthropologist Margaret Mead published an article in the popular science journal *American Scientist* entitled “The Changing Significance of Food,” in which she described dramatic changes taking place in the world’s foods supply and the ways that Americans’ understanding of food and its cultural meanings were being transformed by new production systems and a new sense of global responsibility for food, diet, and health. The essay, written in the midst of a public scandal on the so-called discovery of hunger in America, was an effort to tie together the disparate food and agricultural, and domestic and international nutrition policy concerns that were flooding Americans’ television sets, to make sense of how hunger could exist in a land of affluence. In particular, Mead singled out two root causes for this new understanding of food, “the increase in the diseases of affluence and the growth of commercial agriculture,” and argued that these trends disguised continued problems with basic nutrition and food provisioning:

We began manufacturing, on a terrifying scale, foods and beverages that were guaranteed not to nourish. The resources and the ingenuity of industry were diverted from the preparation of foods necessary for life and growth to foods nonexpensive to prepare, expensive to buy. And every label reassuring the buyer that the product was not nourishing increased our sense that the trouble with Americans was that they were too well nourished.<sup>403</sup>

Here her reference to the foods “guaranteed not to nourish”—convenience foods, but also low-cal, low-fat foods—served as a critique of the way that agribusiness had tackled the changing burden of diet-related disease, engineering novel foods and new markets. For Mead the problems of hunger *and* overeating were both problems with the just distribution of whole foods (rather

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<sup>403</sup> Mead, Margaret. “The Changing Significance of Food,” *American Scientist*, Vol. 58, Iss. 2 (March 1970): 176-181. Part of her critique rested on tearing down the modern divide between city and rural: “There were indeed always conflicts between the needs of farmers to sell crops and the needs of children to be fed.” On the longer divisions between the rural poor and urban affluent, see Williams, R. *The country and the city*, 1975.

than adequate production of foods and nutrition), and could only be solved by holding public and private institutions accountable.

Mead's article marks a particular moment in American history when food and nutrition, hunger and affluence were front and center on the public stage. These discourses can be understood within a longer dialectical history of narratives of abundance and excess framed in counterpoint to narratives of scarcity and hunger that one could trace back to at least Thomas Malthus's time.<sup>404</sup> But there are several distinctive features to this late 1960s, early 1970s transitional moment: its global dimension, a transition occurring in the framing of economic and class concerns and consumerism more broadly, and the nutrition profession's first brush with an organized public actively interested in food politics. Mead noted this new emerging ethic—"We are just beginning to develop a world conscience"—and commented on how television and new media were making other people's poverty visible and more strikingly in contrast to our affluence.<sup>405</sup> What's more, modes of production had gone global, and Americans' eating habits and agricultural policies now had consequences for other countries:

We live in a world today where the state of nutrition in each country is relevant and important to each other country, and where the state of nutrition in the wealthy industrialized countries like the United States has profound significance for the role that such countries can play in eliminating famine and providing for adequate nutrition throughout the world.<sup>406</sup>

Mead, here, was not only tapping into a new global awareness and immediacy of poverty in other countries, but also a particular teleology of progress and modernization.<sup>407</sup>

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<sup>404</sup> Warren Belasco describes Malthusian debates in the 1790s, 1890s, 1920s, late 1940s, 1960s, the period described here, and 1990s. Belasco, Warren. *Meals to Come*. University of California Press, 2006.

<sup>405</sup> Mead, "The changing significance of food," (1970).

<sup>406</sup> Mead, "The changing significance of food," (1970).

<sup>407</sup> Gupta, A. *Postcolonial developments: Agriculture in the making of modern India*. Duke Univ Pr, 1998.

This chapter explores how such associations were built between epidemics of excess and scandals over scarcity by looking at a series of institutional crises in the late 1960s which would directly affect the FDA's food labeling policies: 1) the protracted standards of identity hearings for special dietary foods, 1968–1971, 2) the “Hunger in America” reports which culminated in the 1969 White House Conference on Food, Nutrition, and Health, and 3) a cyclamate scare late in 1969 followed by the artificial sweetener's removal from the FDA's list of acceptable food additives. The sudden attention that these events turned on the FDA and the nutrition profession, and the polemics that surrounded them, would ultimately engender both a weariness with government and a redefinition of food as a vehicle for personal health. The public scandals served as a kind of “shock of recognition”<sup>408</sup> for both the nutrition profession and FDA regulators of the changing nature of Americans' diets, consumerist values, and popular notions of acceptable risk and institutional responsibility.<sup>409</sup>

### **The “Special Dietary Foods” Standards of Identity Hearings**

To address the many labeling challenges posed by new diet products, between 1966 to 1968 the FDA floated various drafts of its proposed “regulations for foods for special dietary uses,” and what the agency held to be the valid grounds and procedure for modifying them. On May 7, 1968, after nearly two years of hedging, the FDA began its pre-hearing conference to initiate the food standards hearings process and determine the format and list of all concerned parties relevant to the revisions of “special dietary” food standards. David H. Harris, an FDA

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<sup>408</sup> “Shock of recognition” is Hermann Melville's phrase. I thank Leo Marx for bringing it to my attention.

<sup>409</sup> Many food studies authors today wrongly credit this late sixties, early seventies period for politicizing food, diet, and health issues. As my dissertation shows, debates over food, diet and risk had been ongoing since at least the postwar period. I argue here, however, that the heated public debates and focused institutional attention during this period brought to the political front-stage what had been, at least since the Great Depression, a largely backstage debate among interested experts. In doing so, they opened this smaller circle of experts up to new voices and popular sentiments on diet, food, and nutrition, thereby transforming the policy conversations.

staffer, served as the FDA Hearings Examiner to officiate the hearings, while Robert N. Anderson, an FDA attorney, would officially represent the FDA in the hearings to make its case in favor of the proposed standards. The proposed changes would cover a wide array of diet products, including vitamin and mineral supplements, fortified foods, artificial sweeteners, and foods for weight control. Its most controversial provision would be the so-called “crepe label,” a proviso required on all enriched foods and vitamin supplements which reinforced the FDA’s policy that such foods were not necessary for the ordinary, healthy American.

The first week of the prehearings signaled the contentious nature of setting standards for dietetic products, as well as the diversity of interests that would be involved. Perhaps more significantly, the prehearings gave just a small taste of the tedious and lawyerly process that food standards hearings could become. At just the pre-hearing conference, May 7-June 4, there were more than 100 attorneys representing almost as many clients, each with their own particular issues. The lawyers alone nearly filled the first 15 rows of the auditorium of the Department of HEW. Hearings Examiner Harris logged 69 official appearances (participants) on just the first day (May 7), of which only five were consumers “who asked to take part in the hearings just for themselves.” The rest were representatives of the food and drug industries.<sup>410</sup> Because the category of “special dietary” foods touched upon a broad base of products, and because of industry restructuring around new diet foods and supplements, industry interest groups ranged from farmer coops and food trade organizations to pharmaceutical companies and health food lobbyists. By the end of the pre-hearings the official number of “appearances” or participants had

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<sup>410</sup> These included: Abbott, AMA, California Cannery and Growers, Cereal Institute, Carnation Co., Corn Products Co., National Association of Frozen Food Packers, Mead Johnson, Quaker Oats, Federation of Homemakers, General Foods, General Mills, Hoffman LaRoche, Milk Industry Federation, Kellogg Co., Sugar Association, Merck & Co., Miles Laboratories, National Cannery Association, Kraft Foods, National Health Federation, National Soft Drink Association, Nutrilite Products, Inc., Sunkist Growers, Swift & Co., Tropicana Products, Inc., Vita Foods Company. “Dietary Food Pre-Hearing Conference Enters Argument Stage,” *Food Chemical News* (May 13, 1966), p. 20.

risen to 108, and the Hearings Examiner conservatively estimated that the actual record of the hearings would run to over 30,000 pages.

The hearings very quickly became ensnarled by industry tactics to obstruct the FDA's procedures with calls for further delay, and the FDA's proposed policies became fodder for colorful political commentary and scapegoating. The first motion the FDA considered was a request by the attorney for Carnation Co. to suspend the hearings until the National Research Council released its update on the United States Recommended Daily Allowances (RDA).<sup>411</sup> Harvard nutritionist Fredrick Stare wrote a letter to the FDA, published in a trade journal, similarly calling for a delay until the new RDAs were released.<sup>412</sup> The political showboating that surrounded the hearings did little to move them along. Then California Governor Ronald Reagan cited the dietary regulations as yet another example of how the FDA was destroying the freedom of industry to run its own affairs. Commenting on the special dietary hearings at a meeting of drug manufacturers in June of 1968, Reagan said:

Now, ... it is on the march against vitamin pills. It wants to force industry to put a notice on every bottle of vitamins that you don't need vitamins if you get enough food. If I feel better taking a little vitamin C to ward off a cold, government can keep its sticky labels off my pill bottles. Don't take the regulatory threat lightly. For whether freedom is chipped away bit by bit, or slashed away in one bold legislative stroke, the end effect is the same.<sup>413</sup>

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<sup>411</sup> "Arguments Are Scheduled on Motion to Suspend Hearing," *Food Chemical News* (May 13, 1968), p. 22  
"Second Week of Pre-Hearing Conferences on FDA's Vitamin-mineral Regs Indicates Effective Date by Mid-1970 of Later, Depending on Courts," *F-D-C reports* (May 20, 1968), p. 13

<sup>412</sup> "Dr. Stare's Letter to FDA Vitamin-Mineral Hearing Examiner Harris," *F-D-C Reports* (July 8, 1968), 17. The AMA Food and Nutrition Council was considering whether to send a similar request for stay on the hearings. "October 4, 1968 Memorandum; To: Members of the Council on Food and nutrition" Found in the William Darby Papers at the Eskind Biomedical Library Historical Archives, Vanderbilt, Nashville, Tennessee. Stare along with William H Sebrell, another prominent nutrition scientist discussed below, would both testify in Congress in May of 1968 that the FDA hearings were "premature." "Stare, Sebrell Tell House Unit FDA Hearings Are Premature," *Food Chemical News* (May 27, 1968), p. 27.

<sup>413</sup> "FDA Says New Drug Clearance May Be Necessary for High-Level Vitamins," *Food Chemical News* (June 24, 1968), p. 34.

To make the case against any intrusion by government into personal choices (and markets for food and drug products), Reagan mobilized this slippery slope appeal to characterize even seemingly broad and innocuous official statements on product labels as a kind of government coercion. (The politics of the label were likely being shaped by parallel debates taking place then around cigarette labeling. In particular, the passage of the Public Health Cigarette Smoking Act of 1969 introduced warning labels for cigarette cartons, a move that would fuel even more heated and strident criticisms about the government's interference in personal liberties, risk-taking, and responsibility.<sup>414</sup>) This would be one of numerous accusations against the FDA during the election year of 1968, which singled the agency out as an example of how federal regulators allegedly infringed on individual liberties on seemingly trivial everyday choices like dietary supplements.

The procedure was also the target of scrutiny and protracted hearings, the principal dispute centering on the question, "Should the hearing be structured in the framework of a fact-finding or adversary proceeding?"<sup>415</sup> The FDA settled the issue in favor of a fact-finding procedure, though the ultimate format chosen foretold a long hearings schedule ahead. The final procedure would be direct examination of each witness called by a sponsoring participant (e.g. FDA, USDA, food company), followed by cross-examination by other participants, re-direct by the sponsor again, and cross again; while only one representative of any participant was allowed to examine a witness, all participants were entitled to cross-examine all witnesses. The FDA alone announced it would call ten witnesses. With around one hundred other participants, and participants each calling multiple witnesses, it was clear the hearings would carry into the following year. Envisioning such a protracted process, the FDA chose to divide the hearings into

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<sup>414</sup> Cf. Brandt, A. *The Cigarette Century*, p. 258.

<sup>415</sup> "FDA-Industry Split on Nature of Hearing Discussed" *Food Chemical News* (August 12, 1968), p. 9.

two separate areas of discussion— 1) vitamin-mineral, 2) artificial sweetener— in part an acknowledgement that it was the so-called “crepe label” on vitamins that was generating the bulk of the polemics.<sup>416</sup>

Once the actual hearings got underway, in June, it became clear that witnesses might face intense grilling by multiple attorneys. One early example was the FDA witness Arthur Grollman, a professor of experimental medicine at the University of Texas Southwestern Medical School. Grollman spent three full days testifying, and cross-examination was still not complete by the end of July. At one point during cross-examination by an industry lawyer, Hearings Examiner Harris complained that, “You’re trying the patience of a saint.” Forty percent of Grollman’s cross-examination time, totaling almost twelve hours, had been taken up by members of just two groups, the Federation of Homemakers and the National Health Federation, the former represented an informal network of self-described ordinary housewives that had been active in past food standards hearings, the latter an alternative health food industry lobby group that had been very active in protesting regulations on dietary supplements.<sup>417</sup> The representative for the National Health Federation, Miles Robinson, would take a particularly active and aggressive inquisitorial role throughout the hearings. In addition to the FDA and USDA witnesses, industry participants had prepared to call 271 witnesses, including Nobel Laureate Linus Pauling and many prominent nutrition experts, such as Jean Mayer, Paul György, and William Darby.<sup>418</sup> Given the unanticipatedly protracted nature of the witness testimony, the costliness of the proceedings also became another ground for protest. By the end of 1968, one pharmaceutical company attorney called the hearings a “war of attrition or trial by ordeal,” calling for the FDA

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<sup>416</sup> Ibid.

<sup>417</sup> “Identity Standards & Limitations on Maximum Content Needed to Protect Consumers...” *F-D-C Reports* (July 22, 1968) p. 16.

<sup>418</sup> “FDA and Agricultural Staffers to Launch Govt. Vitamin-Mineral Testimony; Opponents List 271 Witnesses, FDA Says ‘Cost to Consumers’ Not An Issue,” *F-D-C Reports* (June 10, 1968), p. 19-21.



to suspend them until the agency figured out a better way to address the many problems raised by industry and scientists.<sup>419</sup> A 1970 exposé on the FDA determined that the agency had, over the course of two years, spent nearly \$200,000 on the special dietary hearings, compiling 26,000 pages of testimony, and committing thousands of FDA staff-hours to them.<sup>420</sup> The exposé echoed the sentiments of critics on both of the left and the right that the hearings represented the agency's excessive and unnecessary wastefulness and inefficiency.

The frustration of the scientists called to testify quickly became apparent. During cross-examination in his testimony in August, Paul György, the discoverer of Vitamin B6, was angered by questions concerning his personal stock holdings. Miles Robinson defended having raised the questions by noting that opponents to the FDA regulations, "have a right to know what pressures" might be influencing the witnesses. After the questioning, György, angered by the insinuation that his professional objectivity might be influenced by a financial conflict of interest, vowed he would never return to give further testimony in an FDA hearing. Hearings Examiner Harris expressed fear that the incident might deter other expert outsiders from testifying, a particular concern given that the FDA had no subpoena power and witnesses were thus appearing voluntarily.<sup>421</sup> An even more dramatic incident occurred on December 10th, when government witness, Herbert Pollack, a nutrition researcher for the US military's Institute for Defense Analyses, walked out of the hearings in the middle of his cross-examination. (Pollack was being questioned about the relevance of a current scandal over "Hunger in America," discussed below, to FDA policies on vitamin-enrichment and supplements labeling.) Pollack

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<sup>419</sup> "Lawyer Asks FDA to Make Revisions in Dietary Food Regulations," *Food Chemical News* (Sept. 2, 1968), p. 19.

<sup>420</sup> Figures coming from Turner, J. S. *The chemical feast: the Ralph Nader study group report on food protection and the Food and Drug Administration*. Grossman Publishers, 1970, as cited in Apple, *Vitmania*, p.137.

<sup>421</sup> "Dr. Paul György Says He'll Never Testify Again at Vitamin-Mineral Hearings After Questioning About Stock He Owns," *F-D-C Reports* (August 12, 1968), p. 15. By this point in the hearings, György was only the eighth witness to be called, and only the third to fully finish his testimony. György conceded that he owned stock in American Home Products.

wrote a letter to Commissioner Ley later the same day asking him to revise the hearings format so as to avoid imposing “the burden of legalistic tribulations upon honest scientists who are trying to establish the truth” Pollack felt he “fell into a trap of impatience and annoyance” at the hearings, and he decried “the extraordinary waste of time by the multiplicity of lawyers whose objective seems to be to obfuscate the truth and to extend the hearing time as long as possible.”<sup>422</sup>

The incident clearly left an impression on the FDA staff. Shortly thereafter, in January of 1969, Harris ordered all testimony to be delivered in written form, thus shortening witnesses’ time on the stand and reducing the probability of surprise lines of questioning.<sup>423</sup>

The substance of much of the hearings hinged on what consumers would make of the FDA’s proposed labeling requirements. In particular, industry, and some sympathetic nutrition scientists, were up in arms about the following proviso that the FDA was considering for labels on all vitamin-mineral supplements:

Vitamins and minerals are supplied in abundant amounts by commonly available foods. Except for persons with special medical needs, there is no scientific basis for recommending routine use of dietary supplements.<sup>424</sup>

The FDA’s intent was to use the statement as a corrective to misleading vitamin puffery, but to still allow manufacturers to market certain approved products. Critics referred to the vitamin proviso as a ‘crepe label’, likening it to a label the FDA imposed on substandard products that stated ‘below U.S. standard, low quality but not illegal’. The veracity of the FDA’s required statement became the subject of repeated cross-examination, and differences of opinion emerged

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<sup>422</sup> “Walkout by Govt. Vitamin Hearing Witness Explained in ‘Dear Herb’ Letter to Ley,” *F-D-C Reports* (December 16, 1968), p. 12-14. Pollack was being questioned about his position on the *Hunger—U.S.A.* report, discussed in greater depth below.

<sup>423</sup> “Harris Orders Written Direct Testimony in Dietary Hearings,” *Food Chemical News* (January 27, 1969), p. 25.

<sup>424</sup> “FDA Fact Sheet: Regulations for Foods for Special Dietary Uses” Found in the personal archives of Peter Barton Hutt, Private library of Covington & Burling Law Firm, Washington, D.C., as found in binder “9.SpecialDietaryFoods5-1967-1969” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. cf. Apple, Vitamania, pp. 131-140, on the crepe label.

among experts over all three portions of the label: whether consumers were foolish for seeking routine use of supplements, whether vitamins should only be for people with special medical needs, and whether vitamins were in fact adequately supplied by America's food supply.

Disagreement among nutritionists over what it was that consumers want, or ought to want from vitamins and vitamin enriched products made for the most colorful and poignant moments of testimony and cross-examination, and revealed the extent to which experts were divided as to whether consumers could be trusted to evaluate these special dietary products. The FDA's witness Arthur Grollman argued that the FDA's proposed regulations and labeling requirements were an effective way to protect gullible consumers "from wasting [their] money and buying something that (they) are going to pour out into the sewer." Indeed, Grollman felt that his own patients were "truly very ignorant, and have many misconceptions about their [vitamins'] complete nature, often claiming they do things which I know scientifically are not possible... they have a considerable amount of misknowledge, which they hold to dogmatically."<sup>425</sup> Under cross-examination, however, the counsel for pharmaceutical company Hoffman LaRoche drew upon Grollman's own 1965 paper, "Efficacy & Therapeutic Utility of Home Remedies," to force Grollman to concede a need for multivitamins for certain vulnerable populations, including infants, pregnant women, and sick patients. The testimony reinforced the FDA's case that there was a distinction to be drawn between ordinary consumers and "special" cases for whom the label was not intended to be a deterrent.<sup>426</sup>

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<sup>425</sup> Grollman was particularly dismissive of Linus Pauling's endorsement of a growing popular practice of vitamin megadosing. Grollman noted that Pauling is not an MD, and said Pauling was "talking through his hat" when he advocated large doses of ascorbic acid to ward off colds. He added that Pauling's "opinion there is no better than the governor's," referring to Ronald Reagan's claims. "Identity Standard & Limitations on Maximum Content Needed to Protect Consumers..." *F-D-C Reports* (July 22, 1968), pp. 15-16.

<sup>426</sup> The "ordinary consumer" standard could be contrasted with stricter regulatory enforcement standards for special or marginal cases, such as the standards for "special dietary foods" that I mentioned above, or the FDA's emerging concern during this period with labels targeting pregnant women. Gardiner Harris, "It Started More Than One Revolution," *New York Times* (May 3, 2010), p. D1. For a discussion of how the FDA's concern with the

Yet if Grollman hoped that the label would deter ordinary though foolish consumers from unnecessarily purchasing vitamins, others worried the label gave the false impression that people could eat whatever they like and still get proper nutrition. It was with this concern in mind that William H. Sebrell, Jr., director of the Institute of Nutrition Sciences at Columbia University who testified in his capacity as the head of the AMA's 1968 revision of the Recommended Dietary Allowances (RDA), complained "special medical needs" was not well defined, and that there were certain other people, "because of various stress situations, ignorance, carelessness or for economic reasons," who might rightfully wish to use supplements.<sup>427</sup> In one line of questioning, FDA counsel Robert Anderson sought to have Sebrell elaborate on this opinion if only to discredit it:

Anderson: [...] Do I understand you are still in favor of a diet supplement for a person who is a careless eater and doesn't want to worry about whether his diet is adequate?

Sebrell: Yes. I think this applies to a large number of people. I think there are very few of us -- probably few of you in this room, who eat because of nutrient demands, or you think you need some vitamin or something. I think the tendency rather is to eat what you like, and you don't much care or pay attention to whether this is nutritionally adequate or not. Sebrell went on to point out the "elderly" as one kind of careless consumer, and conceded that the "ignorant person" might be another. Anderson then read from a prominent nutritionists' booklet that, "Vitamin supplementation, however, ought to be used only until such time as faulty food habits have been corrected. It is extremely important that teen-agers be taught the

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"exceptional consumer" has shaped its policies on food safety and cheese production, see Paxson, "Post-Pasteurian Cultures," p. 36.

The international character of the witnesses' expertise also surfaced. When the Miles counsel quoted from Grollman's book, *Pharmacology & Therapeutics* (1965), Grollman noted that the book was written for worldwide circulation, and that statement was geared towards "particularly in underdeveloped countries like India, Japan, and Korea... What I say applies to those areas, not here." "Grollman Adheres to 1965 Paper on 'Home Remedies'." *F-D-C Reports* (July 22, 1968), p. 18.

<sup>427</sup> "Written Direct Testimony of American Medical Association Witness William Henry Sebrell, Jr., In the Matter of Revising the Regulations for Foods for Special Dietary Uses for the Food and Drug Administration," pp. 17-18 (1970), found in the personal papers of William Darby, Eskind Biomedical Library > 2.WJDarby\_Series1\_Box13.

importance of proper nutrition. Do not use vitamin supplementation in an effort to justify or excuse laziness.”<sup>428</sup> Anderson thus noted that Sebrell’s justification of vitamins to compensate for laziness ran counter to the nutrition profession’s goal to advocate for a balanced diet. It was one of several moments where the problem of what was an “ordinary” diet became an exercise in considering the many different personal lifestyles or demographics that were lumped together in the “ordinary consumer.”<sup>429</sup> The incident also highlighted the nutrition profession’s common slippage between descriptive versus prescriptive constructions of “the consumer.” Nutrition scientists were not only being called upon to testify to facts about what an “ordinary” consumer actually ate, but also to their professional opinion about what a healthy consumer ought to eat.

Following Sebrell’s testimony was Sidney Weissenberg, an assistant to the FDA’s Associate Commissioner for Compliance. Weissenberg described Sebrell’s statement to be “erroneous,” and to misunderstand the specific legal terminology at work in distinguishing between dietary supplements for “food use” versus products intended for “therapeutic use.” He explained the confusion by observing that “Dr. Sebrell is a nutritionist, not a lawyer, not an enforcement official,” and thus not qualified to understand these subtleties. Weissenberg himself was scrutinized for the way he and the FDA claimed to speak for the consumer. Earlier the Hearings Examiner had barred Weissenberg from attempting to “discuss what is in the minds of consumers generally,” noting that he was “neither a psychologist nor [had he] conducted national

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<sup>428</sup> “Written Direct Testimony of American Medical Association Witness William Henry Sebrell, Jr., In the Matter of Revising the Regulations for Foods for Special Dietary Uses for the Food and Drug Administration” (1970), p. 26,103, found among the personal papers of Jean Mayer, Countway Library of Medicine Center for History of Medicine, Harvard Medical School, Boston, Massachusetts.

<sup>429</sup> At another point in the hearings, John W. Boehne, chief of the FDA’s special dietary foods branch, was asked by the representative for National Dietary Foods Association about whether the reduction of nutrients in the food supply by processing, and thus the use of special dietary foods to compensate, was of relevance to “aberration” groups such as teenagers. Boehne said they were not. “Boehne Questioned on Loss of Nutrients in Food Processing,” *Food Chemical News* (August 26, 1968), p. 26. Yet, as will be discussed below, snacking among the young was one source of concern among nutritionists, and also seen as a potential opportunity for designing enriched snack foods.

surveys.” Instead Weissenberg submitted individual consumer letters written to the FDA as evidence of how consumers understood the issue.<sup>430</sup>

At stake was the question of whether America’s ordinary diet was adequate or not. At the start of the hearings, Commissioner Goddard, who tried to stay aloof from the hearings throughout, gave a public interview where he argued, “Man cannot live by vitamins alone....”<sup>431</sup> Herbert Pollack’s controversial exchange had been over testimony he was giving against the “supersaturation” of food supply. The preface to the 1968 Food and Nutrition Board’s new RDAs even weighed in on this debate, stating: “With the exception of iron, patterns of food consumption and food supplies in the United States permit ready adaptation to and compliance with the RDA.”<sup>432</sup> Sebrell submitted his written testimony in his capacity as head of the Food and Nutrition Board revision of RDAs, and was doubtful that the FDA’s rigid standards would be

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<sup>430</sup> “Weissenberg says Sebrell is confused, statement is ‘erroneous,’” *Food Chemical News* (Nov. 18, 1968), p. 17. The exchange which followed illustrates what one trade journal described as the characteristic “acrimony” of the hearings:

Hearing Examiner David H. Harris, at this point attempted to cut off Weissenberg’s answer, but he continued: “This illustrates the confusion that comes up in the mind of a nutritionist because he speaks in terms of a medical use of a dietary supplement.”

“Have you finished?” Harris questioned the witness.

“Yes.” responded Weissenberg. “All right” the Examiner remarked, but Ullman added, “Would you say that Dr. Sebrell is more confused than you are?” This brought an immediate objection from FDA’s counsel Robert N. Anderson, which was sustained by Harris...

<sup>431</sup> “Second Week of Pre-Hearings conferences at FDA’s vitamin Mineral Reg,” *F-D-C Reports* (May 20, 1968): p. 15

<sup>432</sup> Sebrell was partly motivated by a concern over the incorrect use of the RDAs as a tool for nationwide policies. The NRC Food and Nutrition Board’s “Improvement of Nutritive Quality of Foods” Report had criticized USDA interpretations of national diet surveys. Its criticisms focus on the fallacy of moving from population-level metrics to individualized recommendations:

“RDA should serve only as a reference, and deviations of individual intakes from the recommended nutrient allowances are significant only in terms of the individual’s total health status. Food consumption survey data cannot be used alone as a measure of nutritional adequacy. [...] Since the RDA are designed to be adequate for practically all of the population of the United States, they allow a margin of safety for individual variations. Individuals whose diets do not meet the RDA are not necessarily suffering from malnutrition, and diets should not be judged as ‘poor’ on an arbitrary figure based on comparison with the RDA.”

“Written Direct Testimony of American Medical Association Witness William Henry Sebrell, Jr., In the Matter of Revising the Regulations for Foods for Special Dietary Uses for the Food and Drug Administration” (1970), p. 26,103, found among the personal papers of Jean Mayer, Countway Library of Medicine Center for History of Medicine, Harvard Medical School, Boston, Massachusetts.

able to accommodate the wide variability of needs among the American population, “particularly because of the trend in recent years toward greater consumption of nonstandardized and nonenriched bakery products.”<sup>433</sup>

On October 13, 1969, after 478 days of hearings, the FDA rested its case. But these were only the FDA’s arguments. The special dietary hearings were now to open up to the many industry witnesses, cross-examinations, and redirects, likely to drag the hearings well into 1970. The entire process had left both the community of nutrition scientists and government regulators drained and frustrated. At an AMA Food Nutrition Board symposium on “Food Standards,” held in June, Mark Hegsted summarized nutrition scientists’ conflicted feelings about the FDA’s approach to regulating diet foods. Noting that as a result of the “tremendous cost” and “inadequate scientific base” of the hearings, “the general scientific nutritional community has less confidence in the Food and Drug Administration than formerly”; however, Hegsted also believed that “industry remains the most suspect.” On the question of how to proceed on informative food labeling, Hegsted was even more at a loss. “I suspect that it is easier to select a bad diet now than it was 25 or 40 years ago,” he lamented, though he believed specialists couldn’t simply pass the buck:

As the problems multiply and become increasingly confused, there is and will be a tendency to pass our confusion on to the public. We have all been through these arguments in recent years. On the one hand, we can say “Put everything on the label” so that the consumer is informed. Then it is his problem not ours. We may get some moral satisfaction from this but we know full well that it is an inadequate solution.<sup>434</sup>

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<sup>433</sup> “Written Direct Testimony of American Medical Association Witness William Henry Sebrell, Jr., In the Matter of Revising the Regulations for Foods for Special Dietary Uses for the Food and Drug Administration,” pp. 17-18 (1970), found in the personal papers of William Darby, Eskind Biomedical Library > 2.WJDarby\_Series1\_Box13.

<sup>434</sup> In a more humorous tone, Hegsted went on to personalize this confusion with the current food labels, also making reference to the new public concern at the time over MSG, so-called “Chinese Syndrome,” and its possible developmental risks: “While I was writing this I took a package of dehydrated soup that my wife had just brought home and noted the following: “Ingredients: enriched egg noodles, salt, hydrogenated vegetable oil, monosodium

But Hegsted also couldn't accept a return to the early 1960s AMA policy:

to push all of those products to the shoulders of the physician. Give him the information and let him instruct the patient. The American Medical Association has supported this position for many years and we know very well that it does not work either.

Somehow, Hegsted argued, the AMA and the community of nutrition scientists needed to develop a program which would directly educate the public to make improved decisions about healthy foods and diet products and also work in coordination with the FDA to improve the information that consumers found on labels.<sup>435</sup>

For those at the FDA, the hearings had come to represent the intransigence of the industries seeking to sabotage the proposed rules and uncertainty on how to handle a changing political atmosphere. At a meeting of the American Bar Association held that August, Hearing Examiner David Harris speculated as to whether the tedious bickering of the hearings might have undermined confidence in the procedure itself: "What seems to be at stake here is the preservation ... of this type of testing of administrative rulings." Alluding to how some industry participants seemed to want to sabotage the hearings, Harris said:

Unfortunately, when Congress provided for proceedings [...] it did not ... afford either the public or the agency any power to compel witnesses to testify, with the consequences that... the proceeding is at the mercy of the whims and the personal involvements or financial involvements of experts.<sup>436</sup>

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glutamate, maltodextrin, hydrolyzed milk and plant protein, powdered chicken, chicken fat, corn sugar, wheat starch, dehydrated onion, dehydrated parsley, vegetable gum, seasonings and turmeric." Having read that, I do not feel particularly reassured of anything. Just having learned of the Chinese restaurant syndrome, I wonder how much glutamate there is in it. I know very well that my wife never read it and, if she had, it would mean even less to her than to me and that is not much. Furthermore, if I had not had my bifocals on, I would not have been able to read it at all. Who are we kidding? Do we think a housewife is going to carry a dictionary and a volume of Food and Drug Administration regulations with her every time she goes to the grocery store?"

<sup>435</sup> Mark Hegsted's speech at first day of Symposium, "Food Standards," found in the Hegsted, D. Mark papers, Countway Library of Medicine Center for History of Medicine, Harvard Medical School, Boston, Massachusetts.

<sup>436</sup> "Future of FDA hearing Procedures Questioned," *Food Chemical News* (August 26, 1968), p. 23-24.



Yet if Harris and the FDA saw the problem as private interest sabotage, participants in the hearing from industry painted the problem as a change in political winds. On November 5th, 1968 Republican candidate Richard Nixon defeated Democrat Hubert Humphrey and Independent George Wallace to become the next U.S. president. The attorney for the National Food and Feed Supplement Association played upon this when asking Weissenberg why it was that one of President-elect Nixon's own daily supplements, Catalyn (an herbal multivitamin), was considered to be in violation of the new FDA regulations. When Weissenberg defended the FDA's position, in the process exchanging angry exchanges with the attorney, the lawyer accused him of "innuendoes and slanders" concerning his clients (many of them health food stores), saying "it is typical of the propaganda campaign conducted by this agency with the taxpayers' funds."<sup>437</sup> Even more than the presidential election, the FDA found that the entire discussion about special dietary foods, and more broadly, the nation's diet, was being dramatically transformed by the emergence of a public scandal over the existence of hunger in America.

### ***Hunger—U.S.A. – The Problem of the “Other America”***

“In issuing this report, we find ourselves somewhat startled by our own findings, for we too had been lulled into the comforting belief that at least the extremes of privation had been eliminated in the process of becoming the world's wealthiest nation.” So began the report *Hunger—U.S.A.*, published in April of 1968. Its “startling” key finding was that, “Hunger and malnutrition exist in this country, affecting millions of our fellow Americans and increasing in

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<sup>437</sup> Upon completing his testimony in Jan. 1969, Weissenberg, assistant to the FDA Associate Commissioner for Compliance, had been on the stand for nearly 50 days. “Harris Orders Written Testimony[...],” *Food Chemical News* (January 27, 1969) p. 26.

severity and extent from year to year.”<sup>438</sup> The report scandalized Americans who had assumed that postwar prosperity had put an end to such extreme poverty and helped to initiate public discussions about the nature of this continued deprivation and what it signified for “the other America,” those left behind by America’s ascendance as a global economic leader. By the end of the year, the problem of hunger became a national preoccupation, affecting the presidential election, and reframing political platforms for domestic policies on how best to manage the nation’s food and agriculture.

The “discovery” of continued hunger in America had direct consequences for the cultural and institutional framings of diet, health, and responsibility, including immediate impacts on the FDA’s hearings on special dietary foods and for how the nutrition science community understood its role in defining, surveying, and addressing malnutrition in America. The scandal invited broad public soul searching on the relationship between affluence and poverty and abundance and hunger, both within the United States and abroad. The scandal called into question the “march of progress” narrative that had framed the emergence of “diseases of affluence,” and understanding it is thus essential for understanding the cultural and institutional shifts in the public understanding of nutrition that would occur during this period.

The sudden discovery of hunger in the late 1960s was in part a reflection of a changing economy. Over the course of the 1960s, the rising prices of certain commonly purchased goods, among them beef, pork, eggs, and lettuce, placed pressure on consumer’s so-called “real income,” or income as measured against the inflationary prices of products. This decline in “purchase power” was a significant factor in prompting a wave of supermarket picketing in

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<sup>438</sup> Citizen's Board of Inquiry into Hunger and Malnutrition in the United States, *Hunger, U.S.A.* (Boston: Beacon Press, 1968).

1966.<sup>439</sup> In addition to this increasing mobilization of consumer unrest, the so-called “War on Poverty,” first initiated by President Lyndon B. Johnson in 1964 with the Economic Opportunity Act and continued under his Administration and into the Nixon Administration through the Office of Economic Opportunity, had succeeded in drawing headlines to the problem of poverty, but received criticism for being half-hearted and always in the shadow of more pressing political concerns like the Vietnam War. When, in 1967, a group of four U.S. senators visited a deeply impoverished, predominantly black community in Mississippi, reporting disturbing accounts of hunger and poverty, the visit received some media attention, but was largely subsumed by the more attention-grabbing headlines on the war and the civil rights movement.<sup>440</sup> Following the visit a Citizen’s Board of Inquiry into Hunger was established which would investigate the problem of continued hunger in America, and the issue went largely dormant for the rest of the year.

It was the Citizen’s Crusade Against Poverty (CCAP), the principal architects behind the Citizen’s Board and the *Hunger—U.S.A.* report, and especially CCAP’s most visible lobbyist Robert B. Choate, who took this growing consumer discontent, and through their exposé on the extremes of poverty, converted it into a distinct message about political accountability and institutionalized poverty. CCAP argued that “the needs of the poor and hungry are subordinated to the concerns of large agricultural producers...” In other words, farm subsidies and state food

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<sup>439</sup> Robert O. Herrmann, “Consumerism: Its Goals, Organizations and Future,” *The Journal of Marketing*, Vol. 34, No. 4 (Oct., 1970), pp. 55-60.

<sup>440</sup> The four Senators who visited were Murphy, Clark, Robert Kennedy, and Jacob Javits. The incident was heavily imbued with the race politics of the day. In response to the national headlines that there were blacks in Mississippi who suffered from hunger and malnutrition, the state governor, Democrat Paul B. Johnson, negated such reports and declared every “negro” in his state to be “fat and shiny.” Larry Brown, “Hunger USA: The Public Pushes Congress,” *Journal of Health and Social Behavior*, Vol. 11, No. 2. (Jun., 1970), pp. 115-126. Governor Johnson had played a prominent role in 1962 as the lieutenant governor who tried to physically block federal marshals escorting the first black student into the University of Mississippi, ran his 1963 gubernatorial election campaign on a platform of pro-segregation, and was infamous for his racist statement about the NAACP: “You know what the N.A.A.C.P. stands for: Niggers, alligators apes, coons and possums.”

programs held higher priority in the government, particularly the USDA, than food aid and poverty programs. CCAP made a particularly effective tool to visualize this institutionalized discrimination, the map of “Geographical Distribution of Hunger in the US” map, which drew attention to the concept of “hunger counties,” U.S. counties which had higher levels of postneonatal mortality, an indicator for malnutrition.<sup>441</sup> In this way CCAP adopted a tactic “to inform and shock the public.”<sup>442</sup> The Hunger Report argued that “the chief contribution we can make does not rest with engaging in a numbers game. It lies elsewhere—with the reversal of presumption.” Its tone was one of scandal and emotion, not measured reason and statistics. When it came out in April 1968, the scandalous tone grabbed headlines, prompting Senate investigations and even reshaping Robert Kennedy’s political campaign strategy.

In addition to the shock of discovery, the other principal framing of these reports was the tragedy of economic contradictions that persisted in America. Thus *Hunger—U.S.A.* noted that “To make four fifths of a nation more affluent than any people in history, we have to degrade one-fifth mercilessly.” Closely coinciding with this report was another report on school lunch programs, *Their Daily Bread*. It, too, mentioned this “other America.”<sup>443</sup> Falling, as the reports did, so closely after the assassination of Martin Luther King, Jr., the implication that hunger was

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<sup>441</sup> This was politically effective both because it showed specific counties, shaming local governments and USDA offices there, but also because it showed a geographical disparity which belied national myths about the country having progressed evenly as a united whole. Critique also implied a relationship between local USDA offices and a long southern history of entrenched racism in farm labor management and ownership. Cf. Hahamovitch, C. *The fruits of their labor: Atlantic coast farmworkers and the making of migrant poverty, 1870-1945*. The University of North Carolina Press, 1997. In a later account, Jean Mayer 1972 described cotton farming as a structural cause of poverty, and by extension hunger in many of these counties.

<sup>442</sup> Brown, L. “Hunger USA: the public pushes Congress.” *Journal of Health and Social Behavior* 11, no. 2 (1970): 119.

<sup>443</sup> Jean Fairfax, Chairman. Committee on School Lunch Participation, (1968). *Their Daily Bread*, Atlanta, Ga., McNelley-Rudd Printing Service, Inc. The “other America” was a cultural reference to Michael Harrington’s book, *The Other America* (1962), an influential study of poverty in the U.S. which helped drive popular support for the subsequent “War on Poverty.”

disproportionately affecting blacks in impoverished southern communities also drew significant attention.<sup>444</sup>

It was these two frames, surprise and contradiction, which dominated the CBS documentary, “Hunger in America,” which aired in May 1968, and which catapulted the scandal into the national limelight. The documentary opened by stating, “Hunger is hard to recognize in America. We know it in other places, like Asia and Africa,” but then shifted to a moralistic tone, “America is the richest country in the world, in fact the richest country in history. We spend a colossal amount of money—one and a half billion dollars a year—to feed the rest of the world. But this spring a private agency, The Citizens Board of Inquiry [...] released an exhaustive report claiming that serious hunger exists in many places in the United States.” In a nod to the geographical and race and ethnic identity politics of the times, the documentary proceeded to offer four examples of local communities hit by hunger: San Antonio, Texas, showing Hispanics; London County, Virginia, “the South”; Tuba City, Arizona, a Navajo reservation; and Hale County, Alabama, showing southern black cotton growers. Suddenly, dramatic images of hunger and starvation in America were broadcasted to the television sets of millions of suburban households, calling to question the nation’s self-image as a land of affluence and abundance.

The scandal and the emergence of a “hunger lobby” had some immediate institutional ramifications. In July 1968, George S. McGovern, the Democratic Senator from South Dakota,

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<sup>444</sup> The *Their Daily Bread* report spelled out this association directly, noting:

“One of the chief by-products of the civil rights movement was the revelation to middle-class America of the existence of an under-developed nation right here—millions of Americans, black and white, living in a shadow world of bare subsistence. The “Other America” is with us, but not in our midst. Unlike the one-third of a nation ill-fed, ill-clothed and ill-housed during the Depression, poor people are no longer visible to middle-class America. It is possible for a suburban family to live its entire life without ever meeting a poor person.”

Indeed, Robert Kennedy’s introduction to the Hunger—U.S.A. report, as it was published in the Congressional Records, was a speech that he had given on April 4, 1968, the day MLK was shot. The speech thus did not receive much publicity, and Kennedy utilized the Hunger report as a new platform for his campaign against poverty. Brown, L. “Hunger USA: the public pushes Congress” (1970): 115–126.

convened the Senate Select Committee on Nutrition and Human Needs, what came to be called the McGovern Committee, launching what would be the longest and arguably most in-depth congressional investigation into the subject of diet and nutrition in the history of the United States. The Committee would ensure that the politics of food and nutrition remained on the front page of the national political agenda over the course of almost a decade, from July 1968 to September 1977.<sup>445</sup> Moreover, in response to the *Hunger—U.S.A. Report* claim that “our knowledge of domestic food problems was limited, and at best superficial,” and that “the Public Health Service has no knowledge of the extent of malnutrition in the U.S.,” the U.S. Public Health Service commissioned the Public Health Survey, which the following January 1969 reported widespread malnutrition and inadequate food programs.

Of more immediate consequence for the Food and Drug Administration was the fallout of the hunger scandal for the already embittered hearings on special dietary foods. To have a scandal over severe malnutrition among some populations in America while the FDA argued in the food standards hearings against the enrichment of novel foods seemed, to many, a serious contradiction, and proof that the agency was not serving the best interests of the American people. Fredrick Stare again wrote an editorial in *Nutrition Reviews*, stating that current lack of knowledge on malnutrition in USA indicated a need for FDA to suspend the hearings:

We should also start promptly an expanded program of nutrition education calling attention to those conditions of ill health that are prevalent in the overfed, as well as the underfed [...] In addition, the food industry should be encouraged to develop new types of foods and build into present foods, not medications, but those nutritional components that will help to prevent malnutrition among the affluent as well as the poor, for it exists among both—to what extent we don’t know. [...] Foods should be classless. The health

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<sup>445</sup> Senate Resolution S 281 of July 30, 1968 established 13 member select committee to “study the food, medical, and other related basic needs among the people of the United States.”

of both rich and poor will benefit from foods providing improved nutrition, and the same foods.<sup>446</sup>

The FDA received numerous motions to stay the hearings on special dietary foods on the grounds that there was insufficient knowledge to proceed.<sup>447</sup>

Inside the hearings company lawyers focused on the FDA's claim that America's "abundant supply" of food was all that was needed to meet health needs. Scientists were suddenly caught between a public debate where they did not want to appear insensitive to concern about hunger and this institutional hearing where many agreed with the FDA's "foods first" policy. One dispute between two public nutrition scientists, Arnold E. Schaefer (head of Public Health Service nutrition program) and Herbert Pollack (mentioned above), quickly spilled over into the public arena. In his testimony on August 28, 1968, Pollack sought to discredit industry clamoring for enrichment by discrediting the Hunger Report. Pollack said the report had "no standing at all... as a scientific treatise" and that it is:

a series of anecdotal statements by individuals, without presenting any evidence to support their anecdotal statements... It is not a scientific document, nor can you elicit from this the evidence that the situation is as they present it here... [that] millions of people go days and days without food, and so forth.

In response to the FDA lawyer's question of whether USDA surveys or the Hunger Report "reveal the existence of significant nutritional inadequacies in the US population," Pollack answered, "No, they do not [...] there is no evidence at this time of serious or significant

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<sup>446</sup> *Nutrition Reviews* (August 1968), p. 229.

<sup>447</sup> "HEW Releases Preliminary Data From National Nutritional Survey" *Food Chemical News* (Jan. 27, 1969), p. 26. That the FDA's anti-fortification policy might face a political backlash as a result of the four Senators' 1967 hunger inquiry was foreseen by at least one nutrition scientist. In a meeting between the AMA Food and Nutrition Board and the ISEO the same month as the Senators' visit to Mississippi, William Darby said, "There was no support for FDA's 'crepe label,'" and suggested that "the ferreting out of deficiency groups as part of the anti-poverty program will cause embarrassment [sic] to FDA and weaken support for the use of the 'crepe label'." "Minutes: Meeting of the AMA Food Industry Liaison Committee, July 13, 1967," p. 4, Found in the personal archives of Peter Barton Hutt, Private library of Covington & Burling Law Firm, Washington, D.C.

nutritional disturbances in the general population of these United States.”<sup>448</sup> Pollack did not restrict his attacks to the hunger report. Regarding Schaefer’s (PHS) nutritional nutrition survey, which appeared to support the claims of the hunger lobby, Pollack argued “[Schaefer] does not present any facts (and) there is no scientific data presented on this thing that I have seen.”<sup>449</sup> Instead, Pollack endorsed the FDA’s new policies on food fortification, and opposed alternative proposals particularly for how they might lead to the opening of a “Pandora’s box to a multitude of problems about which at the present time we know nothing.” Pollack’s testimony, as well as a critical paper he had drafted for internal circulation at the Institute for Defense Analyses, initiated a heated debate among the scientific community about how scientists ought to respond to the Hunger Report.<sup>450</sup>

The debate reflected the extent to which interpreting the facts of the Hunger Report rested upon the tone of the report, how to approach its heated emotional message, how to define hunger

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<sup>448</sup> In his testimony here, and in a report he drafted earlier that summer, discussed below, Pollack emphasized the importance of not confusing scientific statements about population health with recommendations on individuals’ health. Thus, on he explained the proper use of RDAs: “The allowances are intended to serve as goals for which to aim in planning food supplies and as guides for the interpretation of food consumption records of groups of people.” And he added, “These are not minimum requirements or maximum allowances [for individuals].” Pollack, Herbert, “Hunger USA 1968 – A Critical Review,” p. 11 & 15, as found in personal papers of William Darby > 4.WJDarby\_Series1\_Box12. Pollack mentioned his World War II work as an Army medical officer designing military “C” and “K” field rations among his qualifications for evaluating hunger and malnutrition. “Hunger, USA’ Lacks Scientific Standing, says MD-witness at vitamin hearings, Dr. Pollack sees no evidence of significant nutritional deficiencies in U.S.,” *F-D-C Reports* (September 2, 1968), p. 8.

<sup>449</sup> “Pollack Returns to Vitamin-Mineral Hearings, Defends Previous Testimony Opposes ‘Super-Saturating’ Foods with Nutrients,” *F-D-C Reports* (March 3, 1969), p. 7. “Lawyer Asks FDA to Make Revisions in Dietary Food Regulations,” *Food Chemical News* (Sept. 2, 1968), pp. 12-13; “‘Hunger, USA’ Lacks Scientific Standing, Says MD-Witness at Vitamin Hearings...” *F-D-C Reports* (Sept. 2, 1968), p. 8-9.

<sup>450</sup> “Lawyer Asks FDA to Make Revisions in Dietary Food Regulations,” *Food Chemical News* (Sept. 2, 1968), p. 23. In June Pollack had circulated a paper “Hunger U.S.A. 1968 – A Critical Review” in the Institute for Defense Analyses, which lambasted the Hunger Report for being melodramatic, unscientific, and incorrect. The paper leaked to the press and with Pollack working in a military institution it was used by critics to suggest that the government did not take the Hunger Report seriously. Jean Mayer, a Harvard nutrition scientist who would play an important role in the hunger debate, wrote a scathing review of Pollack’s (still not officially published, but circulating in) paper. Mayer belittled the paper, referring to the author of the paper as “Pollack’s ghost writer” because of the poor spelling and proof reading, and then attacked line-by-line the arguments about hunger versus malnutrition showing them to reflect bias and not the state of the art nutrition science. Herbert Pollack, “Hunger U.S.A. 1968 – A Critical Review” (June 1968), and Jean Mayer, “On ‘Hunger USA 1968 -- A Critical Review’ by Herbert Pollack, M.D.,” both found in the Folder, “U.S. Select Senate Committee on Nutrition Hearings 1968,” of Series I, Box 12 of the William Darby Collection of Eskind Biomedical Library, Vanderbilt University, Nashville, Tennessee.



vis-à-vis poverty, and a consensus that there was a lack of scientific knowledge about malnutrition and need for monitoring infrastructure. One of Pollack's criticisms of the Hunger Report was its use of anecdotal evidence and emotional rhetoric. Pollack argued the report "must be considered more of a political polemic than a scientific treatise" since it was "based upon a series of anecdotal testimonial presentations" and "seems to stir up action based upon an emotional appeal" rather than rational analysis based on a basic knowledge of nutrition. For these reasons, Pollack believed one could not trust the "strong bias based upon emotional reactions of both the proponents and the opponents" and argued that "a disciplined factual study is necessary."<sup>451</sup> Other nutrition scientists reacted differently to the emotional appeals. One nutritionist reviewing Pollack's paper, described his reaction to the "Hunger in America" TV report as life changing because of the gripping emotional imagery of the report:

[F]or this author, a physician who has dealt with a great deal of kwashiorkor and nutritional marasmus in Africa, it was eye-opening to sit in a comfortable U.S. home and to see cases of these serious nutritional diseases displayed in Texas and Arizona. This unscientific program stirred my emotions. As an academic whose work involves mainly international nutrition activities, this program awakened in me a resolve that in the future my work and that of my colleagues and students should also include attention to nutrition problems in the United States.<sup>452</sup>

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<sup>451</sup> Herbert Pollack, "Hunger U.S.A. 1968 – A Critical Review," p. 19.

<sup>452</sup> Latham continues:

"What is alarming about the disagreement on this important issue is not that it results in hot debate but that it creates a polarization of views. There is the camp of the "concerned" who are genuinely shocked that such a situation exists in their country and who wish to sound the alarm and castigate the government. There is the camp of the "establishment" who feel that the government is doing all that it can do and who anyway believe that basically the poor are poor because they are "no goods," or because they are lazy, or because as Dr. Pollack suggests they become malnourished as a result of wasting their money on such "expensive synthetic non-nutrient products as Kool-Aid."

It is important that nutritionists be, and are seen to be, among the concerned citizens. Let us not as a professional group take a stance in relation to this problem similar to that taken by the A.M.A. in relation to Medicare."

Michael C. Latham, "The Hunger U.S.A. Debate" (October 29, 1968), Found in the Folder, "U.S. Select Senate Committee on Nutrition Hearings 1968," of Series I, Box 12 of the William Darby Collection of Eskind Biomedical Library, Vanderbilt University, Nashville, Tennessee.

The scientific community was split between those who saw the hunger scandal as unnecessarily politicized, and those who found themselves awakened by the emotionally disturbing images and rhetoric surrounding their profession's work.

There were also arguments over how precisely to define the terminology of "hunger" given the politics and economics of food provisioning. A congressional hearing following the release of the report observed: "Much confusion has surrounded the terms 'hunger', 'starvation', and 'malnutrition'."<sup>453</sup> Pollack, for one, distinguished between "primary malnutrition" and "secondary malnutrition," the former caused by "inadequate food availability," the latter, he argued, by 1) "poor absorption" (due to intestinal disease), 2) increased metabolic demands of illness, and 3) "[I]lack of knowledge of nutritional value of foods and poor management of household budgets." It was his general impression that hunger in America was due to "secondary malnutrition" resulting mostly from the third cause.<sup>454</sup> Upon returning to the dietary standards hearings, after his stormy exit a few weeks before, Pollack's testimony highlighted some of the social and economic difficulties regulators faced in defining hunger and nutritional need. When asked, again, to enumerate "all the causes of malnutrition of which you are aware," the question

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<sup>453</sup> U.S. Senate, "The Food Gap: Poverty and Malnutrition in the United States," Interim Report for the Select Committee on nutrition and Human Needs, (August 1969), p. 8. For a more in-depth historical consideration of this debate, and the broader history of Americans grappling with hunger, see Eisinger, Peter K. *Toward an end to hunger in America*. Brookings Institution Press, 1998, pp. 12-15.

<sup>454</sup> Some of his comments reflect an entrenched racialization of nutrition, which in the context of international work in developing countries was largely overlooked, but when suddenly brought to the U.S. context was now inflammatory. For example, Pollack notes that the report's mention of eating "almost anything chewable," including tree bark and clay" could be explained by the fact that such is done by "certain individuals who have psychopathological perversions of their appetites and do not represent anything beyond ignorance, superstition, or psychoneurosis." Herbert Pollack, "Hunger U.S.A. 1968 – A Critical Review," p. 5. Note also Pollack's comment on the Hunger Report's statement that "they do eat the same food day in and day out..." to which he replies: "The monotony of eating is frequently by choice. People do not like to eat strange foods." Where Pollack acknowledges clear documentation of miserable living conditions, he uses "poor sanitation" to explain the malnutrition: "The extremely high rate of parasitic infection is always an outstanding problem in these groups of children, and can be related as a causal to the inadequacies of their nutrition and the anemias." Herbert Pollack, "Hunger U.S.A. 1968 – A Critical Review," p. 7. It is worth noting parallels between this period of comparative soul searching on "hunger" and the extent of America's development in 1968, and the recent scandals during the 2005 Katrina hurricane response and debates over the use of the term "refugee."

which Pollack had walked out on, the government nutritionist answered: “everything that deviates from the so-called accepted standard,” but noted that a “multiplicity of causes,” among them “economics,” could be a factor. However, Pollack, who was arguing that vitamin enrichment was not needed, observed that it was “perfectly possible to buy a nutritionally adequate diet” on \$3,000 to \$4,000 a year.<sup>455</sup>

Where there was stronger consensus among nutrition scientists was on the need for “education” and better monitoring. If Pollack’s report and testimony were to be believed, there was no reason to think that many if not most of those suffering hunger and malnutrition in America, with proper training and coaching, should have no trouble achieving a healthy diet. One explanation was that Americans had simply forgotten how to be thrifty. Jean Hewitt, a home economist and regular food writer for the *New York Times* summed up many professionals’ sentiment when she wrote that inadequate nutrition was “a classless problem.” In part it was a comment on rising food costs, which were forcing many families above the poverty level to “trim weekly market bills.” But she also expressed concern about the growing reliance, among lower and middle class families, upon “convenience foods such as packaged mixes and frozen prepared dishes” over the more economical fresh produce. In her opinion, there was “no place [...] in poverty-level budgets” for paying the “premium price [...] for a built-in maid service.”<sup>456</sup>

But some argued “education” was not enough. Several clinical physicians and community nutritionists were so incensed by Pollack’s public statements that they wrote an editorial to the

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<sup>455</sup> “Pollack Returns to Vitamin-Mineral Hearings, Defends Previous Testimony Opposes ‘Super-Saturating’ Foods with Nutrients,” *F-D-C Reports* (March 3, 1969), p. 7. To some extent vitamin enrichment, and in particular vitamin supplements, raised the difficulty in teasing apart what was a “food safety” from what was a “food security” one.

<sup>456</sup> By this reasoning, convenience foods, according to Hewitt, ought to still be considered a luxury, which had the double cost of being both a wasteful use of money, but also an unhealthy tool for family meal planning. Jean Hewitt, “Inadequate Nutrition: A Classless Problem,” *New York Times* (May 31, 1969), p. 10.

*American Journal of Clinical Nutrition*, which re-infused class politics into Pollack's interpretation:

[Pollack] introduced an element of distortion, and that is his undue stress on "education." After all, however inadequate the nutritional education of the middle class and rich may be, they have alternatives to malnutrition. Furthermore, a number of attempts to provide "education of the poor" by professional nutritionists have ended with the nutritionist being educated and the poor becoming the "faculty." Indeed the current street jargon has designated "education" as a code word that now represents a "copping-out" by the middle class.<sup>457</sup>

They argued experts would have to look beyond just education, and factor in material constraints and class disparities, if they were to tackle hunger: "[The USDA standards for what percent of income is needed to purchase a nutritionally adequate diet] completely overlook the fact that a great many people do not have the education, the freezer and pantry space, the transportation, and necessary information to carry out effective buying habits."<sup>458</sup> Indeed, they saw the

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<sup>457</sup> Alfred D. Klinger, Robert Mendelsohn, & Jaqui Alberts, "A Reply to Dr. Herbert Pollack Re: *Hunger USA*," *The American Journal of Clinical Nutrition* Vol. 23, No. 6 (June 1970): 677-683. Indeed, the authors noted that middle class shoppers could learn a thing or two from cash-strapped poor in how to manage a household:

"Lack of appreciation of the nutritional value of food does not necessarily mean that a person lacks the knowledge essential to prepare a nutritious diet. It is common knowledge that many affluent people send their maids shopping for groceries because these women have developed a keen sense of both price and quality as the result of extensive experience. Many people in the middle class are poor household managers, but because of the money available to them, they manage to have nutritious meals. Is it not unreasonable for those of us with incomes many times greater than those from impoverished areas to request that some people, particularly those without money, be more frugal, more wise, and more imaginative than we?"

Here the authors are illustrating the double standard inherent in nutrition experts' accounts of poor versus middleclass consumption. Experts characterize poor people's food purchases as bad nutritional choices rather than legitimate consumer discretion, ignoring how both poor and middle-class consumers might justifiably purchase food for reasons other than health (such as convenience).

<sup>458</sup> The authors also highlighted the misconception, put forward by Pollack, that the existence of obesity among the poor was an indication that it was possible to find adequate and even excessive food:

"One of the most difficult things to explain is the presence of obesity among people who are undernourished. Most of us are hoodwinked into believing that excess weight is associated with plentiful food. It is not so simple. The "hunger" is not limited to the emptiness directly resulting from insufficient food, although that is where it begins. Most of the people who live in the ghettos are prisoners of circumstances beyond their control. Whatever problems they may have are usually magnified immensely by the emptiness of their lives and the hopelessness of their future. The leverage needed to break this vicious circle is money, but the prospect for obtaining any is grim. They crave respite and solace from the pressing reality of their hostile existence. They often find it in calorie-cheap but caloric-high substances.

“education” argument as a ruse: “there is a disturbing tendency among public officials and medical professionals to put great stress on “education,” often as an excuse to do little else for people who need food.”

By 1969 the frustration over the report had spread beyond the nutrition community. In March of 1969, a group of senators wrote to Health, Education, and Welfare Secretary, Robert Finch, noting with exasperation, “For many years, the United States has been developing fortified foods for hungry citizens in other countries without making an effort on a similar scale here at home.”<sup>459</sup> Following his testimony before the McGovern Senate Committee in late July, Ralph Nader submitted to the committee a list of 47 questions that he suggested be asked of the “food manufacturers and processors.” Among the questions were several highlighting the growing popular frustration over the failure to bring enriched foods to these needy populations:

(20) ... What effect would enrichment of basic foods have on the profit of your corporation and industry in general? Why are enriched foods artificially priced higher than standardized nonenriched foods?

(31) In what ways do your products attempt to supply as many of the nutrients at the Recommended Daily Allowances as possible?

(32) Has your company participated in the manufacture of protein and nutrient rich supplemental foods for use in developing countries? If so, what are these foods, and why have they not been marketed in this country? If you have not participated in this type of manufacture, why not?

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Inactivity, in addition, also plays a major role. Why should they move about? To be beaten? Where should they go? [...] Therefore, although a person might not eat much, he fattens quickly on rubbish that is available. And he eats not merely to satisfy his body but to fill a relentless void that has drained him spiritually.”

Ancel Keys, both in his 1959 book *Eat Well and Stay Well*, and in his report for the 1969 White House Conference on Food, Nutrition, and Health, discussed below, would continue to make this same point about the paradoxical existence of “diseases of the affluent” among the poor in America. It was an argument that wouldn’t really take hold popularly until the 1980s.

<sup>459</sup> “March 27, 1969 Letter from Jacob Javits, Charles H. Percy, Peter H. Dominick, Marlow W. Cook, and Robert Dole to Secretary Robert Finch” in Folder, “Conference on Food and Nutrition,” Box 74 (Conference on Food and Nutrition), Staff Member and office Files, Egil Krogh, 1969-1973 in Richard Nixon Presidential Library and Museum, Yorba Linda, California.

(34) Is the nutritional quality of your food products a major concern of your company? How is this concern manifested in research, marketing, and advertising functions?

(38) Who consumes your product? What is the relation of the needs of these consumers to the constitution of that product?

(46) Can you demonstrate that your convenience or processed foods contain at least the nutritive value contained in similar quantities of the foods they replace?<sup>460</sup>

The list signaled that “Nader’s Raiders” now had the food industry in their sights, though the list also revealed the beginning of a shift in focus: looking to food solutions rather than underlying economic structures of poverty.

“Hunger in America” also invited some public soul searching on perennial social questions about hunger, poverty and equity in a nation (ostensibly) of affluence and abundance. In December of 1969 journalist Nick Kotz published book, *Let Them Eat Promises*, highlighting the contradiction between affluent America of 1950s and 1960s and reality of disparities:

This new American tragedy is that hunger and malnutrition, excruciating human misery and disease, should exist for millions — in the richest nation with the highest individual standard of living known to mankind... This is the story of hunger in the America of the \$900 billion gross national product, of the \$200 billion federal budget, of 1.2 cars and 1.3 television sets per family, of eight million pleasure boats, of block-long supermarkets with entire meals frozen to be prepared instantly in automated kitchens. This is the America that pays farmers \$3 billion annually not to plant food because it has developed an ingenious ability to produce far more than paying customers can eat, the America that spends millions on dieting because the affluent consumer can afford to eat too well.<sup>461</sup>

Hunger called into question America’s narrative of progress. Suddenly it appeared as though a certain part of the country had been “left behind” by the discourses of consumerism or the reliance on capitalism as an engine of progress.

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<sup>460</sup> “Nader’s 24 Questions Outline Attack Against Food Industry,” *Food Chemical News*, Vol. 11, No. 18 (July 28, 1969), pp. 9-11.

<sup>461</sup> Marjorie L. DeVault and James P. Pitts, “Surplus and Scarcity: Hunger and the Origins of the Food Stamp Program,” *Social Problems*, Vol. 31, No. 5 (Jun., 1984), pp. 551.

Such broad soul searching also made for ripe political fare, and hunger proved to be a volatile subject for the new Nixon Administration. The failure to feed all of America's citizens was quickly cast in the Cold War context as a potential national embarrassment. Since at least the "Kitchen Debate" in 1959 between then Vice President Nixon and Soviet Premier Nikita Khrushchev, keeping the American stomach full had served as important symbolic evidence of the fruits of America's capitalist consumer-oriented market.<sup>462</sup> Robert Choate, in an appearance at a Senate hearing in the summer of 1969 worried about what the domestic hunger scandal might do for America's campaigns against communism abroad: "I think the free enterprise system is at stake here, for it matters not how many ABM's [anti-ballistic missiles] we build if we cannot prove to the poor and hungry of other countries that we have an economic system which can take care of its own." A variety of activist organizations, dubbed "the hunger lobby," took up the hunger issue as yet another example of how racial disparities reflected entrenched economic discrimination and poverty. In what would become a central battleground over issue framing, they attacked those who claimed "the poor were malnourished because of ignorance, and [thus] needed education rather than direct assistance" as either out of touch with poverty, or racist. At stake was whether to define hunger with a focus on food versus an emphasis on social inequality.<sup>463</sup> Meanwhile, the FBI had decided to investigate the participants of the CBS "Hunger

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<sup>462</sup> The exchange dramatically improved Nixon's public profile, helping him towards his efforts to receive the Republican presidential nomination the following year. Bruce Mazlish. "Toward a Psychohistorical Inquiry: The Real Richard Nixon" *Journal of Interdisciplinary History* Vol 1, No. 1 (1970) pp 49-105.

<sup>463</sup> As cited in DeVault & Pitts, "Surplus and scarcity: hunger and the origins of the food stamp program," p. 552. Recently historians have shown how the civil rights movement should be understood in a Cold War context. Such civil disputes at home carried a significant symbolic weight on America's reputation abroad. Mary L. Dudziak, "Brown as a Cold War Case," *Journal of American History* 91 (June 2004): 32-42. One of Nixon's fellow Republicans, New York Senator Jacob K. Javits, used the hunger crisis to lobby that Nixon reorder national priorities away from building "limitless" military power and toward restoring "domestic tranquility." Richard L. Madden, "Javits Bids Nixon Shift Priorities," *New York Times* (May 22, 1969), p 23. In this respect, the hunger scandal can be seen as part of a broader political shift under the Nixon presidency, when America was also extracting itself from the Vietnam War and grappling with growing race riots and political protests at home.

in America” documentary, believing the hunger scandal to be a “gigantic conspiracy” by certain individuals to guarantee the refunding of certain poverty programs.<sup>464</sup>

### **The 1969 White House Conference on Food, Nutrition and Health**

The Nixon Administration had to get on top of the hunger controversy. While the appearance of hunger in America in 1968 had caught most off guard, by 1969, all parties were scrambling to find ways to frame the problem such that it aided their platform. On May 6, 1969, having barely finished his first hundred days in office, Nixon sent a message to Congress arguing that “the moment is at hand to put an end to hunger in America [...] for all time.” While recognizing that the fact, “That hunger and malnutrition should persist in a land such as ours is embarrassing and intolerable,” Nixon noted that hunger “is an exceedingly complex problem, not at all susceptible to fast or easy solutions.” He argued that addressing economic poverty alone was not enough, for:

[...] what matters finally is what people buy with the money they have. People must be educated in the choosing of proper foods. All of us, poor and nonpoor alike, must be reminded that a proper diet is a basic determinant of good health. Our private food industry has made great advances in food processing and packaging, and has served the great majority of us very well. But these advances have placed great burdens on those who are less well off and less sophisticated in the ways of the modern marketplace.

Tackling this problem would be no trivial matter for his administration, Nixon concluded, since, “Something like the very honor of American democracy is at issue.”<sup>465</sup>

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<sup>464</sup> Larry Brown, “Hunger USA,” *Journal of Health and Social Behavior*, Vol. 11, No. 2. (Jun., 1970), pp. 115-126.

<sup>465</sup> “Text of President’s Message to Congress on Proposals to Combat Hunger in U.S.,” *New York Times* (May 7, 1969), p. 50. One newspaper account depicted the May 6th speech as the Administration’s reaction to fellow Republican Senator Jacob Javits’s May 1st criticisms that Nixon was moving too slow. “Javits Bids Nixon Consider Major Hunger Drive,” *New York Times* (May 2, 1969), p. 48. Javits at this time was proposing a Republican legislative alternative to the Democratic bill (from McGovern) on reforming the farm assistance bill. Richard L. Madden, “Javits Bids Nixon Shift Priorities,” *New York Times* (May 22, 1969), p. 23.



While striking an unequivocal tone of urgency and concern in the message to Congress, Nixon conveyed mixed signals on how his administration would frame the issue. On the one hand, he indicated that this topic clearly fell within the category of poverty concerns. Many of the specific institutional goals that Nixon laid out were to be managed by the Urban Affairs Council, which he had established at the start of his presidency under the direction of Daniel Patrick Moynihan. Moynihan, who had been secretary of Labor under Lyndon B. Johnson, a position from which he had pronounced a “cycle of poverty” in the 1965 report “The Negro Family: The Case for National Action,” was a prominent scholar and political figure in the federal war on poverty.<sup>466</sup> Nixon also mentioned the important role that would be played by the Office of Economic Opportunity, an executive branch product of LBJ’s War on Poverty that was, under the Nixon Administration, directed by Donald Rumsfeld. Moreover, several of the specific policy agenda issues which Nixon endorsed—in particular, reforming the family food assistance program, or the food stamp program—were also the principal concerns raised in the debates over *Hunger–U.S.A.*

Yet the message also reflected how the Administration was already reframing the hunger controversy as not so much a failure of public anti-poverty programs but rather a need to spur private citizens and organizations to lift up the needy. The challenge Nixon laid out for Congress and the public was “to make the private food market serve these citizens as well, by making nutritious foods widely available in popular forms.” Following this focus on private initiatives, Nixon said that he would soon “announce a White House Conference on food and nutrition, involving executives from the Nation’s leading food processing and food distribution companies and trade unions.” This group of industry leaders would be called upon to explore the ways that

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<sup>466</sup> Cohen, Patricia. “Scholars Return to ‘Culture of Poverty’ Ideas.” *New York Times*, October 17, 2010, sec. U.S. <http://www.nytimes.com/2010/10/18/us/18poverty.html>.

“the private food market might be used to improve the nutritional status of all Americans, and how the Government food programs could be improved.” In a nod to the importance of advertising, Nixon would have them “work with the advertising industry and the Advertising Council, to develop an educational advertising and packaging campaign to publicize the importance of good food habits.” In short, the Nixon Administration was choosing to define hunger and malnutrition as a wake-up call for private innovation and involvement rather than just public campaigns against poverty.

On June 11th Nixon announced that he was appointing Jean Mayer, a Harvard nutrition scientist and well known hunger “militant,” to be a special consultant to the White House on its conference on food and nutrition that fall. In his announcement Nixon framed the conference broadly – about the science of nutrition, not just hunger and poverty:

Over the years no country has been so closely associated with the science of nutrition as the United States: Pioneers such as Lafayette B. Mendel of Yale, E. V. McCollum of Hopkins, Joseph Goldberger of the U.S. Public Health Service, and Conrad Elvehjem of Wisconsin were founders of the science. No country has ever undertaken such a gigantic and successful task of raising food as was done by this country in World War II. No country has succeeded in providing such a high standard of diet to so many millions of citizens while assisting millions more in less fortunate countries.

The White House Conference on Food, Nutrition, and Health was to be a reaffirmation of “our commitment to a full and healthful diet for all Americans.” What’s more, the conference was to be about malnutrition more broadly, not just hunger:

We also know that many Americans who have enough money to afford a healthful diet do not have one. Many of our youngsters have erratic diets which may be deficient in certain nutrients. Many more of us eat not wisely but too well.

While only a slight adjustment on the language of the hunger lobby and public debates, the shift to food and nutrition rather than hunger and poverty would prove portentous for the White House Conference.

Jean Mayer (1920–1993) was the child of two French physiologists and his father, André Mayer, was actively involved in politics and public affairs.<sup>467</sup> Jean Mayer also did not shy away from public activism, and had gained fame during World War II as a freedom fighter for the underground Free French Forces, for which he won numerous decorations, including the Knight of the Legion of Honor. Mayer received a double PhD. at Yale and the Sorbonne, and came to Boston to work with Walter B. Cannon, a physiologist at Harvard whose most famous contributions were coining the term “fight or flight” and developing Claude Bernard’s concept of “homeostasis.” Mayer’s research built off of Cannon’s notion of homeostasis, focusing on the roles that exercise and food “satiety” played in the development of obesity.<sup>468</sup>

By the time he was picked by Nixon’s aides to run the Conference, Mayer had already earned quite a reputation as an activist on hunger issues. Mayer had been elected chairman of the conference, “To End Hunger in America” held in DC in October 1968, launching his national role on the hunger debate. Mayer’s framing of the White House Conference on Food, Nutrition, and Health was different from the Nixon Administration’s. For one, Mayer was less optimistic about the use of novel foods and industry innovation to solve the problem. In one interview following his appointment, Mayer noted, “Special foods for the poor are not the answer. The poor should eat the same foods bought in the same stores as everybody else.”<sup>469</sup> Here he differed

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<sup>467</sup> Among other things playing a prominent role in putting together a group in the League of Nations which could be considered a prototype for the Food and Agriculture Organization.

<sup>468</sup> Marjorie Hunter, “Nutrition Conference Organizer,” *New York Times* (Dec. 1, 1969), p. 54. Johanna Dwyer, senior nutrition scientist in the NIH Office of Dietary Supplements, former participant in 1969 White House Conference on Food, Nutrition and Health (assistant to Jean Mayer), phone interview, Nov. 20, 2009.

<sup>469</sup> John Herbers, “Nixon Aide Builds Nutrition Crusade,” *New York Times* (June 29, 1969), p. 31.

from the congressional Republican platform (of Senator Jacob Javits and others), which highlighted the importance of enriched foods and the role of private food companies in the development and distribution of new foods.<sup>470</sup> Perhaps for these reasons, Mayer was assigned Dr. O. Lee Kline from the FDA, a “career Fed” agency staff member who, according to one of Mayer’s students later, was “detailed to Mayer to control him.”<sup>471</sup>

The conference was planned for December, to occur right between Thanksgiving and Christmas, a time of year when Americans were especially attuned to hunger and charitable giving. From the time of his appointment in June through November Mayer had a small team of assistants, some from the White House staff and others his graduate students from Harvard, who helped write correspondences and invitations to participants. Mayer was kept busy with numerous social events with interest groups as well as civic society groups who invited him to give public statements on the issue of hunger and the role of the Conference in galvanizing society. Jean Mayer’s executive summary from the Conference report provides a detailed description of how the conference was structured and conducted:

[There were] 26 panels and [...] eight task forces. The panels were made up of academic, medical, industry, and agriculture experts, as well as citizens chosen because of their particular concern rather than expertise. The task forces represented vast segments of our population such as social action groups, women's organizations, industrial and consumer interests, professional organizations, and religious denominations. All 800 or so participants in the preparatory work were highly conscious of their responsibility and spent considerable time in work and travel to insure that the 2,200 additional members of the Conference be provided with thoughtful and detailed provisional recommendations

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<sup>470</sup> “Javits Bids Nixon Consider Major Hunger Drive,” *New York Times* (May 2, 1969), p. 48.

<sup>471</sup> Johanna Dwyer, phone interview, Nov. 20, 2009. According to Dwyer, “the FDA at that time [...] was really sort of the J. Edgar Hoover of food.” Indeed, a June 18, 1969 memo from Haldeman to Dent and Ehrlichman describes Pat Moynihan recommending they appoint “a partisan, politically attuned Republican” to be Mayer’s deputy for the conference. “Memorandum for: Mr. Dent” (June 18, 1969), found in Folder, “Conference on Food and Nutrition,” Box 74 (Conference on Food and Nutrition), Staff Member and office Files, Egil Krogh, 1969-1973 in Richard Nixon Presidential Library and Museum, Yorba Linda, California.

and background material. / Panel and task force members met for the whole week starting Sunday, November 30. The full Conference started on December 2 [...]. The Conference lasted 3 days during which groups were meeting in 30 different rooms with intense and constructive discussions taking place.<sup>472</sup>

The Conference had grown beyond the simple private sector meeting imagined by Nixon in May, and incorporated “task force” groups in response to accusations that it would not be democratically representative and inclusive.

In the months leading up to the conference, Jean Mayer was assaulted from both sides. Critics on the left argued that Mayer had been taken in by the Nixon Administration. John Kramer, of the National Council on Hunger and Malnutrition was quoted as calling him “Dr. Mayer and Mr. Hyde,” for appearing sympathetic to the hunger lobby but supporting Nixon’s reframing of the conference broadly to include non hunger issues and disproportionate industry representation.<sup>473</sup> Donald M. Kendall, president of PepsiCo, Inc., resigned from the chairmanship of the Food Safety panel allegedly because he disapproved of Jean Mayer’s criticism of snack foods.<sup>474</sup> With each of these criticisms, the media and editorials grappled with questions about the Conference’s true public value: Was it legitimate? Was it representative?

Jean Mayer’s December 1969 description of the conference was clearly crafted to address these doubts by projecting an image of diversity in its participants. Speaking to President Nixon, Mayer noted, “Following your instructions, the membership of the Conference-and of each discussion group-was as broad as possible.” One measure of this diversity was the many

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<sup>472</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health: Final Report*. Washington, DC: US Government Printing Office, 1970.

<sup>473</sup> Marjorie Hunter, “Nutrition Conference Organizer,” *New York Times* (Dec. 1, 1969), p. 54. Mayer dismissed Kramer as a one who makes a profession out of the hunger issue and stirring up political scandals. Jean Mayer, “Memorandum, for John D. Ehrlichman” (November 12, 1969), found in Folder, “Conference on Food and Nutrition,” Box 74 (Conference on Food and Nutrition), Staff Member and office Files, Egil Krogh, 1969-1973 in Richard Nixon Presidential Library and Museum, Yorba Linda, California.

<sup>474</sup> “Parley On Food to Open Amid Signs of Discord,” *New York Times* (Dec. 2, 1969), p. 37.

different professional sectors and personal backgrounds the participants would bring to the conference:

University professors and students, physicians, old and young, industry leaders and technicians, representatives of consumer organizations, members of all main religious denominations and of minority organizations, members of women's organizations with membership totaling over 60 million women, labor leaders, representatives of health organizations, agricultural and trade organizations, social action groups from all economic levels ranging from the National Association of Manufacturers to various organizations dealing with the very poor.

In keeping with the politicization of race and regional identity in this period, the Conference was also structured in ways which equated diversity and poverty with minority race and regional constituencies. Mayer made note of the fact that “over 400 of the very poor themselves” would be “brought together to discuss the recommendations submitted to them by the panels and the task forces,” describing these participants as:

“[...] black, Mexican-American, Puerto Ricans, white, Indians, Alaskan natives, inhabitants of the Pacific Trust territories, and of our Caribbean dependencies and migrant laborers.”

Organizers furthermore composed a printout of all participants listed by their home state, in order to ensure that the Conference had representation from all fifty states.<sup>475</sup>

Despite this accommodation of the hunger lobby and so-called “militant” activist organizations, critics complained the intellectual breadth of the conference watered down the

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<sup>475</sup> Folder “WHCFNH: Subject Files - [Draft - Geographical List and Task Forces Assignments of Members and Consultants of the WHC on FNH c. 1969],” Box 35 ([Draft - Geographical List and Task Forces Assignments of Members...] to GSA Form 1354 (Job Order) [July 1969]), Series 2, Conference Working Files, 1969-1971, “White House Conference on Food and Nutrition [1969-1970]” Richard Nixon Presidential Library and Museum, Yorba Linda, California.

urgency and crisis of the hunger issue, characterizing it as “two conferences.”<sup>476</sup> Others, including one conference participant, felt this had the virtue of drawing in a bigger audience:

By stressing food and nutrition, you get the support of a whole host of groups who would not come under just the hunger label. Middle-class groups can see that they have a stake here because there are issues which affect their self-interest. [Once involved, such groups] have to recognize that feeding people has a higher priority than feeding other people better.<sup>477</sup>

The hunger lobby’s response: that the poor needed money, not research.

On December 2nd, 1969, Nixon convened the White House Conference on Food, Nutrition, and Health, addressing nearly 5,000 persons at the opening plenary session. With the address, Nixon crystallized his administration's framing of the debate. Setting the stage for neo-liberal policies on hunger and malnutrition, Nixon explained why he was about putting cash into families’ hands:

Our basic policies for improvement of the living conditions of the poor are based on this proposition: That the best judge of each family's priorities is that family itself, that the best way to ameliorate the hardships of poverty is to provide the family with additional income—to be spent as that family sees fit.

[...] Some argue that the poor cannot be trusted to make their own decisions, and therefore, the Government should dole out food, clothing, and medicines, according to a schedule of what the Government thinks is needed.

Well, I disagree. I believe there are no experts present in this great gathering who know more about the realities of hunger and malnutrition than those among you who are here because you have suffered from it; or than those among you who are here who do

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<sup>476</sup> For a similar retrospective argument, see DeVault, M. L., and J. P. Pitts. “Surplus and scarcity: hunger and the origins of the food stamp program,” p. 554.

“The conference was to include the broadest possible spectrum of groups involved in food problems and its goals were defined in the broadest possible ways. This strategy downplayed inequality and poverty as causes of hunger and emphasized solutions involving education rather than spending.”

<sup>477</sup> Jack Rosenthal, “Nixon And Hunger: Parley Called Test of Commitment,” *New York Times* (Dec. 2, 1969), p. 49.

suffer from it, from great cities, from worn out farms, from barren reservations, from frozen tundra, and tiny islands half a world away.

The task of Government is not to make decisions for you or for anyone. The task of Government is to enable you to make decisions for yourselves.

He framed healthy diets as a problem of individual responsibility and “closing the knowledge gap.”<sup>478</sup>

Highlights from the different panels reveal the diversity of policy issues at play in the conference, and suggest a shared sentiment for a need to change the nation’s policies, if not agreement on what form that change should take.<sup>479</sup> The panel on “Traditional Foods” noted the erosion of traditional foods by the rise in convenience foods and snacking:

Significant changes in our eating patterns are also taking place, including the consumption of more snack foods between meals, more eating away from home, and greater use of convenience foods.<sup>480</sup>

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<sup>478</sup> Nixon added humorous personal anecdote at the end, which he felt emphasized “the power of example”:

“I know the power of simply dropping a word as to what a President or a potential President does in certain fields.

I recall in your field [of journalism], about 18 months ago I was being interviewed on a talk show. I was asked how I kept my weight down—that was my problem rather than the other way around. I answered—I thought rather low-key—that the doctor had told me to eat cottage cheese. The difficulty is that I don't like cottage cheese. I said I took his advice, but I put catsup on it.

You can't imagine how many letters I got. The dairy industry wrote and told me that I should like cottage cheese. The catsup industry wrote and told me to try it on my cereal. And others wrote and said catsup with cottage cheese had to be unhealthy. I pointed to the fact that my grandmother lived to be 92 and she ate it all her life, so that was the answer.

I use this facetious example to only indicate that the power of example, not just from a President, but from those in this room in the whole field of not just how much, but how and what we eat with regard to diet can be tremendous.”

<sup>479</sup> The Conference was also a veritable Who’s Who of nutrition scientists. William Sebrell chaired, and George J. Christakis vice Chaired the panel on “The Sick: nutrition and Public Health; Nutrition and Hospital Care; The Role of Outpatient Services. Outreach into the Community; Medical Care”; Hegsted Chaired the “Standards of Dietary and Nutritional Evaluation”; Arnold Schaefer and Neige Todhunter were consultants for the panel on “A Continuing Monitor System of Dietary and Nutritional Evaluation”; William “Bill” Darby Chaired and Nevins Scrimshaw co-chaired the panel on “Groups for Whom the Federal Government has Special Responsibilities”; Theodore Van Itallie vice chaired the “Advanced Academic Teaching of Nutrition” Panel; Phillip White was chairman of the panel on “Popular Education and how to Reach Disadvantaged Groups”; Stanley Gershoff, chair of the “Systems of Delivery of Food and Money for Food” panel.

<sup>480</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health*, p.103. Contrast this observation with the panel “The Family as a Delivery System” (p. 202):

“The family is the basic unit of our society and a most important institution. [...] Today, however, many functions formerly handled by the family are increasingly being assumed by other institutions (schools, community agencies, etc.). This could weaken the stability and effectiveness of the family and threaten the unique and powerful role it has always played in shaping its members' destinies.



The panel's recommendations by and large reflected its composition of members from the meat and dairy industries, who took advantage of the platform to "dispel the confusion that surrounds the significance of fats in our national diet," namely the recent cholesterol scare. The Consumer Task Force attempted to counter this retrograde message with an urgently worded comment on the panel's report:

Nutritional and shopping information is most useful at point of sale, which means on the package label. We need on the label a percentage break-down of the list of ingredients. This percentage information is increasingly urgent as more and more foods are processed partly or wholly.

The "Food Manufacturing and Processing" Panel, chaired by C.W. Cook (of General Food Corp.) and vice-chaired by Gordon Edwards (Kraft Co.)<sup>481</sup>, provided a direct industry counterpoint to the "Traditional Foods" perspective. Its first recommendation was the Repeal of the Filled Milk Act, which the panel felt was holding back innovation in the creation of less fatty and more nutritious dairy substitutes:

Milk and milk products are recognized as excellent sources of nutrition and the principal source of certain essential nutrients. However, some nutritionists and consumers desire to obtain the nutritional benefits of milk in a fluid milk product in which vegetable fats, preferably polyunsaturated, are substituted in whole or part for the milk fat. A significant hindrance to progress in the improvement and marketing of such a product is the Filled Milk Act (21 U.S.C. 61-64) which, since 1923, has prohibited the interstate shipment of milk or cream to which has been added, which has been blended or compounded with any fat or oil other than milk fat. The Filled Milk Act was enacted on the premise that since pure milk is a desirable nutritious food, consumption of substitutes for pure milk would

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It is recommended: That more positive emphasis be given by business, industry and all communications media to the unique and important role of the homemaker; the intelligence and common sense required; the value of her services, the most constant of which is the providing of food; and to her contribution in the making of healthy, productive and contributing citizens and future families."

It is interesting to compare this statement with Mary Douglas's contemporaneous discussion of the importance of meals in structuring family ties. Douglas, "Deciphering a meal," pp. 61-81.

<sup>481</sup> This panel was a Who's Who of executives from food industry giants, including Robert L. Callahan, of Coca-Cola; Daniel Gerber, of Gerber Products Co., Harold Mohler, of Hersey Foods Corp.

have injurious effects on the public health. Because of developments in food technology since 1923, that premise is no longer valid.<sup>482</sup>

Its other recommendations included the repeal of the Butter Act, repealing the Filled Cheese Act, to authorize the fortification of milks, and increase wheat, rice and corn enrichment (including the allowance of enrichment of chocolate products),<sup>483</sup> in short, to promote innovation in novel foods that would solve the nation's diet and health problems.

All of these panels would add to the general din of calls for reform, which would congeal into a post conference consensus for changing government policy on food distribution programs and more specifically improving nutrition labeling and education, though perhaps not into a clear consensus for how to do it. But two panels would have a more direct impact in anticipating the way that food, nutrition and health were framed in the years following the conference. The first of these was the panel on "Adults in an Affluent Society: The Degenerative Disease of Middle Age," which fell under section II on "Establishing Guidelines for the Nutrition of Vulnerable Groups (With Special Reference to the Poor)," and which was chaired by Ancel Keys, and vice-chaired by Irving Page. The panel's report highlighted that "the poor and disadvantaged suffer from insufficient food, even outright hunger and malnutrition... [but] Many of them of them also share the problems of the affluent—too many calories, under activity, overweight, inability to make wise food choices leading to a balanced diet."<sup>484</sup>

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<sup>482</sup> Naturally, this recommendation prompted the enclosure of a dissent by the National Milk Producers Federation U. S. White House. *White House Conference on Food, Nutrition, and Health*, p. 280.

<sup>483</sup> It also recommended the "terminat[ion of] hearings on part 80.2 of proposed regulations for vitamin and mineral fortified foods" (i.e. the FDA special dietary foods hearings proposal to restrict fortification).

<sup>484</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health*, p. 51. It thus recognizing how obesity could be caused by poverty, not just affluence. Indeed, in its conclusion they stated this more directly: "The Panel recognizes that problems like atherosclerosis, obesity, alcoholism, and hypertension are evident in both the poor and the affluent segments of our society. Much can be done to control these problems." While calling for more research on the topic, they left no doubt about what they saw as the Conference's principle priorities ought to be: "That first priority in effort, time, and resources be directed toward providing an adequate diet for the poor."

The explanation given in the panel's report for the rise in obesity followed those given by Keys a decade before in *Eat Well and Stay Well*:

Our abundant resources, technological processes, promotion and marketing techniques have created the means to change for the better the way we eat, live dress, and behave. Instead, the system seems to create dependence and limits choice in our way of life. Too often the matter of how we live has come about by the pressures of the markets, small influence groups, or the insistence of the mass media rather than by careful evaluation and national debate on what choices are open to us.<sup>485</sup>

Among the possible solutions to this modern problem the panel offered, in a section with the header "Labeling," suggestions on improvements in food labeling information. It specifically encouraged a change on the labeling of fatty acid content:

Many persons already are attempting to modify their diets, either because they have been screened and found to be at high risk or on their own volition. In addition many physicians are proscribing special diets for patients who have had a heart attack, or who, for other reasons, are thought by the physician to merit such management. Following such modified diets is made difficult by lack of good information on the fat content and the fatty acid composition of foods found on the grocery shelves. Current regulations prevent manufacturers from providing such information.

The Panel believes the consumer is entitled to know the content of the food he consumes. Furthermore such information is required by physicians in prescribing special diets.

Keys's panel also indicated a role for industry to "make every reasonable effort to formulate and market palatable foods. These should be of such a composition that individuals who care to do so can regulate the nutritional characteristics of their diet without undue effort or expense." While the panel was an outlier in the way it focused on overeating rather than malnutrition resulting

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<sup>485</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health*, p. 52.

from lack of food, its importance after the conference would grow as policies around overeating began to eclipse the hunger controversy.

The other panel that I focus on here is the panel on “New Foods: Standards of Food Identities that Simulate Traditional Foods. Impact of New Technologies on Nutritional Value,” held in Section 3 of the Conference on “The Provision of Food as it Affects the Consumer,” the section that most closely fit Nixon’s original plans for involving industry in solving the hunger crisis. The New Foods Panel was chaired by Richard S. Gordon (VP of Monsanto) with nutritionist Gladys A. Emerson co-chairing. One panel member in particular, Peter Barton Hutt, an attorney from the law firm Covington & Burling, would prove to have an important role in the panel (drafting the report), and would also take its findings with him when he took a position in the FDA in the 1970s.<sup>486</sup> The panel’s framing of the debate reflected a pro-industry perspective on many of the legal debates surrounding food. Broadly speaking the panel called on government institutions to reform regulations to let the market resolve the debates, to allow:

Freedom for industry to experiment and innovate, coupled with responsibility to consumer inquiry and Government regulation. Freedom for consumers to be informed, to inquire, and to petition; coupled with a responsibility to become knowledgeable and effective consumers.

It also argued for some narrower policy reforms, such as throwing out the “jellybean rule” — “No one type of food should be preferred over another as a nutritional carrier” — and removing caps on mega-dosing to let fortification be driven by the market, not the government.<sup>487</sup>

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<sup>486</sup> The panel had other noteworthy members: Samuel A. Goldblith (MIT), and Kenneth Kirk (FDA Associate Commissioner for Compliance).

<sup>487</sup> “The consumer should be free to select, in the marketplace, any fortified food of her choice whether of completely natural or completely synthetic origin or some combination.” On the repeal of the “jelly-bean rule,” which was recommendation number 6, Peter Hutt would ease up when he took on the office of FDA general Counsel.

The New Food Panel's report was substantially longer, and more detailed than the other industry reports, and reflected the energy and ambition with which Hutt addressed many ongoing food policy debates. It proposed ten specific recommendations:

1. The implementation of an immediate food fortification program to relieve malnutrition.
2. The establishment of a single regulatory policy to achieve uniform practices for the protection of consumers.
3. A policy of truthful disclosure wherein names for foods accurately describe what the foods are.
4. The establishment of a meaningful, accurate, and useful method of presenting information to consumers through food product labeling.
5. A standard of characterization which may be required by the Government to guarantee the amount of the characterizing ingredient in food products i.e., what makes a food what it is.
6. A standard of nutritional quality which may be required by the Government to assure a food product's minimum and maximum values for nutritional purposes.
7. Fair and expeditious regulatory proceedings in which any person would have the right to participate.
8. Uniform application of all regulatory requirements throughout the Nation, enforceable by Federal, State, and local officials.
9. A separate Administration for Nutrition Science and Technology to maintain surveillance of the Nation's nutritional status and to develop National nutrition policies.
10. Modern inspection and quality control techniques for inspection of food.

Under the detailed proposal for item #3, "truthful disclosure," the Panel recommended getting rid of the "imitation" label for being simplistic and inaccurate. In its place, and explained under item #4 "meaningful, accurate, and useful method of presenting information," the panel stated that laws already existed providing government agencies (namely the FDA) the authority to introduce ingredient labeling for all foods, generic, standard and novel, as well as increase the availability of "information about nutritional properties" for a given food. This list of proposed reforms

would become important since it foreshadowed many policies that Peter Hutt, Virgil Wodicka, and others from conference who would shortly move into the FDA would directly implement in the 1970s.<sup>488</sup>

The content of the conference panels and subsequent White House Conference Report got some dutiful media coverage in the moment but would play a greater role over the next few years as a reference for political lobbying and defense for institutional reforms. In the immediate aftermath of the conference much greater attention was given to how the conference was ransacked by colorful protest groups and diverse social movements. Illustrative of this were the strident comments made by the various task force commentators on the otherwise staid scientific and industry panels. One of the more revealing and comparatively raw and unedited contributions to the final report was the “reflections and impressions” section of the “Voluntary Action by Women” Task Force (which included Esther Peterson, discussed in Chapter 4), which listed dozens of quotes from individual task force members showing a wide range of viewpoints and impression. In attempt to capture the frenetic and emotionally intense mood of the conference, one anonymous participant contributed his or her impressions in prose that read like beat poetry:

Cold people, cold people, verbose people, people not staging other people, people strutting verbally, scaring people, caring people, fighting people, and men and women. Forlorn women, women shouting, men shrugging, men talking, men explaining—more talkers than listeners. Our daily bread, but not theirs—their hunger but not ours. Scientific

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<sup>488</sup> Indeed, the Panel’s discussion of item #5 proposed a loosening up of food standards, pointing to precedent in an FDA experimental food standard:

“A recent example of such a modern standard is the one for breaded shrimp, which guarantees the amount of shrimp the consumer receives but permits any safe and suitable breading ingredients with only a very few specified exceptions. It is equally important that new variations and new foods be permitted to be marketed under their own accurate and informative names and not subject to an old standard, in the way that special formula breads are marketed separate from the standard for enriched bread.”

Two years later Peter Hutt would provide the same argument when he sought to generalize this approach to all food standards and introduce the FDA’s new system of nutrition information labeling.

facts pouring from experts—flooding the rooms—drowning the uneducated. Some gentlemen not listening men—and women trying, women prodding, women pushing, women helping, women seeking, and finding answers and asking more and hoping—then more and more—some bad rips mended—some cruel truths spilled over nice talk—more talk of now—keen meaning from the meaners. Some feeling of turning on—and to each other—Humility seeping through the layers of indifference. Only a start—miles to go, years to work—Starting now—no excuses, no delays, no rationalizing—Their daily bread— now.<sup>489</sup>

Another task-force participant expressed what must have been a common feeling among activist simply eager to see results: “I have felt torn between a desire for the Conference to maximize effectiveness and the need of the kind of drama that will emphasize the need for action.” Activist participants struggled with whether it was better to seek a rational (dispassionate) and productive discourse, or the need for a powerful emotive voice that would draw attention and force real political change.<sup>490</sup>

Jean Mayer tried to put a positive spin on this colorful element, saying “it ws [sic] rather like a gigantic exercise in sensitivity training. [...] The meetings forced everyone to listen to points of view they had never listened to before.”<sup>491</sup> But many participants were unhappy with how the conference was unfolding. One complaint was substantive. Nixon was not seen to be showing a sense of urgency over the hunger issue. Some groups in the hunger lobby threatened

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<sup>489</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health*, p. 312.

<sup>490</sup> Some of the comments did give a sense of how new and empowering the task-force format, particularly the Women’s Task Force, was for some of them. One commentator expressed a real hope with the experimental conference format and the role of women in it:

“I felt the role of the Task Force was an expression of the new womanliness. This could be an historic turning point in the way women look at themselves. Having felt limited to a specific personal role—the nurture of the family—they now find themselves speaking for the nurturing of society.”

Another woman noted, “I’ve gone to a lot of conferences [...] I keep hoping that something will happen,” but she had never been on a task force like this before. Though she continued:

“But this being on a Women’s Task Force—you feel kind of comfortable with women. You get your strength up to go out with the men. Another learning process: I’ve worked with white people since 1964--you get to be more honest—you learn to speak straight out, not just be polite “

Despite this opportunity, she knew that many people back home in Mississippi were suspicious the conference was just “a showcase.”

<sup>491</sup> Stare, Fredrick. *Adventures in Nutrition: An autobiography*, p. 127.

to hold a sit-in until “until the President declares an emergency.” Others held a prayer of “No Thanks” on December 4th.<sup>492</sup> There was also disagreement over whether public education was significant for the issue of hunger and poverty. A community organization report argued that “poverty, not ignorance, was the main cause of hunger and malnutrition.”<sup>493</sup> On December 5th, Nixon met with six delegates of the groups, but did not concede to their appeals that he declare a national emergency.<sup>494</sup>

Another problem was the gap between how experts and ordinary people at the conference understood the issues. Jean Mayer opened the meeting stating, “Bear with the academic jargon you’re going to hear. You may learn something.” However, on the panel on “New Foods” a woman asked, “What do you mean by genetic foods?” The audience laughed and she was told that the word she meant was “generic,” not genetic. The woman complained, “See? That’s what I mean. You people don’t tell us consumers what you’re talking about. I’m confused and you’re not helping us to understand with all your fancy words.”<sup>495</sup> The episode illustrates the way in which the expert panelists’ regular reliance on technical language or the exchanges between panelists over data on food consumption and diet recommendations quickly alienated and frustrated participants less experienced with these institutional languages for food and nutrition concerns. And some complained that the very format of the conference resulted in people talking past one another:

The whole tone of this carnival—some call it a conference—is a deaf one. No one is listening to anyone else. And all that can ever come out of it is a big fat waste of time—for poor, for consumers, for food experts, for everyone here. [...] There is a gap between all the

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<sup>492</sup> “Prayer Of ‘No Thanks’ Given at Hunger Parley,” *New York Times* (Dec. 5, 1969), p. 65.

<sup>493</sup> Jack Rosenthal, “4 Panels Bid Nixon Declare a Hunger Emergency,” *New York Times* (Nov. 30, 1969), p. 74.

<sup>494</sup> Jack Rosenthal, “6 Hunger Parley Delegates Rebuked,” *New York Times* (Dec. 6, 1969), p. 25.

<sup>495</sup> Sandra Blakeslee, “Food Parley Exposes a ‘Trust Gap’,” *New York Times* (Dec. 7, 1969), p. 85.



interest groups here. [...] That's because everyone is wearing the ear plugs of his own biases that he brought with him to the conference.

Richard Hall (VP of research at McCormick Company) was dismayed by the lack of trust between consumers and industry: “no steps have been taken, in our panel or in others I've been to, to try and bridge this problem or even discuss it.” As a journalist characterized the gap: “In a sense [the industry, consumer and science experts] represented a second conference. Theirs was on nutrition—on quality of food rather than the quantity.”<sup>496</sup>

The conference was also an experiment for public broadcasting, as National Education Television (the predecessor to PBS) organized a novel citizen participation format in parallel with the conference. NET broadcasted two programs called “Hunger: A National Disgrace,” one of which was a one-hour distilled report from the conference, and the other entailed 12 regional stations broadcasting local programs on hunger, including local citizens' panels and expert commentary on the issue of hunger along with audience reactions, question and answer sessions, and, at some of the stations, computer-card questionnaires for the audience members. NET taped the local programs and submitted them along with the filled-in questionnaires and a report to President Nixon. John W. Macy Jr., president of the Corporation for Public Broadcasting, the NET station's parent company, argued that “We've reached the stage where it's not enough simply to tell people what the problems are. They have to be given an opportunity to do something about them” [...] and the experimental broadcast was an effort to “get them to express their views to decision makers.”<sup>497</sup>

The NET town hall meeting in DC opened with a framing that echoed the ABC “Hunger in America” documentary. The narrator described hunger's key victims through ethnic and geographic categories, Appalachian whites, Blacks in South Carolina, Mexican Americans in

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<sup>496</sup> Sandra Blakeslee, “Food Parley Exposes a ‘Trust Gap’,” *New York Times* (Dec. 7, 1969), p. 85.

<sup>497</sup> Fred Ferretti, “Public TV to Test Its Strength Next Week” *New York Times* (Nov. 28, 1969), p. 79.

New Mexico, Indians on Federal Reserves, and showed clips from interviews in these areas with people struggling with poverty and malnutrition. During the question and answer session, the audience voiced disappointment with the White House Conference's issue framing. A Hispanic man, the first to speak, voiced the recurring complaint that, "This conference shouldn't be a conference about food, nutrition, and health, it should be a conference about poverty and hunger!" The audience was clearly selected to reflect a wide diversity of social and economic backgrounds, and as the moderator circulated through it, each speaker increasingly built on the idea of having a common hunger identity despite differences in geography and race. The town hall panelists of experts were selected to reflect a wide range of political affiliations: Jean Mayer, Senator McGovern, Reverend Jesse Jackson (representing Operation Breadbasket), Congressman Robert Price (Democrat from Texas), Richard E. Lyng (Assistant Secretary of USDA), John Kramer (National Council on Hunger and Nutrition). Rev. Jesse Jackson echoed a criticism which resonated with many in the crowd when he complained that it was unacceptable that "we've put a man on the moon, but can't help a family feed its children."<sup>498</sup>

In the weeks and months following the White House Conference, people differed over whether the conference had been a success, had met its intended goals, and perhaps most importantly, what its would legacy would be. Pointing to the experience of there having been "two conferences," one on hunger, the other on nutrition and consumerism, the hunger lobby argued that broadening the conference had been a tactic by the Nixon Administration to defuse

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<sup>498</sup> WHCA Videotape Collection > 1969 Post-Inauguration Titles; File/ID# WHCA VTR# 3544 Format: 2"; Title/Event: "Hunger - A National Disgrace," Pt. 1 & Pt. 2; Date: 12/2/1969 Time of Day: 2000; Source: WETA; Producer: NET, in the "White House Conference on Food and Nutrition [1969-1970]" Special Collection of the Richard Nixon Presidential Library and Museum, Yorba Linda, California. The paradox between the extravagance of the U.S. Space Race program and the social problem of hunger would be a recurring criticism throughout the hunger controversy. In May 1969, Senator Edward Kennedy called for a slowdown in the space program so that funds could be diverted to more "pressing problems" such as poverty, hunger, pollution, and housing "here on earth." It reflected a cooling of post-Sputnik sentiment. Kennedy argued, "We need not try to get to Mars or Venus merely because the Russians might get there first." Robert Reinhold, "Kennedy Puts Earth Needs Ahead Of Space Program," *New York Times* (May 20, 1969), p. 1.

hunger as an issue. Adding fuel to the accusation, Nick Kotz in his book *Let Them Eat Promises*, published the same week as the conference, quoted Nixon as saying to his USDA Secretary, Clifford M. Hardin, “Use all the rhetoric, so long as it doesn’t cost any money.” Despite such repeated criticisms from the left, Jean Mayer continued to defend the organization of the conference, complaining, “People have spoken too much only to others of their own type—doctors to doctors, processors to processors, consumers to consumers, poor to poor.”<sup>499</sup>

The most visible immediate policy goals which came out of the conference were calls to expand the Food Stamps and School Lunch programs.<sup>500</sup> Concern over the conference and the hunger issue also helped to derail many of the FDA’s planned changes being discussed in the hearings on special dietary foods to rules on vitamins and vitamin-enrich foods. More generally, the conference opened up what would become a recurrent food politics question, lingering today, over whether farm support programs (subsidies) ought to be coupled to food aid programs, or whether food aid should be tied to welfare programs. On this front, Nixon also appeared to be evasive. By the time of the Conference, Congressional legislation on food stamp reform had largely stalled. Senator McGovern accused Nixon of “double talk and double action” on food stamp reforms, using the Administration’s influence in the House to defeat the bill “on the grounds that ‘we can’t afford it’.”<sup>501</sup> Even as early as 1970, the legacy of the White House Conference began to shift from poverty to education (and especially labeling), and from malnutrition to overeating.<sup>502</sup> It would continue a further trend in the detachment of food policy from agricultural policy.

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<sup>499</sup> Jack Rosenthal, “Nixon And Hunger,” *New York Times* (Dec. 2, 1969), p. 49.

<sup>500</sup> Over the next few years these reforms would eventually be implemented, as would the creation of the Special Supplemental Feeding Program for Women, Infants, and Children, or WIC. Poppendieck, Janet. *Free for all: Fixing school food in America*. University of California Press, 2010, p. 63.

<sup>501</sup> Jack Rosenthal, “Nixon And Hunger,” *New York Times* (Dec. 2, 1969), p. 49.

<sup>502</sup> Indeed, industry would find the White House Conference panel reports to be a useful lobbying tool for reforming

### **Bittersweet – Cyclamate’s Fall From Grace**

While not a central focus of the conference, another food scandal which surfaced in 1969 had inadvertently found its way onto the White House Conference agenda: cyclamate and questions about the safety of it and other “generally recognized as safe” or GRAS food additives.<sup>503</sup> In the conference panel on “Food Safety” arguments occurred over the need to scientifically review the Delaney Clause, a clause in the 1958 Food Additives Amendment that required the FDA to ban any chemical additive found “to induce cancer in man, or, after tests, found to induce cancer in animals.” One panelist, James Turner, who ended up writing a separate concurring opinion, was alarmed by how the language of the panel’s report had been adjusted so as to construe that the Delaney clause should be repealed. Turner clarified that, when pressed on the issue, all panelists insisted “that the chemical environment be controlled as completely as possible.” Turner wanted to make clear with his statement that GRAS should not be a means for easing standards on food additives, and to hammer this point home he included a line in the original statement that had been redacted: “No additional chemicals should be permitted in or on our foods unless they have been shown with reasonable certainty to be safe on the basis of the best scientific procedures available for the evaluation of safety.”<sup>504</sup> The incident reflected the way in which public scares over MSG and especially cyclamate had cast doubt over what were

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the food label. By March of 1970 the ISEO had compiled a booklet containing all the quotes from different panels indicating the need for changes in food labeling. “1969 White House Conference Report Labeling Recommendations – Prepared by ISEO (March, 1970),” found in the binder “8.FoodLabelingAdvertising1\_1957-1970” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>503</sup> Sandra Blakeslee, “Panel on Food Safety Debates Use of Most Accepted Additives,” *New York Times* (Dec. 3, 1969), p. 28.

<sup>504</sup> U. S. White House. *White House Conference on Food, Nutrition, and Health*, Section 3, Panel 3 on “Food Safety,” p. 139. That summer, James Turner, along with 15 other of Ralph Nader’s “Raiders,” had interviewed FDA personnel and examined FDA records as research for what would be an exposé on the agency, published the following year as *The Chemical Feast* (1970). Boffey, P. M. “Nader’s Raiders on the FDA: Science and Scientists’ Misused’.” *Science* 168, no. 3929 (1970): 349.

agreed to be “the best scientific procedures.”<sup>505</sup> Here I will only briefly describe the cyclamate scandal, for it was this scandal which had the most direct impact on FDA staffing changes and on subsequent shifts in agency policies in the 1970s on managing risks and informing consumers.

Ever since Abbott Laboratories decided to expand its Sucaryl market beyond diabetics to a mass public, its signature additive, cyclamate, had continued to face scrutiny about its possible negative side effects. As mentioned in Chapter 2, the FDA and its scientific advisory committees were initially resistant to the use of the “nonnutritive” artificial sweetener by otherwise healthy individuals. Those reservations reflected scientists’ uncertainty as to whether accumulative concentrations of the sweetener might have unforeseen side effects, which might not surface in smaller populations but would become a concern at the scale of mass marketing. Even after the FDA issued a policy statement in 1962 informally accepting the additive in mass consumed products, cyclamates were the subject of recurrent medical news stories questioning their safety. In 1964 The Medical Letter issued a message to its readers drawing attention to a Wisconsin Alumni Research Foundation (WARF) study which suggested cyclamate stunted the growth of rats. A *Consumer Reports* issue carried a copy of the message in lay terminology, and it got considerable coverage in the press. Within a year it became known that WARF had conducted the research under contract by the Sugar Research Foundation and most people subsequently

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<sup>505</sup> I leave aside the MSG concerns, as well as a more in depth discussion of the Delaney Clause. For an example of the parallel MSG debates at this time, see Morton Mintz, “Rise and Fall of Cyclamates,” *Washington Post* (Oct. 26, 1969), p. 1. For a longer history of recurrent cultural concerns with MSG in various Asian countries and in the United States, see Sand, J. “A short history of MSG: Good science, bad science, and taste cultures.” *Gastronomica* 5, no. 4 (2005): 38–49.

discredited it.<sup>506</sup> WARF researchers published another article in *Nature* later in 1965 which generated further press, but had less impact on the product's sales.<sup>507</sup>

Up to 1968, however, the FDA generally remained impartial on these inter-industry disputes over the safety of natural versus unnatural ingredients. In 1965, an FDA review of cyclamate studies affirmed that there was no demonstrated risk from use of the artificial sweetener in soft drinks and other food products, but the agency did not change its official position that such products were classed as special dietary foods and thus, ostensibly, for people under special treatment.<sup>508</sup> In 1968, a study by FDA staff scientist Martin Legator showed that cyclohexylamine, a chemical precursor in the production of cyclamate, which sometimes appeared in the final consumable product, had a notably higher carcinogenic profile. This prompted renewed interest in examining the diet ingredient's safe use in the food supply.<sup>509</sup>

In April 1969, the increasing media attention led Commissioner Ley to issue a public announcement. Ley quoted an interim NAS Food Protection Committee's review of the sweetener as stating "totally unrestricted use of the cyclamates is not warranted at this time," and said that the FDA agreed with this position, "that consumers should limit their use of the cyclamates" to "no more than "50 milligrams of cyclamate per kilogram of body weight per day." Recognizing that "it's difficult to put this recommendation into practice because consumers really can't tell how many milligrams they are getting in a product without a lot of

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<sup>506</sup> Two days after The Medical Letter statement was distributed, sales of Royal Crown Cola hit a low for the year, as one of Wall Street's largest brokerage firms advised its clients not to buy company it pending a clear statement from the FDA as to its safety. David Hoffman, "Diet Drink Sweetener Controversy is Reheated," *NY Herald Tribune* (10/3/65), p. 12.

<sup>507</sup> David, Hoffman, "Diet Drink Sweetener Controversy is Reheated," *N.Y. Herald Tribune* (10/3/65), p. 12. "Say Artificial Sweeteners in Large Dose Harm Rats" *Supermarket News* (10/11/65), p. 23. A Japanese study showing a high incidence of miscarriages in pregnant mice fed large doses of the sweetener, published in 1964, but then republished in an American Journal in 1967, also prompted renewed concern and attention by media and the FDA. Harold M. Schmeck, "FDA is studying artificial sugars," *New York Times* (January 31, 1967), p. C-52.

<sup>508</sup> "Cyclamates Safe as Used Now: FDA" *Supermarket News* (5/24/65), p. 18.

<sup>509</sup> "FDA Geneticist Raise New Doubt on Cyclamate," *Medical World News* (Nov. 15, 1966), pp. 25-27. "Pressure Grows on FDA to do Something About Cyclamates," *Food Chemical News* (Nov. 25, 1968), pp. 4-5.

arithmetic,” Ley point to the special dietary hearings already in progress, the second section on “foods for calorie restricted diets” as the agency’s attempt to “give the consumer more meaningful information.” In the meantime, Ley argued that people could safely continue to consume artificially-sweetened products, so long as they exercised a moderate amount of precaution, restricting their intake of diet soft drinks, particularly for children, for example, to no more than one or two bottles a day.<sup>510</sup>

Because of this ongoing uncertainty, the FDA specifically chose to keep the issue of safety out of the Special Dietary hearings on artificial sweeteners.<sup>511</sup> Instead other issues were discussed there: whether artificial sweeteners should be classified as food additives instead of grandfathered in to the GRAS category; whether “technological use”<sup>512</sup> should be exempt from the standards being developed for diabetic use; and how cyclamates should be labeled. In a September 1969 appearance, FDA staffer Weissenberg noted that the FDA was motivated to introduce the new regulations because the original label—”should be used only by persons who must restrict their intake of ordinary sweets”—was intended to signify the products were only for diabetics, but new products with the label marketed to a wider audience, and which sometimes include caloric sweeteners, were no longer appropriate for those patients.<sup>513</sup> So the hearings

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<sup>510</sup> “Statement by Herbert L. Ley, Commissioner of Food and Drugs” and “Dr. Ley’s Press Conference on Cyclamates” (April 3, 1969), found in the binder “22.Cyclamates1\_1964-1972” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. In the question and answer session that followed, the very first question Ley was asked was whether there was cause for concern with pregnant women consuming cyclamates. The special interest in pregnancy reflected the post-thalidomide sensitivities on food and drug safety protocols.

<sup>511</sup> For Abbott Laboratories there was a major concern over whether safety questions would surface in the FDA food standards hearings on 403(j) labeling discussions. “Memorandum to Abbott 403(j) File, Re: Cyclamates -- Safety Issues” (September 29, 1966), found in the binder “22.Cyclamates1\_1964-1972” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>512</sup> The use of cyclamate in canned foods for restoring sweetness, and not intended for diabetic or dieting use and health labeling.

<sup>513</sup> “Misuse of Artificial Sweeteners Statement led to New Dietary Regs,” *Food Chemical News* (Sept. 15, 1969), pp. 23-25.

mostly focused on how to solve this division of the market for artificially sweetened goods, rather than the lingering questions about the sweetener's safety.

All of this changed October of 1969. Jacqueline Verrett, a research scientist at the FDA, had been running tests of cyclamate on chicken embryos since 1966. By December of 1968, Verrett shared these results internally within the FDA. Fifteen percent of the embryos she injected with cyclamate had shown visible deformities. The agency decided that neither her work nor her colleague Legator's studies could be extrapolated to humans. On September 30, 1969, out of frustration with what she would later characterize as "foot dragging" inside the agency about her and Legator's findings, Verrett did an interview with NBC where she stated directly and emphatically that, "I don't recommend cyclamates for chicks, and I don't recommend it for people."<sup>514</sup> Herbert Ley issued an immediate rebuttal of Verrett's comments, stating "Cyclamates are safe within the present state of knowledge and scientific opinion available to me." The FDA convened an ad-hoc committee of the NAS to review cyclamate's status as a GRAS ingredient. A week later, Abbott Laboratories acknowledged funding a study which also suggested carcinogenic effects. So on October 17, 1969, in response to the new evidence, the ad-hoc committee recommended its removal from the GRAS list. The following day, HEW Secretary Robert Finch, holding a can of TaB soda (sweetened with cyclamate and saccharine), announced that cyclamate would be provisionally banned.<sup>515</sup>

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<sup>514</sup> "Bitterness About Sweets" *Time Magazine* (Friday, Oct. 17, 1969); Morton Mintz, "Bittersweet Saga: The Rise and Fall of Cyclamates," *The Washington Post* (Oct. 26, 1969), pg. 1. Morton Mintz's reports on the cyclamate controversy played an important role keeping the FDA on its toes. Commissioner Ley commented on Mintz's doggedness on the subject during the April 1969 public announcement. William Goodrich, FDA General Counsel at the time, later identified Mintz's early 1960s exposé on drug safety trials as moving along the New Drug Amendments of 1962. "William W. Goodrich, office of General Counsel, 1939-1971" hosted on the FDA website, last accessed August 4, 2010:

<http://www.fda.gov/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/ucm073370.htm>.

<sup>515</sup> Finch's announcement must have dramatically fueled anxieties about the hidden potential of carcinogenic food additives. He noted that the kind of bladder cancer which had developed in the rats has "an extremely long latency period" of up to 20 years. Morton Mintz, "Bittersweet Saga: The Rise and Fall of Cyclamates," *The Washington*



The seesaw nature of the cyclamate safety review prompted widespread commentary and disagreement in the scientific community about the appropriate approach to risk management. *The Lancet* ran an editorial that noted that “never have so many pathologists been summoned to opine on so few lesions from so humble a species as the laboratory rat.” An editorial in *Nature* characterized the wave of bans on cyclamate across Europe as “the cyclamate bandwagon” and interpreted Commissioner Ley’s speculations on opening an investigation into saccharine as bearing the marks of “an impending witch-hunt.” They also sarcastically mused that banning the other artificial sweetener would have the “upshot” of leading people to eat more sugar, “an outcome which there is reason to believe could be considerably more pernicious to health than any amount of artificial sweeteners in the diet.”<sup>516</sup> Not all scientists or science reporters were against the ban. Joshua Lederberg, a Nobel Laureate in Stanford’s Department of Genetics who worked on cancer research, came to the defense of the FDA’s cautious actions, arguing that, “The potential threat of chemical induction of cancer surely should not be taken lightly.”<sup>517</sup> Scientists’ commentaries, however, generally focused on the minimal risks being discussed and the problematic nature of relying on animal studies which very little resembled the contexts in which humans would be consuming the additive.

On December 11, 1969, Commission Herbert Ley, Jr. resigned from the FDA. In accepting his resignation, HEW Secretary Finch praised Ley as a “gifted scientist and a

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*Post*; Elizabeth Whelan, “The Bitter Truth About a Sweetener Scare,” (August 26, 1999), found at the American Council on Science and Health “News & Commentary” website, last visited on Dec. 22, 2007: [http://www.acsh.org/news/newsID.381/news\\_detail.asp](http://www.acsh.org/news/newsID.381/news_detail.asp). This was a period of growing public interest in cancer and the role of environmental factors. In 1971, Nixon would declare a “War on Cancer.”

<sup>516</sup> Elizabeth Whelan, “The Bitter Truth About a Sweetener Scare.” “The Cyclamate Bandwagon.” (1969). *Nature*, 224(5217), 298-299.

<sup>517</sup> Lederberger’s letter is particularly ironic given that given that five years later his position would be reversed, and he would be attacking calls to introduce federal regulations on recombinant DNA research. Joshua Lederberg, “DNA research: Uncertain Peril and Certain Promise,” *Prism* 3 (November 1975): 33, from Watson and Tooze, *The DNA Story*, Document 3.2. CF. Sally Smith Hughes, “Making Dollars Out of DNA: The First Major Patent in Biotechnology and the Commercialization of Molecular Biology, 1974-1980,” *Isis* 92 (September 2001): 541-575.

dedicated public servant,” but noted that he had “coped strenuously with an unwieldy agency.”<sup>518</sup> Looking back on his brief 17-month tenure, Ley would have few positive things to say about the agency. Only a couple of years later, at a Congressional hearing on the FDA, Ley lambasted the agency for its close ties to industry, and claimed that he left out of exasperation with an overbearing pharmaceutical industry.<sup>519</sup> Despite continued appeals by Abbott Laboratories into the 1980s, cyclamate would remain a banned food additive. But, as will be discussed in the following chapter, the experience with cyclamate would have significant political consequences for the FDA. It led to an outside review of the agency’s GRAS standards, and the procedures by which the FDA determined which food additives were acceptable and which were not. And the cyclamate controversy would become a *cause célèbre* and exemplar for those protesting what they considered to be the FDA’s excessive overreaching. When the FDA sought to ban similar popular food items in the 1970s, in particular saccharin, the only remaining artificial sweetener on the market, critics and industry would be much quicker to mobilize against it. Perhaps most significantly, with the exit of Ley, and the swearing in of a new Commissioner, Charles Edwards, the cyclamate controversy marked a period of staffing and organizational changes at the FDA which would shape the agency’s new policies in the 1970s.

### **The Limits to Growth (or Scarcity in Abundance)**

By the time the FDA had concluded the special dietary hearings in 1971, discussions of hunger, both at home and abroad, had evolved from discussions of the economic poverty of certain ethnic minorities to a discourse on the responsible management of populations and raising the conscientiousness of consumers. The shift would mark the turn to a decade-long

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<sup>518</sup> Source: <http://www.fda.gov/AboutFDA/CommissionersPage/PastCommissioners/ucm113447.htm>

<sup>519</sup> His subsequent criticism of the FDA resulted in his being added to Nixon’s infamous master list of political opponents.

preoccupation with population and resource scarcity.<sup>520</sup> On April 20, 1970, activists called for a national environmental teach-in, and millions of Americans converged on campuses and parks to show their concern for a variety of environmental issues confronting mankind. The first Earth Day marked the emergence of environmentalism, but also the crystallization of a new global sensibility for personal responsibility. Alongside the new social movements mobilizing around environment were “countercuisine” movements of activists seeking to challenge the establishment food industry and organize around alternative food practices.<sup>521</sup> In their efforts to politicize consumer choices, these movements infused “the politics of the personal” into food politics, including the personal responsibility for the world’s diet.

Concern over how to manage the world’s growing population had already surfaced in the 1960s. In 1966, Kenneth Boulding published *The Economics of the Coming Spaceship Earth* in which he described a closure of the global “frontiers” and called for an end to the “cowboy economies” of the past.<sup>522</sup> In a description of the world’s economy that looked far different from Galbraith’s *Affluent Society*, Boulding argued that “the earth has become a single spaceship, without unlimited reservoirs of anything.” In this new “spaceman” economy all members of the ship would have to learn to work together. Charles F. Park argued in a book called *Affluence in Jeopardy* in 1969 that, based on the amount of lead and iron he predicted was available, the world could soon run out of certain raw materials. Another concern was the “population bomb,” the rapidly growing world population and the strains it posed for world resources. Nixon, in his White House Conference opening speech, called for the support of a “Commission on Population Growth and the American Future” and specifically mentioned the need for family planning programs. And in 1972 the newly formed “Club of Rome” published its treatise on the growing

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<sup>520</sup> Cf. Nye, D. E. *Consuming power: a social history of American energies*. The MIT Press, 1999, p. 226.

<sup>521</sup> Belasco. *Appetite for Change*. Cornell University Press, 1993.

<sup>522</sup> Boulding was drawing metaphorically upon the classic “frontier thesis” of American history.

world population, *The Limits to Growth*, which modeled ways in which the explosion of population growth would exhaust resources. Barbara Ward and René Dubos would state this relationship more directly and emotionally in their 1972 book, *Only One Earth*, arguing we had an ethical obligation to change our habits soon if we wished to care for and maintain the only home that we had.<sup>523</sup>

These global economic concerns were not only problematizing notions of the affluent society, but also understandings of diseases (and diets) of the affluent.<sup>524</sup> A specific concern was food scarcity. In 1968, biologist Paul Ehrlich would declare in *The Population Bomb* that “the battle to feed all humanity” had already been lost. Others characterized the battle as one where America's affluence globally had left others behind. Thus, according to Georg Arne Borgstrom's 1965 publication, *The Hungry Planet: The Modern World at the Edge of Famine*, if all the food in the world at the time were distributed evenly among its 3.5 billion human inhabitants, every one of them would go hungry.<sup>525</sup> These debates over food supply and population growth harkened back to Thomas Malthus's times, and reflected perennial arguments over whether pessimistic projections of resources shortages spelled certain doom for society (in the form of a

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<sup>523</sup> Francis Sandbach, “The Rise and Fall of the Limits to Growth Debate,” *Social Studies of Science*, Vol. 8, No. 4 (Nov., 1978), p. 509. Walter Sullivan, “The World Is Running Out Of Raw Materials,” *New York Times* (June 22, 1969). “To Grow or not to Grow,” *Newsweek* (March 13, 1972), pp. 102–103.

<sup>524</sup> While these scholars were assaulting the positivist, and teleological assumptions of America's ascendance as an “affluent society,” the anthropologist Marshall Sahlins was critiquing it from another direction: that the civilized man was necessarily better off than his hunter-gatherer ancestors. In 1968, Sahlins laid out what would be his “Original Affluent Society” argument that, contrary to the common depiction of pre-agricultural man as suffering chronic starvation and a continual “sense of impending doom,” many hunter-gatherer societies were able to achieve a primitive kind of affluence by simply reducing their material wants and enjoying the greater leisure of not having to work so hard as modern man. Thus, Sahlins noted, “There are two possible courses to affluence. Wants may be “easily satisfied” either by producing much or desiring little.” Sahlins, M. “Notes on the original affluent society.” *Man the hunter*. Transaction Publishers. 1968, pp 85–89. Sahlins, M. *Stone age economics*. Chicago: Gruyter, 1972. While scholars would debate the empirical foundations of Sahlins's characterization of the life of primitive man, its implications for how to address modern disparities paralleled those who called for a return to simpler more modest diets (for a Small Planet). These people believed that, just as primitive man “chose” to consume less so as to have more free time, the problems of excessive eating, “diseases of affluence” among the rich and lack of access to food among the poor, might best be solved by conscientious individuals choosing to exercise self-control and simply consume less.

<sup>525</sup> Tom Wicker, “The Nation: Population, Hunger and Oblivion,” *New York Times* (May 4, 1969), p. E15.

return to subsistence living) or whether unforeseen technological or social solutions would render those anxieties moot.<sup>526</sup>

Within this latest Malthusian debate, the diet-heart thesis took on an entirely new light. Many authors were specifically linking the rise in chronic heart disease and overeating in rich countries, and particularly among the affluent, with a corresponding crisis in the lack of access to food in poor communities and developing countries. In this way they layered onto the public health narrative about curbing appetites a moral story about the systematic maldistribution of resources and fostering of poverty and hunger. Moore Lappé, for example, argued in *Diet for a Small Planet* (1971) that food shoppers' decisions at meat counters across America shaped food availability and famine around the world, since meat was an energy intensive food product, whereas vegetarian foods were more ecological. 1972 was particularly viewed as a “crisis year.” In a book review on the subject, Mayer noted: “There probably has not been a single year in recorded history where food shortages and famines have not occurred somewhere in the world [... but] 1972 stands as a landmark: crops failed or were inadequate in several major subcontinental areas: the Soviet Union, China, the Indian peninsula, the Sahel.”<sup>527</sup> Lester Brown, author of the book Mayer was reviewing, *By Bread Alone* (1974), and senior fellow with the Overseas Development Council, considered the causes of the crises to be the “present disequilibrium” in balance between food production and consumption. The book described how “an enormous appetite for animal product has forced the conversion [...] of more and more grain, soybean and even fish meal into feed for cattle, hogs, and poultry, thus decreasing the amounts of food directly available for direct consumption by the poor.” The author thus advocated “a shift in consumption in developed countries towards a “simplified” diet containing fewer animal

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<sup>526</sup> Belasco characterizes it as a cultural battle of “faith” versus “doubt” which takes the dialectical form of technological utopians (“cornucopians”) pitted against socially critical dystopianism. Belasco, *Meals to come*, 2006.

<sup>527</sup> Jean Mayer, “By Bread Alone” *New York Times* (Dec. 15, 1974), p. 395.

products and, in particular, less meat.”<sup>528</sup> In a 1974 *New York Times* article, Jean Mayer was quoted making a similar claim more directly targeting Americans: “The same amount of food that is feeding 210 million Americans would feed 1.5 billion Chinese on an average Chinese diet.”<sup>529</sup>

The nutrition profession, challenged by the hunger scandal and the White House Conference, was no longer only looking outward at hunger abroad, but was also looking inward to the U.S. to tackle malnutrition and problems in the equitable distribution of food. One prospect raised in the conference and touted by some nutritionist was to use special dietary products to solve hunger. Jean Hewitt, home economist and food writer for the *New York Times*, wrote an article which depicted the development of “low-cost, specially formulated nutritive foods” used in underdeveloped countries since the end of WWII as “tests abroad,” which companies and nutrition experts could now apply to the United States. One of the “lessons learned” from this postwar effort to eradicate hunger in developing countries, according to the article, was that it was easier to develop and produce “low-cost, specially formulated foods” than to get them to be eaten.<sup>530</sup>

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<sup>528</sup> And there would be dramatic growth in this literature over the course of the 1970s. Power & Hohenstein, *World of Hunger — A Strategy for Survival* (1976); Lappe & Collins, *Food First: Beyond the Myth of Scarcity* (1977). One author, in reviewing this literature noted:

“Poverty is due to maldistribution of resources (both internationally and within nations), and not to the physical limits of producing the resources themselves. Indeed, given the situation of maldistribution of wealth, land and economic opportunity, the introduction of more productive agriculture (as in the case of the Green Revolution) can lead to a worse distribution of wealth and a lower effective demand for agricultural resources.”

Sandbach, Francis, “The Rise and Fall of the Limits to Growth Debate,” *Social Studies of Science*, Vol. 8, No. 4 (Nov., 1978), p. 507. Here, he foreshadows Amartya Sen’s arguments on hunger and food entitlements. Sen, A. *Poverty and famines: an essay on entitlement and deprivation*. Clarendon, 1982. These books also bear a striking resemblance to present day ones, such as arguments in Barry Popkin’s latest book, *The World is Fat* (2008), where Popkin argues that food consumers (and producers) have a moral obligation to the world’s underfed when they eat too much. Popkin, Barry. *The World is Fat: The Fads, Trends, Policies, and Products That Are Fattening the Human Race*. Avery, 2008.

<sup>529</sup> Anthony Lewis, “Affluence and Survival II,” *New York Times* (April 22, 1974).

<sup>530</sup> Jean Hewitt, “Progress--and Obstacles--Erasing Malnutrition In U.S.,” *New York Times* (Nov. 11, 1969), p. 50.

Food companies jumped on this new market for high-tech nutritive foods. New foods included Quaker Oats Company's "Incaparina," a high protein grain product, "C.S.M.," a corn-soy-milk mixture, Coca-Cola's "Saci," and Monsanto's "Puma," the last two both high protein shakes<sup>531</sup> General Foods Corp. was preparing to market a "stable, high-protein, corn-soy-wheat elbow macaroni" in the U.S. It was being test marketed in the fall of 1969 to housewives in Alabama, and the company believed it could be a profitable product and not have to become a "poor people's food," though the FDA's imitation label would be a market deterrent. This nutritive boom was also an opportunity for food companies to push their anti-FDA-food-standards platform. A spokesperson for Monsanto argued that enriching such food products as chocolate bars, potato chips, and sodas may become a more desirable solution to malnutrition, given trends such as the declining numbers of people who eat breakfast, and the increase in snacking.<sup>532</sup> Even the Biafra hunger crisis, gripping the attention of U.S. news viewers in 1970, promoted the use of novel foods as one solution used abroad that might work at home. Jean Mayer involved in the Biafra aid efforts, wrote a letter mentioning a product in use there with possible application in U.S.

What remained unclear was whether the nutrition profession could bring its tools to the U.S., into what was already a politically charged environment, without themselves being tainted by politics.<sup>533</sup> In a 1972 article, Jean Mayer reflected back upon the past few years' debates with

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<sup>531</sup> Jean Hewitt, "Progress--and Obstacles--Erasing Malnutrition In U.S.," p. 50. The article goes on to describe Quaker Oats' only limited success, in Colombia, with Incaparina, due to the fact that it resembles a local gruel (colada). "The most nutritious product in the world does no one good until it is consumed," said Robert D. Stuart (president of Quaker Oats) in a July McGovern hearing.

<sup>532</sup> The article lists other examples of domestic commercial campaigns that companies had developed with the hunger controversy in mind, including what a Quaker Oats representative described as a three pronged attack: 1) the creation of new special and enriched foods, 2) a person-to-person education through "classes in the ghettos," and 3) "a minority-group T.V. personality to be the poor people's Julia Child." Jean Hewitt, "Progress--and Obstacles--Erasing Malnutrition In U.S.," p. 50.

<sup>533</sup> In light of all the urgent food and resource issues, domestic and global, the public was tiring of onerous procedures of governmental organizations, including the FDA's food standards. In July of 1969, still early in

the goal of framing nutrition problems as they should be addressed in the United States in the seventies. Mayer noted the White House Conference's role as a wake-up call for the profession that it had to address problems at home, though he suggested that it had been willful ignorance rather than unintentional naiveté that had led many nutrition scientists to ignore domestic problems:

The relation between nutrition and a number of social problems had been recognized for some time; however, in the past, those scientists who were concerned with the clinical aspects of nutrition generally focused their attention on the underdeveloped countries of Africa, Latin America, and the Far East where the problems are more acute, the picture easier to quantify, and the work supported by a number of international and U.S. agencies. The "apolitical," "establishment-approved" character of international work was also seen by academics as more congenial than was the raising of disturbing social and political issues about our own society.

In other words, working abroad had been easier than solving America's problems, because scientists weren't held to the same political scrutiny about the nature of treatment. Mayer believed it was now time for the profession to own the social and political problems which came with treating nutritional problems.<sup>534</sup>

In the same article, in a section titled the "Changing Character of Food," Mayer also sketched out an argument for why the new negative nutrition, constituting one might say an additional "limit to growth," posed a fundamental challenge for food producers and their previously harmonious relationship with the diet profession:

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Nixon's presidency, the media had fun when the President indirectly intervened in the FDA's considerations of hot dog standards. The agency was rejecting proposals to allow for a lower percentage of fat in hot dogs, while Nixon's Presidential Consumer advisor, Virginia Knauer, was arguing industry should be allowed to make products that met consumer's new demands. Nixon reportedly telephoned Knauer stating his support. In the call the president famously said: "Stick to your guns, Virginia. I'm behind you 100 percent. I come from humble origins. Why, we were raised on hot dogs and hamburgers. We've got to look after the hot dog." And also, "I'm on a low cholesterol diet myself." The incident was too irresistible an opportunity for jokes, with one of the Washington, D.C. papers running the headline: "Major Administration Shift on Weenie." The joke was probably really on the FDA, since the message to the public was that the agency was spending public money on something so seemingly trivial as preventing companies to make diet hot dogs. *Food Chemical News* (7/14/69), p. 2.

<sup>534</sup> Jean Mayer, "Toward a National Nutrition Policy," *Science*, New Series, Vol. 176, No. 4032. (Apr. 21, 1972), pp. 237-241.



The food manufacturers, distributors, and retailers are well aware that theirs is not basically a “growth” industry. [...] in an effort to increase sales, the food companies are marketing service and convenience in the form of frozen foods and packaged meals. The work that was once performed by the unpaid housewife is now being done by organized labor—food has thus become subject to the same inexorable rise in prices that is characteristic of all industrial goods. [...] Faced with increasing prices, the consumer has been driven to find cheaper substitutes for the primary foods: meat, for instance, may be increasingly displaced by textured vegetable protein. The substitutes can be judged acceptable only if they are enriched with an equivalent quantity of a long list of vitamins and minerals.<sup>535</sup>

Here, Mayer spells out the problem with many of the new foods and technical solutions being proposed to solve America’s dietary troubles. For industry, according to Mayer, selling nutrition might simply become another tactic for white-washing its for-profit interests in food processing and manufacturing. Mayer identified food labeling and building a national nutrition program of education as the main policy outcomes of the consumer programs from the White House Conference and potential public policy solutions to these continued trends towards unnecessary (i.e. unhealthy) convenience and abundance.<sup>536</sup>

## Conclusion

In some sense the hunger controversy simply went away. By the time a second White House Conference on Food, Nutrition and Health was held two years later in 1971, little media attention was paid to it, and none of the activist protests that had hijacked the previous one, even though conference attendees agreed that the problem of hunger in America continued to persist and continued to need monitoring and attention. While the hunger issue came to occupy a

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<sup>535</sup> Jean Mayer, “Toward a National Nutrition Policy,” *Science*, p. 176.

<sup>536</sup> The introduction of the voluntary nutrition label in 1973 and the Dietary Guidelines for Americans published in 1980 in some sense can be seen as inheritors of this legacy.

backseat in American food policy discussions,<sup>537</sup> the concern with global scarcity and “limits to growth” would come to shape much of the 1970s politics, as would frustration and disillusionment with political institutions and their capacity to solve urgent food issues. However, even as public attention drifted elsewhere, for the nutrition profession the scandals of this period had several important and enduring consequences.

First, they brought the nutrition profession’s attention back to the United States. The nutrition profession, already mobilized and experienced in nutrition studies abroad in the 1960s, was now bringing those tools to bear on domestic policy. As mentioned in Chapter 1, nutrition departments in the United States had built up their research programs around the availability of Cold War funding for studying and solving diet and hunger problems abroad. The “Hunger in America” scandal helped draw their attention back home. Focusing on the United States, in turn, foregrounded the differences of studying hunger in the context of an affluent nation. The other growth area of research in nutrition in the 1960s, heart disease and chronic degenerative diseases, continued to dominate nutrition departments’ framing of U.S. diet and health policies.

Second, they politicized many in the nutrition profession, creating a schism between an older generation that saw its professional mission as working in step with public and private institutions, supporting the conventional nutrition paradigm, and a younger generation who wanted to challenge this orthodoxy and reconfigure the mission of nutrition and diet sciences. This younger generation openly embraced the politics of collective responsibility embedded in epidemiological work, and was skeptical of the self-interested role of industry in either

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<sup>537</sup> Janet Fitchen has argued that, more than going away, hunger was merely transformed from a socially visible problem—beggars and lines of hungry—to a less visible disparity where the poor might to act like consumers (standing in lines purchasing items with food stamps), but suffer other less acute forms of malnutrition. She thus describes a difference between “absolute” versus “relative” depravity, an issue I take up in the Conclusion. Fitchen, J. M. “Hunger, malnutrition, and poverty in the contemporary United States: some observations on their social and cultural context.” *Food and Foodways* 2, no. 1 (1987): 309–333.

contesting or distorting the new message of negative nutrition to eat less. In this sense the nutrition transition had a profound impact on the profession. A nutrition scientist who worked with Jean Mayer later described it to me as a series of epistemological contrasts between the old guard and the new, which carried with them particular economic and political commitments. Before, nutrition was in agricultural schools, production-focused and very lab-oriented while not strong on clinical research. The new generation of researchers were in public health schools or involved in clinical research, comfortable with biostatistical data as much or more than chemical laboratory tests, and focused on foods in consumer settings.<sup>538</sup> The public debates described in this chapter foregrounded the politics and biases embedded in both the old and new nutrition paradigm.

In 1971, epidemiologist Abdel R. Omran gave a name to this changing public health paradigm, and specifically the dramatic shift in the burden of disease (and the burden of responsibility) that affluent societies would face. Omran described what he called an “epidemiological transition” which had occurred in most developed nations, where “degenerative and man-made diseases displace pandemics of infection as the primary causes of morbidity and mortality.”<sup>539</sup> The transition was the moment in development when the population growth exploded because of a drop in mortality occurred and before fertility rates leveled out or dropped. Omran’s 1971 article “The Epidemiologic Transition” was a way of visualizing development through the lens of population-level changes, and to recognize how these changes brought with them significant shifts in the social burden of disease. It was also a critique of the demographic transition, its economic determinism, and a call for public health institutions to

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<sup>538</sup> She said that more than a Kuhnian change, the conflict between these two communities, discussed in the next chapter, was only really settled when “the old nutrition scientists died off!” Johanna Dwyer, phone interview, Nov. 20, 2009.

<sup>539</sup> Omran, Abdel. “The Epidemiologic transition: A theory of the epidemiology of population change.” *Milbank Memorial Fund Quarterly* 49, no. 4 (1971): 509–538.

actively engage development. In effect, it linked understandings of diseases of poverty to diseases of affluence through a teleological model of national development with direct implications for public policy and institutional accountability.<sup>540</sup>

Omran's article is today referenced as an early awareness of the emerging problem of chronic diseases in affluent nations, and not, ironically, for what he was focused on – population control and more conventional development problems. This repurposing of his article reflects the way in which the politics of hunger and overeating changed in the intervening years. This was the last time that “Hunger in America” was a front-page, sustained political concern. Just as Omran's model would take on new meaning in subsequent decades, the 1969 White House Conference on Food Nutrition and Health quickly came to symbolize the need to reform food labels as much or more than its original ostensible mission to reform anti-hunger programs. It in part reflected the successes of the Nixon Administration to reframe the debate and industry efforts to capitalize off of the Conference agenda. This is the irony of the hunger scandal and how it shaped subsequent food labeling policy. The scandal started from a concern with “those left behind,” but ultimately functioned to underscore the new challenges of the affluent society and need for novel solutions like food labeling.

This period also marked a turn towards a general wariness of tiresome governmental procedure by the nutrition profession and the public. For the medical profession, growing

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<sup>540</sup> Omran was “extending the scope” of epidemiology in policy circles. In the words of two historians of Omran's work, the focus on an “epidemiological” transition as opposed to the “demographic transition” “provided a means of medicalizing the transition and international development work.” George Weisz & Jesse Olszynko-Gryn, “The Theory of Epidemiologic Transition: the Origins of a Citation Classic,” *Journal of the History of Medicine and Allied Sciences*, Volume 65, Number 3, July 2010, pp. 287-326. However, epidemiological transition theory had a limited audience in the 1970s, because its original focus had a narrow specialized audience. Indeed, over the subsequent decade the article was hardly cited except inside population control research circles. It wasn't until the 1980s that it would resurface in the 1990s highlighted (reframed) as an article on the rise of chronic degenerative diseases. The “epidemiological transition” would be the inspiration for the expression “the nutrition transition” which came into widespread usage in the late 1990s, and which, as I discuss in the Conclusion, Barry Popkin and Marion Nestle have used to draw attention to the emerging problem of obesity.

arguments on the importance of personal responsibility in solving growing healthcare costs would recast public health institutions and government institutions like the FDA as paternalistic. For the public, cultural debates over eating meat versus vegetarianism, or the value of mealtime versus snacking reflected changing food habits that were redefining what was food and “non-food.”<sup>541</sup> Out of this would emerge a new political order, a wave of deregulation and new policies that would lead to a retooling of the FDA food labeling system and the introduction of the first nutrition label.

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<sup>541</sup> Anne Murcott, “Scarcity in Abundance: Food and Non-Food,” *Social Research* Vol. 66, No. 1 (Spring, 1999), 305-339.

## **Chapter 4**

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**Nutrition and Neoliberal  
Governmentality:  
The FDA's Turn to "Nutrition  
Information" Labeling  
1972 – 1984**

*Government is defined as a right manner of disposing things so as to lead not to the form of the common good, [...] but to an end which is 'convenient' for each of the things that are to be governed. [...] In order to achieve these various finalities, things must be disposed – and this term, dispose, is important because with sovereignty the instruments that allowed it to achieve its aim - that is to say, obedience to the laws - was the law itself; law and sovereignty were absolutely inseparable. On the contrary, with government it is a question not of imposing law on men, but of disposing of things: that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics - to arrange things in such a way that, through a certain number of means, such and such ends may be achieved.*

— Michel Foucault, “Governmentality,” 1978.<sup>542</sup>

*Rigorous quantification is demanded in these contexts [of heated political dispute and public accountability] because subjective discretion has become suspect. Mechanical objectivity serves as an alternative to personal trust.*

– Theodore Porter, *Trust in Numbers*, 1996.<sup>543</sup>

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<sup>542</sup> Michel Foucault, “Governmentality,” 1978, p. 93-95.

<sup>543</sup> Ted Porter, *Trust in numbers*, p. 90.

Recently American historians have sought to resituate the turn to deregulation and a new political culture of neoliberalism not with the Reagan revolution in the 1980s, but emerging earlier, more gradually, in the 1970s. In the words of one historian of the period:

the 1970s witnessed declining faith in government programs—skepticism about large-scale public efforts to remake the world [...] Americans developed a deeper, more thorough suspicion of the instruments of public life and a more profound disillusionment with the corruption and inefficiency of public institutions.<sup>544</sup>

This move back in time has helped reveal how the push for deregulation had its roots as much in the anti-establishment and popular disenfranchisement of the seventies as it did in any single-party platform or political agenda. Anti-government sentiment across political parties fueled a variety of movements to explore private solutions to what had previously been seen as public affairs.<sup>545</sup> Yet, it would be during this period of deepening popular distrust for government when the FDA introduced its most ambitious restructuring of food labeling in decades. Through a kind of administrative fiat, in 1973 the FDA introduced the first government approved “Nutrition Information” labels, extended ingredient labeling to all foods — standard and nonstandard alike— and effectively ended the use of the “imitation” label except in particularly egregious cases of economic fraud. The new policies would represent the biggest change in the FDA’s food labeling since 1938, and signaled a dramatic shift away from the postwar reliance on standardizing foods towards a new emphasis on informational labeling.

That the FDA could introduce such sweeping reform despite a post-sixties weariness with Big Government owes to an emerging interest in regulatory tactics which catered to Americans’ growing interest in new consumer lifestyles. This chapter situates the FDA’s 1970s turn to labeling within what would subsequently be described as the emergence of neoliberalism. I use

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<sup>544</sup> Schulman, B. J. *The seventies: The great shift in American culture, society, and politics*. Free Press, 2001, p. xv.

<sup>545</sup> Tuck, S. “Introduction: Reconsidering the 1970s—The 1960s to a Disco Beat?” *Journal of Contemporary History* 43, no. 4 (2008): 617.



“neoliberal” in both its meaning as a political ideology that endorses the classical economics concept of a self-regulating market, and also its meaning as a historically situated phenomenon, a mode of governance focused on cutting “government waste” by improving administrative efficiency and accountability and deregulating the economy.<sup>546</sup> In particular, I identify the food labeling reforms as an example of experiments in “informational regulation,” or regulation through disclosure.<sup>547</sup> Informational regulation would be an increasingly popular style of governance during this tumultuous political period, often seen as neither a simple dismantling of the State (the deregulation favored by small government conservatives) nor the bureaucratic ramping up of direct State regulations (which might result in onerous procedures feared by the Right, or regulatory capture feared by the Left). One risk studies scholar in the 1980s summed up this kind of regulation as non-interfering: “Information provision is an indirect means of regulation, since it assumes that individuals will use what they know to make choices best suited to their own preferences.”<sup>548</sup>

While economists continue to argue about whether such regulatory tools are an effective means of implementing public initiatives, I am more concerned here showing that informational regulation is popular across political parties because of its purported neutrality and fairness. That

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<sup>546</sup> Steger, Manfred B., and Ravi K. Roy. *Neoliberalism: a very short introduction*. Oxford University Press, 2010. The economic school most closely associated with neoliberalism is the Chicago School of Economics at the University of Chicago, home to Milton Friedman. Harvey, David. *A Brief History of Neoliberalism*. First Edition. Oxford University Press, USA, 2005. Harvey's account focuses heavily on the anti-statist interests and activities of neoliberalism movements. Shamir adds to this model an account for how the complimentary push in the politics of the personal, particularly personal responsibility, girds up the anti-state agenda. Shamir, R. “The age of responsabilization.” *Economy and Society* 37, no. 1 (2008): 1–19.

<sup>547</sup> Sunstein, C. R. “Informational regulation and informational standing: Akins and beyond.” *U. Pa. L. Rev.* 147 (1998): 613.

<sup>548</sup> As opposed to direct regulation, such as banning a product. Hadden, *Read the Label: Reducing Risk by Providing Information*. Westview Press Boulder (USA), 1986, p. 34. Stephen Breyer, a prominent advocate and architect of deregulation reform in the 1970s (and future Supreme Court justice), touted informational disclosures because they did not restrict individual choice: “[S]ince freely functioning markets require adequate information— which disclosure helps to provide— disclosure, like antitrust, can be viewed as augmenting the preconditions of a competitive marketplace rather than substituting regulation for competition.” Stephen Breyer, *Regulation and Its Reform* (Cambridge, MA: Harvard University Press, 1982), p. 161.

notion of fairness is predicated on two assumptions. The first is the belief that markets are an equitable and legitimate terrain in which to enact public initiatives. The turn to information labeling reflects a governance choice to translate questions of public health and the management of citizens' health into questions of markets and the management of consumers. The FDA's history of policing health claims on foods, and especially its "nutrition education" turn in the 1970s, fits within a broader history of the state's role in cultivating the "consumer-citizen"<sup>549</sup> and a recent turn to "lifestyle politics."<sup>550</sup> The FDA's efforts to demarcate the line between educating, informing, advertising, and deceiving can be seen in this light as an effort to negotiate the extent to which citizens' health ought to be a consumable good distributed through markets. This marketization of diet and nutrition information should be situated in a larger cultural shift towards market-embedded ethics and health libertarianism. Using the food label as a public health tool presumes that all consumers will have equal access to the labeled information and equal competence to weigh its value, and that differences in lifestyles (an individual consumer's prerogative) will subsequently determine how the label is used.

The second presumption on which claims of fairness in nutrition labeling was predicated is the notion that there exists objective information about food in the marketplace. The FDA's dramatic changes to food labeling would depend upon an external system of evaluating food that was both sufficiently general (capable of being applied to the wide variety of foods in the American market) and objective (measurable and able to be characterized as a factual information disclosure rather than discretionary advice). As this chapter will show, the construction of nutrition labels as mere information disclosures was both a necessary fiction for the label's legal viability—such information could be required under the FDA's authority to

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<sup>549</sup> Spring, J. H. *Educating the consumer-citizen: A history of the marriage of schools, advertising, and media*. Lawrence Erlbaum Associates, 2003.

<sup>550</sup> Giddens. *Modernity and self-identity: self and society in the late modern age*. 1991.

mandate product disclosures—and for its political viability, as nutrition numbers could be characterized as value-neutral facts. This chapter thus articulates how the FDA’s adoption of nutrition information labeling entailed a kind of “double boundary work” of validating certain forms of expert knowledge and legal practice,<sup>551</sup> while also favoring a specific kind of quantifiable objectivity, or “trust in numbers”<sup>552</sup> over other analog forms of objectivity such as “truth-to-nature.”<sup>553</sup> The FDA took great pains to present the label within this scientific frame of food objectivity and neutrality, even as medical specialists continued to dispute the best approach for institutionalizing healthy eating and food companies continued to sell nutrition science to a diet hungry public.

The introduction of nutrition labeling can thus best be understood as a political compromise, introduced in a period when citizens were advocating some sort of institutional change, but were also profoundly disenchanted with politics and public governance. Despite being a compromise, the label would not be neutral in its consequences, and this chapter discusses the performative role of labels in reconstituting food within a new epistemological and political sensibility, what I discussed in the Introduction as “nutritionism.” The switch to labeling nutrition would dramatically reconfigure the way that food was represented in the marketplace and would transform the FDA’s model for managing consumers on questions of diet, risk, and health.

### **Can the Consumer Speak?<sup>554</sup>**

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<sup>551</sup> Jasanoff, S. *The fifth branch: Science advisers as policymakers*. Harvard Univ Pr, 1990.

<sup>552</sup> Porter, *Trust in Numbers*, 1996.

<sup>553</sup> On a broader history of alternative or changing meanings of objectivity, see Daston & Galison, *Objectivity*, 2007.

<sup>554</sup> I’m deliberately punning here on Timothy Mitchell’s similarly stated question, “Can the mosquito speak?” Mitchell, T. *Rule of experts: Egypt, techno-politics, modernity*. Univ of California Pr, 2002. Mitchell asks this question to raise the argument that nonhuman actors such as mosquitoes might have some form of indirect but

The final form of nutrition labeling introduced in the 1970s would be largely determined by institutional prerogatives of staff at the FDA, but the initial push for its introduction was in no small part shaped by the rise of new consumer organizations and activists. Indeed, the first few years of the decade were marked by a distinctive self-awareness about this revitalized consumerism in America. One article published at the time in the *Journal of Marketing* compared the “present era of consumer unrest” with earlier moments in the 1900s and 1930s, and offered a variety of explanations for why now – “rising public standards of business conduct and social responsibility,” sudden economic and social dislocation (including declining real incomes and purchase power), and even the appearance of new social organizations for activism emerging out of the civil rights and anti-war movements.<sup>555</sup> Here I describe some of the most relevant forms of consumer activism in this period as they bore on the activities of the FDA and food labeling. These social pressures helped to define the public atmosphere in which nutrition labeling was born, an atmosphere, as discussed in the previous Chapter, of distrust and frustration with public institutions and conversely optimistic interest in pursuing private reform through private institutions.

One of the earliest and most serious assaults by a consumer group on the legitimacy of the FDA at this time was the exposé, *The Chemical Feast: The Nader Report*, written and published in 1970 by James S. Turner, one of the lawyers from Nader’s Raiders who was a

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significant agency in socio-technic systems like dams in Egypt. I would like to invert this argument to propose that, though “We are all consumers,” to talk of our agency as a consumer is not the same as to talk of the agency of an individual person. In this chapter, as throughout the dissertation, I will be specific about what precisely is the “voice” of the consumer (or more correctly aggregated consumers) when it speaks through mediated platforms like consumer surveys, consumer research findings, consumer advocacy organizations, collective purchasing patterns (“voting with their wallets”), or even individual consumers speaking anecdotally and metonymically on behalf of all consumers. By attending to these mechanisms by which consumers’ interests are brought into the institutional activities of the FDA, I want to illustrate the ways that these mechanisms for democratic feedback themselves partially reconstitute consumer voices and frame their uses.

<sup>555</sup> Herrmann, Robert O., “Consumerism: Its Goals, Organizations and Future,” *The Journal of Marketing*, Vol. 34, No. 4 (Oct., 1970), pp. 55-60.

participant in the White House Conference on Food, Nutrition, and Health.<sup>556</sup> Turner and the team from Ralph Nader's group investigating the FDA from 1968 to 1970 were able to get access to the FDA and its procedures on scientific safety review using new legal tools under the Freedom of Information Act.<sup>557</sup> *The Chemical Feast* chronicled a wide range of examples of what it characterized as the FDA overstepping its authority in some areas while simultaneously failing to provide adequate pro-consumer controls in others. It opened with the example of cyclamates, documenting the FDA's failure to acknowledge and even cover up evidence of the additive's carcinogenic risks. Turner used the cyclamate case to suggest that the Agency needed to reform its procedures for scientific safety assessment of GRAS, "generally recognized as safe" ingredients, but also to imply that it reflected a more systematic failure of the agency to protect the public from a flood of new and dangerous chemicals in the marketplace. The book quoted a 1963 speech by Nobel Laureate Hermann Mueller, who warned:

Today we human beings are exposed to a great number of substances not encountered by our ancestors, to which we therefore have not been specifically adapted by natural selection. Among these substances are food additives, drugs, narcotics, antibiotics, cosmetics, contraceptives, air pollutants, and water pollutants.

The very visible incident of the cyclamate ban in 1969 became a flashpoint for ongoing anxieties about chemical additives, risk, and the continued failures of public institutions to protect consumers. *Chemical Feast* went further, highlighting in a chapter titled "Hidden Ingredients" how the food standards system had the ironic effect of obscuring many of the ingredients used in standard products, and created a site for industry influence where companies

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<sup>556</sup> Boffey, P. M. "Nader's Raiders on the FDA: Science and Scientists' Misused'." *Science* (1970): 349-352.

<sup>557</sup> In a 1970 law review, Ralph Nader discussed the "Freedom of Information Act" and his efforts to use it on the FDA. Nader, Ralph. "Freedom from Information: The Act and the Agencies." *Harvard Civil Rights-Civil Liberties Law Review* 5 (1970): 1.

could lobby the FDA to have ingredients not labeled once they were included in a product's official standard.<sup>558</sup>

Just as damaging as these documented failures to protect the public from potentially hazardous food ingredients were the examples in the book of the FDA's draconian enforcement measures on seemingly trivial issues. In a chapter on "Enforcement," Turner gave examples of how the FDA's zeal for filing charges against individuals it believed to represent medical quackery resulted in an out-of-balance use of public resources and not just the prosecution but also persecution of alternative expert opinions. (Turner noted that, "It is a further irony that the Food and Drug Law through the FDA's enforcement policy, tends to catch not those guilty of fraud, but those who sincerely believe in their theories and works. Unlike cynical shakedown artists, the true believer is reluctant to admit his error in return for a suspended sentence.")<sup>559</sup> Many of the examples focused on the FDA's campaign against nutrition quackery and against vitamin supplement claims, and revealed enforcement measures that raised civil liberty questions about citizens' privacy or free speech protections, or cruel and unusual punishments for taking nonconventional health positions. The exposé also drew upon the special dietary hearings and the extensive time and effort the Agency spent on introducing the crepe label as evidence of its bureaucratic incompetence, calling such hearings "charades" in so far as they were supposed to protect the public as a public fact-finding procedure.<sup>560</sup> These examples were widely cited in media reports and book reviews as evidence that the FDA management not only needed to be reformed, but also that its enforcement culture needed to be brought into line with a new

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<sup>558</sup> Turner described the case of lobbying by Coca-Cola and Dr. Pepper to remove caffeine labeling from their soft drinks in 1968 as one of the experiences which most disenchanted the Nader law students involved in the summer study. One student said after the incident: "I will never be able to trust another government official again." Turner, J. S. *The chemical feast: the Ralph Nader study group report on food protection and the Food and Drug Administration*. Grossman Publishers, 1970, pp. 49-51, 249.

<sup>559</sup> Turner, *The chemical feast*, pp. 32-33.

<sup>560</sup> Turner, *The chemical feast*, pp. 210-211.

sentiment in America favoring independent and alternative cultures. Even the journal *Science* acknowledged in a review of the book that it made a convincing argument for changing the FDA.<sup>561</sup>

Another group chiming in on the need for FDA reform at this time was the Center for Science in the Public Interest (CSPI), formed in 1971 by Michael F. Jacobson (1943–) and two others from Ralph Nader’s Center for the Study of Responsive Law. In 1972, Jacobson published *Eater’s Digest: A Consumer’s Factbook of Food Additives*. The book was neither intended to categorically demonize food additives, nor to defend their use, but instead to inform the public of why they are used and to begin an informed dialogue about whether those uses matched public interests. In a section at the end, “Standardized Foods and Food Labeling,” Jacobson addressed the problematic existence of what he called “silent labels” for “foods whose labels list none or only a few of the ingredients and additives that the food contains.” In other words, foods for which the FDA had developed “standards of identity” and therefore considered to be self-evident and to not need an information disclosure. Without using the polemical style of *Chemical Feast*, Jacobson also emphasized the need for and reasonableness of universal ingredients labeling.<sup>562</sup> While CSPI at this time did not attract the same broad public attention as Ralph Nader’s group, the organization came to be recognized and respected by the late 1970s for its specialization in consumer issues relating to diet, nutrition, and health generally, and food labeling specifically. Starting in 1980, CSPI began publishing the “Nutrition Action Healthletter,” whose wide distribution provided the organization with a platform for spreading its views on industry or FDA abusive practices, pressuring Congress through issue-framing, and shaming institutions into reforming or regulating egregious examples of advertisements which distorted health

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<sup>561</sup> Cf. Rima Apple, *Vitamina*, p. 137-138.

<sup>562</sup> Jacobson, M. F. *Eater’s digest: The consumer’s fact-book of food additives*. Doubleday, 1972.

messages.<sup>563</sup> (By the late 1980s, CSPI would become the dominant consumer advocacy organization on most federal-level issues related to food politics, as discussed in Chapter 5.)

These consumer-interest groups succeeded in keeping food and diet political issues alive in the media even as the 1960s interest in poverty and hunger increasingly faded from public view. The 1969 White House Conference policy agenda of creating a unified, coherent national program for the nation's nutritional health had by 1970 to 1971 largely waned. A mid-decade report on such efforts attributed the continued difficulty with coordinating efforts to the complexity of food and diet issues: "The present lack of policy coordination derives from the multi-dimensional character of nutrition ... Nutrition, like the environment, is a web of many strands."<sup>564</sup> Despite these "many strands," the need for improved nutrition labeling emerged from the conference as a clear and coherent policy agenda item that all parties, consumer activists, food industry, regulators, and nutrition scientists, could agree on. Jean Mayer, providing a typical view from the nutrition profession and from leftwing organizations, would describe the need for nutrition labeling as arising from the drastically changed food supply and proliferation of new foods that rendered obsolete or "unreal" much of the current nutrition advice, steeped as it was in discussing the "old foods."<sup>565</sup> Richard Gordon, representing an industry view, saw labeling as

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<sup>563</sup> "Center for Science in the Public Interest: A Brief History," as found at the CSPI website, last accessed March 12, 2011: <http://www.cspinet.org/history/cspihist.htm>.

<sup>564</sup> From a 1975 revision of Food Stamp Program & School Lunch Program, as quoted in Stearns, *Fat history*, p. 641.

<sup>565</sup> Mayer, J., "Nutrition Labeling" in Mayer, J. *US nutrition policies in the seventies*. Freeman, 1973, p. 150. Esther Peterson would describe Mayer as fondly saying, "What food group is pizza?" "Statement by Esther Peterson on Nutritional Labeling," p. 2, found in the Esther Peterson Papers, 1884-1998, Schlesinger Library, Radcliffe Institute for Advanced Study.

Mayer was not simply indicting the new foods. In the preface to Jacobson's *Eater's Digest*, he acknowledged that food additives had played an important and necessary role in creating new convenience foods which freed up housewives from domestic work:

"The women's liberation movement became possible when labor-saving devices freed adult females from many of the drudgeries of housekeeping. Refrigerators eliminated the need for daily food shopping, modern stoves and dishwashers reduced somewhat the time associated with the preparation of meals. The development of convenience foods, however, was the major quantum jump in freeing the housewife from the need of spending hours every day being the family cook. And many of the new foods, besides being



solving the problem of a “great lack of communication and cooperation among various interests.” Gordon further identified several structural changes which had changed the nature of supplying food and food information, foremost among them the switch from the “old-time grocery,” whose main preoccupation was “buying and moving largely perishable basic commodities,” to the “modern supermarket,” which sought to “bring the most popular foods to the greatest number of people possible.”<sup>566</sup> Gordon and Mayer were just two voices among many calling for nutrition labeling. In October of 1970 some Cornell nutritionists working at the Consumer Research Institute, a private research center funded by the Grocery Manufacturers Association, published a survey of over 800 nutritionists that showed strong support for the introduction of nutrition labeling.<sup>567</sup> The survey added to the perception of strong popular support for labeling.

This interest translated quickly into several early private experiments with nutrition labeling in 1970 and 1971. At a July 1970 Grocery Manufacturers Association meeting, FDA Commissioner Charles Edwards encouraged industry to work with agency to introduce voluntary nutrition labeling. By October certain trade groups like the Institute for Shortening and Edible Oils were holding meetings to move forward the idea of labeling.<sup>568</sup> From such meetings, five supermarkets decided to participate in testing nutrition labeling with their customers: Giant

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nutritionally useful, tasted better than those produced by any but talented cooks. Again, food additives have played an indispensable role in the development of these time-savers.”

Jacobson, (1972). *Eater's digest*, pp. xvi-xvii.

<sup>566</sup> Gordon, R. “New Foods” in Mayer, *US nutrition policies in the seventies*, pp. 94-95.

<sup>567</sup> Call, D. L, and M. G Hayes. “Reactions of nutritionists to nutrient labeling of foods.” *The American Journal of Clinical Nutrition* 23, no. 10 (1970): 1347.

<sup>568</sup> At one meeting the FDA shared six possible formats for nutrition labeling with the following mixed group of food interests with the hope of getting feedback and initiating studies: Consumers Union, Consumers Federation of America, American Dietetic Association, American Home Economics Association, Virginia Knauer of President Nixon’s Office of Consumers Affairs, Esther Petersen (Giant Foods), a GMA task force, National Canner’s Association, National Association of Food Chains. Ben H. Wells, “The Consumer Research Institute’s Nutrient Labeling Research,” *Food Drug Cosmetic Law Journal* (Jan. 1972), pp. 40-44. Mayer. J. “Nutrition Labeling,” in Mayer, J. *US nutrition policies in the seventies*. Freeman, pp. 150-156.

Food, Incorporated in Maryland, Jewel Company in Illinois, Kroger Company in Ohio, Consumers' Cooperative in California, and First National Store (with Harvard) in Massachusetts.<sup>569</sup> The supermarkets used one or a combination of two of the FDA labeling schemes, monitoring changes in purchasing habits among their customers.

Among these experiments, by far the most comprehensive and ambitious was the experiment with nutrition labeling in 1971 and 1972 by Giant Food Corporation, a progressive regional supermarket chain in the DC area, under the leadership of Esther Peterson, a consumer advocate hired by Giant to build its consumer education program. Esther Peterson (1906-1997) was born to Danish immigrants and grew up in a Mormon family in Utah. After graduating from Brigham Young University, she moved with her husband to Boston where she became a paid organizer for the American Federation of Teachers. Over the course of the 1940s and 1950s, Peterson rose in prominence in labor politics, serving as Head of the Women's Bureau in the Department of Labor under President Kennedy, and then as Special Assistant for Consumer Affairs under President Johnson (a position she would return to again later in the seventies under President Carter).<sup>570</sup> Because of her importance in advocating on women's issues, Peterson served as a member of the "Voluntary Action by Women" Task Force at the 1969 White House Conference.<sup>571</sup> In 1970 Peterson was hired into the position of Vice President of Consumer Affairs at Giant Foods. Her move there indicated the manner in which many consumer advocates were exploring private paths for pushing public agendas. Peterson would use the job to push the

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<sup>569</sup> Margaret L. Ross, "What's happening to food labeling?," *J. of Amer. Dietetic Assoc.* Vol. 64 (March 1974), pp. 262-267.

<sup>570</sup> Peterson, Esther, and Winifred Conkling. *Restless: The Memoirs of Labor and Consumer Activist Esther Peterson*. Caring Publishing, 1997.

<sup>571</sup> Peterson was listed by one consumer movement analyst at the time as one of only three prominent figures to emerge in the 1960s as leaders of the consumer movement, the other two being Ralph Nader and Betty Furness. Herrmann, Robert O., "Consumerism: Its Goals, Organizations and Future," *The Journal of Marketing*, Vol. 34, No. 4 (Oct., 1970), p. 57.

idea of consumerism as an “asset” to retailers, rather than a liability.<sup>572</sup> At the Sept. 1971 launch of the Giant Food nutrition labeling program, the president of the company described the labeling experiment as partnership between consumer and business.<sup>573</sup>

In the Giant Study literature Peterson explicitly framed the Giant Food nutrition label within President Kennedy’s Bill of Rights as an extension of the consumer’s “Second Right, the right to be informed.” Even more, in an article in the *Food, Drug, and Cosmetic Law Journal*, an important professional journal for food lawyers, Peterson wrote that the advent of informative labeling meant that, “the side of food boxes could provide a first-class course in nutrition education.”<sup>574</sup> Giant Food Stores put together an impressive committee of expert consultants, including Jean Mayer, James Turner, Helen Nelson (center for Consumer Affairs of the University of Wisconsin), Sidney Margolius, a well-known consumer reporter, and representatives from industry and the FDA and FTC, to help determine the labeling program. Giant initially put the labels on 58 of its private-brand products, and only on canned meats, vegetables, and carton milk. As soon as the FDA narrowed the range of approved experimental labels, the supermarket put the labels on all Giant-brand foods. The label gave the calories per household portion, grams per portion for carbohydrates, protein, and fats along with a rating on a scale from 0 to ten for the micronutrient vitamins based on RDAs. Giant also designed a circle pie symbol color-coded to indicate the kinds of nutritional information provided for a given

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<sup>572</sup> And would even write a *Harvard Business Review* article to this effect. Peterson, E. “Consumerism as a Retailer’s Asset.” *Harvard Business Review* 52, no. 3 (1974): 91–101.

The project would be a shift from Peterson’s role under the LBJ administration in addressing supermarket boycotts by focusing on lowering prices. Then, she had sided with the boycotters, thereby souring relations between Peterson and other LBJ advisers, which lead to her forced resignation. Cohen, *Consumers’ Republic*, 2003, p. 368.

<sup>573</sup> “Statement by Joseph B. Danzansky, President, Giant Food Inc., on Nutrition Labeling,” Giant Food Inc. News Release (9/6/71), found in the Esther Peterson Papers, 1884-1998, MC 450, folder #1515. Schlesinger Library, Radcliffe Institute.

<sup>574</sup> “Giant’s Test of Nutrition Labeling: an experimental program” booklet found in Esther Peterson personal papers MC 450 Box 76, Folder 1514 at Schlesinger Library, Radcliffe Institute. Peterson, E. “Information Labeling as a Consumer Guide.” *Food Drug Cosm. LJ* 27 (1972): 74.

product. To determine the impact of the labels, Giant distributed a questionnaire to its shoppers, getting 3,000 responses supporting the initiative. To get the message out, Giant Food published special flyers and brochures, point-of-purchase posters and shelf “talkers” or tags, and ran television and radio announcements in the Washington DC area featuring Esther Peterson explaining the new label. Esther Peterson also hosted a half hour special, “What’s For Dinner? Do You Really Know?,” where she described the company’s labeling campaign and its value for empowering consumers.<sup>575</sup>

As these private experiments with nutrition labeling were underway, staff at the FDA commissioned a series of consumer surveys and tests conducted by the Consumer Research Institute (CRI) to establish what it was that consumers sought in a label, what they thought of different formats, and how they used them.<sup>576</sup> In December of 1970 the FDA held consumer acceptability tests to narrow the number of formats.<sup>577</sup> Ogden Johnson, the Director of Division of Nutrition, led the FDA staff on the labeling program and settled upon the following three options for study:

1. A numerical system which expresses, in percentage of recommended daily allowance (RDA) the nutrients present in a food product in amounts above 5%;
2. A pictorial system in which symbols such as stars or smiling faces are used to indicate the amount of RDA provided by the food for each of several nutrients; and

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<sup>575</sup> Among the reasons Jean Mayer described this supermarket nutrition label as preferable among the many being tested was because, “It is not promotional, and looks the least like one more advertisement,” making it “mush more effective to a public saturated with and tired of promotional material.” Mayer. (1973). Labeling. in Mayer. *US nutrition policies in the seventies*, pp. 151-152. “Giant Food is Testing Nutritional Labeling,” Giant Newsletter, found in the Esther Peterson Papers, 1884-1998, MC 450, folder #1515. Schlesinger Library, Radcliffe Institute. “You Asked for More Nutrition Information,” Giant pamphlet, found in the Esther Peterson Papers, 1884-1998, MC 450, folder #1530f+. Schlesinger Library, Radcliffe Institute.

<sup>576</sup> Some consumer groups expressed skepticism about the FDA’s reliance upon CRI, an industry-funded research group, arguing that it would bias surveys in favor of industry-favored formats. “FDA Negotiates with GMA Institute for Consumer Survey,” *Food Chemical News* (Dec. 14, 1970), p. 12.

<sup>577</sup> Dec. 2, 1970 Letter from Ogden Johnson to William Darby, found in Series1, Box12” of the William Darby personal papers at the Eskin Biomedical Archives at Vanderbilt.

3. A verbal system in which adjectives such as very good or excellent are used to rate the food as a source of a series of nutrients.

CRI ran three phases of tests.<sup>578</sup> In the first phase, the “Nutrient Labeling Formats Experiment” runs from June through September 1971, CRI conducted a study on 950 “educated, middle-class households” in Connecticut and Georgia, gauging how consumers responded to food catalogs that provided the nutrition information in the three formats. The second phase, a “Nutrient Information Comprehension Task,” entailed two parts: mailing questionnaires to “(1) 1,080 poor, uneducated whites, (2) 1,170 poor, uneducated blacks and (3) 2,000 respondents representative of the general public” (resulting in 1,546 replies); and a face-to-face study of “291 poor, uneducated whites and 252 poor, uneducated blacks” in inner city areas of Cleveland, Philadelphia, Grand Rapids and Miami. This study was conducted from January to February in 1972, and tested consumers’ ability to compare product pairs with small differences in nutrient disclosures.<sup>579</sup> The final phase was the “Purchaser Behavior Experiment,” run in June and July of 1972. As the CRI Report described it, “this third study goes beyond the first two,” where the question was, “Can the consumer understand, and have the ability to use nutritional information.” In this last study the critical question was, “Will the consumer be more able and willing to use nutritional information [in actual food purchase situations] when it is presented under any one of the formats being considered by the FDA?”<sup>580</sup>

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<sup>578</sup> Ben H. Wells, “The Consumer Research Institute’s Nutrient Labeling Research,” *Food Drug Cosmetic Law Journal* (Jan. 1972), pp. 40-44. “Interim Report of the First Two Phases of the CRI/FDA Nutritional Labeling Research Program” CRI Working Paper (August 1972), as found in the personal archives of Hutt, Peter Barton. “Nutrition Labeling” *Federal Register* preamble, as published in the *Food Drug Cosmetic Law Journal* (May, 1972), pp. 319-327.

<sup>579</sup> The CRI Report made note that the survey was conducted by “highly skilled interviewers of the same race as respondent.” “Interim Report of the First Two Phases of the CRI/FDA Nutritional Labeling Research Program” CRI Working Paper (August 1972), p. 8, as found in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>580</sup> “Interim Report of the First Two Phases of the CRI/FDA Nutritional Labeling Research Program” CRI Working Paper (August 1972), p. 11, as found in the personal archives of Hutt, Peter Barton.

The surveys are interesting for the way they reveal the FDA's concern, in the wake of the hunger scandal and White House Conference, with targeting certain vulnerable groups. The CRI noted that, "Of primary concern was the [positive] reaction of undereducated (tenth grade education or under), low family income (\$5000 or less) consumers to the various nutrient labeling formats."<sup>581</sup> For this reason the second two phases focused on reaching these populations of consumers. Race was reduced to blacks and whites, but appeared to be deployed in the study more for the purposes of proving that the studies used diverse samples rather than to directly scrutinize the role of race in shaping understandings of food and diet. Despite the attention to race in subject sampling, the results sections of the studies did not discuss whether there were differences in comprehension associated with its samples' racial composition. Instead, the study report focused on differences between reactions of "underprivileged consumers" versus "middle income subjects." There was no mention of the role of gender in the studies' design or test results of tests, though periodic references to "her" and the "housewife" indicate who was imagined to be the purchaser across class and racial categories.

Just as interesting as who the studies examined was what the studies showed. The principal finding was consumers' strong preference for numbers over words and pictures. Consumer performance was found to be more or less equal across three types, but "the numerical system was preferred over words and pictures." Here the report articulated several explanations for why consumers preferred the numerical label more than the other two options. One reason was precision: "consumer desires for exact measurement. In other words, consumers feel strongly that they should know exactly how much of a particular nutrient is contained in a product." Adjectival words—such as "superior," "slight," "very good" and "fair"—on the other

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<sup>581</sup> "Interim Report of the First Two Phases of the CRI/FDA Nutritional Labeling Research Program" CRI Working Paper (August 1972), p. 6, as found in the personal archives of Hutt, Peter Barton.

hand, were considered “too vague and somewhat confusing,” while smiling faces were considered “childish and even condescending.” this suggested another reason why consumers disliked pictorial symbols, that “Nutrition is apparently an important subject in the mind of a consumer, and, should be approached seriously.”<sup>582</sup> Numbers were taken seriously. Despite this taste for numbers, consumers expressed an even greater interest in improved ingredients labeling than in nutrition labeling, per se: “It is also interesting to note that consumers generally appear to be interested in a listing of the ingredients contained in a product as much as they are in information regarding the product’s nutritional value.” While this last finding appeared to surprise the designers, it could be explained by the fact that consumers were using the ingredients as a more familiar measure of a product’s health value (such as vegetable oils versus animal fats).<sup>583</sup>

On March 30, 1972, the FDA published its proposals for possible reforms to food labeling (the final version of which is discussed below) in the *Federal Register*, to open up discussion with the public and industry more broadly on how to move forward. It described the three formats being tested and foregrounded the documentation of consumer interest from the CRI and supermarket studies as evidence of popular support for the changes. The preamble highlighted five “nonuse benefits” of a nutrition label:

- (1) Nutrition information for food products will increase consumer confidence in the food industry.
- (2) If manufacturers have to show nutrition information, they will try harder to make their products nutritious.

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<sup>582</sup> “Interim Report of the First Two Phases of the CRI/FDA Nutritional Labeling Research Program” CRI Working Paper (August 1972), as found in the personal archives of Hutt, Peter Barton.

<sup>583</sup> It has been my personal experience in the years pursuing this dissertation research that ingredients labeling is often the first labeling concern people ask me about when I mention my study of nutrition labeling. I have come to see this as a sign of how people readily switch between nutrition information and a more analog ingredient information when thinking about diet and health in food labeling.

- (3) Nutrition labels encourage advertising that will promote consumer education.
- (4) More information indicates a greater concern for consumer welfare.
- (5) Consumers have the right to know the nutrition value of food products on the market.<sup>584</sup>

In some sense the FDA was here showing that the success of the new label wasn't only limited to whether and how consumers actually used it, but that it would also generate indirect pressure on industry to buy in to nutrition and health programs and serve broad democratic ideals by functioning as a public trust-building tool.

The proposals did generate widespread interest and general approval, though they also raised some questions about the scope of the new program and the FDA's regulatory authority to implement it. The questions centered on the ambiguity of whether the label was to be understood as nutrition information or as education. When speaking at one of several nutrition labeling meetings between the FDA and members of the AMA the months following the proposals, William Darby, the chairman of the AMA Council on Food and Nutrition, felt it important to distinguish between "consumer education," something which occurred over a person's lifetime and required substantially greater investment for institutions, and which would be needed for one to make sense of the "consumer information" being proposed for the label. Darby believed that the information label alone was not enough to overcome the "credibility gap" between "a questioning 'now' generation" that had turned to "anti-establishment sources as credible authorities in nutrition." (Darby also made a telling comment of the shift from his school days when the popular refrain in preventive medicine was "Educate the Public," to the present period when it had become, "Educate the Consumer.") The label as inert information could be, for

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<sup>584</sup> "Nutrition Labeling" 37 *Federal Register* 6493-6494, as reprinted in *Food, Drug and Cosmetic Law Journal* (May 1972), pp. 319-327.



Darby, only a first step in a total education program.<sup>585</sup> While Darby was concerned with the effectiveness of the label as mere information, others were concerned with whether the FDA had the authority to demand even this much of industry. A strict construction of the agency's statutory authority could be used to argue the FDA had no powers to require new and specific nutrition information. Indeed, it would be the presentation of the label as merely a "voluntary," information disclosure, and not government-mandated education, which would help provide the legal defense for its implementation.

### **Peter Barton Hutt and a "Lean" FDA**

In the absence of new congressional legislation the Food and Drug Administration lacked clear guidelines for how it could legally change labeling without undercutting its established practices under the 1938 Food, Drugs, and Cosmetics Act to defend standards of identity through name-labels rather than ingredient or nutrient declarations. The solution to this legal impasse would come from a food lawyer at the Washington-based law firm Covington & Burling, Peter Barton Hutt, who in 1971 was invited by FDA Commissioner Charles Edwards to serve as the agency's Chief General Counsel in charge of setting and defending its legal positions. During Hutt's tenure from 1971 to 1975, the Food and Drug Administration would introduce dramatic changes to how it established and enforced statutes, changes which, among other consequences, would clear the way for the agency to implement food labeling reform.

Peter Barton Hutt (1934–) was born in Buffalo, New York, where his father worked in "retail dairy." Hutt himself worked as a milkman and at other jobs in Hutts Dairy during the summers while in school. A strong personal interest in the milk industry led him to write nearly

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<sup>585</sup> William Darby, "Meaningful Consumer Education in Nutrition (April 14, 1972)" draft found in Series 2, Box 6 in the William Darby personal papers at Eskin Biomedical Archives in Vanderbilt University.

every paper at school in Philip Exeter Academy, in college at Yale University, and then in law school at Harvard University on the subject of the regulation of milk by the federal government. In law school one day he had lunch with visiting guest Bill Goodrich, the longstanding FDA Chief General Counsel. Upon striking up a conversation with Goodrich about whether a substitute soybean oil product should be labeled as an imitation, Hutt impressed Goodrich with his enthusiasm and encyclopedic interest in the subject. Among Hutt's three job prospects, the FTC, the FDA, and the private law firm Covington & Burling, Goodrich encouraged him to take the job at Covington & Burling in Washington, DC, arguing it was the surest path to later joining the FDA at a higher position.<sup>586</sup> At Covington & Burling, Hutt worked under the mentorship of food law greats such as Tommy Austern and became a partner in the firm in 1968. He never litigated, but instead gave legal advice to trade associations and corporate clients on a variety of food and drug topics, including on issues such as labeling (of great interest in the wake of the 1962 drug laws). Hutt also earned a reputation as a lawyer interested in public service by taking on *pro bono* work on criminal law applied to alcoholism, arguing two precedent-setting cases, known as the *Easter* and *Driver* cases, in the late sixties which secured the legal basis of treating alcoholism as a disease instead of a crime. He successfully argued the matter before the Supreme Court in a 1968 case, *Powell v. Texas*. Over the course of his public and private roles, colleagues and critics alike would come to respect Hutt for two principal professional attributes, his formidable bearing, aggressive yet never uncivil, and his inexhaustible knowledge of the even

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<sup>586</sup> Peter Barton Hutt, senior counsel of Covington & Burling, former FDA chief general counsel, personal interview, Cambridge, Massachusetts, Jan. 16, 2008. See also, Hutt's law firm bio page, last accessed on March 7, 2011: <http://www.cov.com/phutt/>.

the most arcane facts of food law.<sup>587</sup> These traits would play an important role in his success pushing through food labeling reform.

By the late 1960s Hutt had begun to take a very visible position on the issues of nutrition labeling, imitation foods, and weaknesses in the food standards approach to regulating. In 1969, he received a call from Richard Gordon, a VP and General Manager at Monsanto and the chair of the New Foods panel for the White House Conference on Food, Nutrition, and Health. Gordon was Jean Mayer's friend. (They had summer homes next door to each other.) Gordon wanted a food lawyer to serve on the panel and was given the choice between Hutt and "some Ralph Nader lawyer." Gordon chose Hutt. As described in Chapter 3, Hutt drafted the New Foods panel report for WHCFNH, arguing for dramatic changes in the FDA's standards of identity system, in particular the dismantling of the imitation label and the introduction of some form of nutrition labeling.<sup>588</sup> (Upon arriving at the FDA, Hutt would pull out that report as the starting point for what the FDA could do to reform food labeling.) Hutt was also advising industry that they ought to prepare themselves for a new reality of nutrition labeling. In November 1970, Hutt addressed the annual Dairy Congress arguing that "more informative labeling" ought to be seen as an "opportunity" for the dairy industry, not a liability:

My own view is that no industry stands to gain more from nutrition labeling, and increased nutrition awareness by the consumer, than the dairy industry. Milk protein is universally regarded as the standard by which all other protein is judged. No other food can begin to compare with milk as the source of calcium in the daily diet. Milk is the

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<sup>587</sup> These personal attributes of Hutt's are regularly referred to and widely commented upon by a variety of the people I've interviewed for this project, and are also prominent in many of the direct and indirect accounts of Hutt in articles and *Food, Drug, and Cosmetic Journal* papers in the 1970s.

<sup>588</sup> Hutt noted in his interview that the White House Conference "was a sea-change [in food labeling] only because we went to the FDA and implemented it. Literally the whole thing. If I hadn't gone to the FDA it never would have been implemented. Not in a million years." The "we" were five new members of the FDA: Virgil Wodicka (VP at Hunt-Wesson Foods), James D. Grant (had been deputy to Jean Mayer on the WHCFNH), Johnson (Nutrition Program of HEW Health Service and Mental Health Administration), Hutt, and one other person who Hutt described as a nutritionist from Canada.

preferred carrier for Vitamin D. It is a major source of other vitamins and minerals. It has a nutrition story to tell that cannot be matched.

Hutt acknowledged the concern over fatty acid composition, but argued that, “All this means is that milk is not the perfect food, just the most nearly perfect natural food.” What’s more, “Nothing requires that nutrition labeling be negative, or designed to disparage the product [...] labeling brochures for dairy products could present an extraordinarily persuasive nutrition story.” Whether or not the dairy industry wished it to be so, Hutt saw that “there is an awakening nutrition awareness among consumers, and that nutrition will play a major role in consumer food purchases in the future.”<sup>589</sup>

In September 1971 Hutt joined the FDA, at the age of 37, replacing Goodrich as General Counsel. Hutt’s appointment was criticized by some as an example of a “revolving door” at certain government regulatory institutions. Hutt had consulted for many of the industries he would now be regulating at the FDA, and many felt that despite his clear competence and expert knowledge he would be influenced by those associations. What’s more, in what some critics called “musical chairs,” Hutt’s predecessor William Goodrich took a job at the Institute of Shortening and Edible Oils, one of Covington & Burling’s clients and a trade organization with clear interests in FDA concerns over food labeling. This charge of the revolving door between

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<sup>589</sup> Peter Hutt, “More Informative Labeling -- An Opportunity for the Dairy Industry,” speech given at the Dairy Congress (Nov. 4, 1970), pp. 13-14, as found in the “Speeches” files of the personal archives of Hutt, Peter Barton. Hutt also gave a speech at Gillette on over-the-counter drugs in 1969, which formed the basis of how he approached that subject. Peter Barton Hutt, personal interview, Cambridge, Massachusetts, Jan. 16, 2008.

Only two months before he joined the Agency, statements by Hutt on the issue of nutrition labeling were also published in *Food Chemical News*, one of the more important trade journals. Hutt gave his opinion on the nutrition labeling schemes being considered at that time:

“I distrust any approach that utilizes either terminology or a color system or a symbol denoting various grades of nutritional value. Each product presents a unique situation. I simply do not see how the presence of any single ingredient, or even a few ingredients, can properly determine its nutritional value or its proper place in the daily diet.

The interrelation of ingredients is far too complex, and the variations in the daily diet among individuals is too pronounced, to permit this easy solution. ... the simplicity of this type of approach is far outweighed by the danger of creating for the consumer a white list and a black list of foods, when most are more properly in a gray area.”

“Product Nutrition Brochures on Request Suggested,” *Food Chemical News* (Nov. 16, 1970), pp. 14-16.

industry and FDA was one of many complaints at this time that the FDA might be “captured” by industry interests and not protecting the public on a variety of issues including drug trials and exposure to harmful drugs such as DES. To offset such criticisms Hutt recused himself from all issues under current consideration at the FDA for which he had counseled clients at Covington & Burling. Hutt told one reporter, “My new client is the general public, through the FDA, and I intend to represent that client as well as any lawyer can.”<sup>590</sup>

Hutt was one of several new people brought into the FDA at this time whose activities at 1969 White House Conference shaped their agenda at the agency. Virgil Wodicka joined the FDA in February 1970, fresh from a WHFCN panel on “Food Quality” where he recommended nutrition labeling.<sup>591</sup> Ogden “Oggie” Johnson, a member of the “Traditional Foods” conference panel, was hired to be director of Nutrition Division (chosen over Schaefer, who headed the CDC nutrition survey during the Hunger debates). Johnson was tasked to review material from the WHFCN. It was Johnson and Wodicka who approached GMA about conducting a study on consumers in 1970. According to a later account by Johnson, support for labeling inside the FDA was limited to himself, Wodicka and Sherwin Gardner, and otherwise only really pursued by outside activists. General Counsel William Goodrich, Hutt’s predecessor, didn’t think labeling

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<sup>590</sup> Hutt played a key role in developing the legal arguments used by industry to keep the additive DES, diethylstilbestrol, on the market in animal feed well after it was discovered to be a carcinogenic. Science writer Nicholas Wade voiced these concerns about Hutt “trying to serve two masters” in a *Science* in-depth profile on Hutt in 1972. Wade wondered:

“Has Hutt really changed sides? Does the consumer really stand to benefit from having one of the food and drug industries’ foremost defenders installed in the second most powerful position in the FDA? Is it to industry’s advantage to be regulated by a regulator who understands its problems from the inside?”

Wade, N. “FDA General Counsel Hutt: A Man Trying to Serve Two Masters.” *Science* 177 (1972): 498–502. For a history of the FDA and the DES scare, see Langston, N. *Toxic bodies: hormone disruptors and the legacy of DES*. Yale Univ Pr, 2010, pp. 98-111. The FDA’s handling of DES would earn it long-term opponents. Peter Greenwald, a nutritionist who would go on to work at the NIH’s National Cancer Institute in the 1980s (and play a role in loosening its restrictions on the use of disease claims on food) actively lobbied the FDA to ban DES. Senator Proxmire, discussed below, introduced a bill in Congress to ban DES in livestock. Cf. Kessler, D. A. “Implementing the Anticancer Clauses of the Food, Drug and Cosmetic Act.” *The University of Chicago Law Review* 44, no. 4 (1977): 817–850.

<sup>591</sup> 28 July 1987 Letter from Virgil O. Wodicka to Peter Hutt; found in the binder “FoodNutritionLabeling3\_7\_86-6\_88” in the personal archives of Hutt, Peter Barton.

was enforceable. Despite this internal resistance to labeling, Wodicka and Johnson began to lay the groundwork for it before Hutt's arrival. They determined that U.S. RDAs ought to be used because "it provides an equal and fair comparison across the various products in a class and across product lines."<sup>592</sup> And to build ties between the FDA and potential allies on labeling, Johnson spent almost 100 days traveling, most of that time "giving speeches to all sorts of food and consumer groups convincing them that we were on their side."<sup>593</sup> Still, in this early stage nobody was sure exactly whether the FDA could legally require the label or only ask for it voluntarily from industry.

When Peter Hutt started his job as General Counsel, Commissioner Charles Edward and Deputy Commissioner Jim Grant met with Hutt to give him a list of things to tackle: 1) to write the medical device statute to introduce in Congress, 2) to figure out how to regulate over-the-counter-drugs, 3) to resolve the problem with the "imitation" label (which Hutt later described as Jim Grant's personal fixation), and 4) to figure out how to implement the Freedom of Information Act.<sup>594</sup> Soon thereafter Virgil Wodicka added nutrition labeling to this list, and Hutt began to formulate a strategy, based on ideas he had voiced at the White House Conference "New Foods" panel, for addressing both the challenges of imitation labeling and nutrition disclosures. The March 1972 nutrition labeling proposals, mentioned above, blended the efforts of Wodicka and Johnson to determine what formats and content consumers and nutritionists were seeking with Hutt's ingenious legal construction of the nutrition information panel as a product disclosure triggered by a company's voluntary decision to make a health claim. Below I

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<sup>592</sup> August 21, 1987 Letter from Ogden C. Johnson to Peter Hutt; found in the binder "FoodNutritionLabeling3\_7\_86-6\_88" in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>593</sup> 28 July 1987 Letter from Virgil O. Wodicka to Peter Hutt; August 21, 1987 Letter from Ogden C. Johnson to Peter Hutt; May 3, 1988 Letter from Sherwin Gardner to Thomas Scarlett (FDA; all found in the binder "FoodNutritionLabeling3\_7\_86-6\_88" in the personal archives of Hutt, Peter Barton.

<sup>594</sup> Peter Barton Hutt, personal interview, Cambridge, Massachusetts, Jan. 16, 2008.

discuss the content of these proposals, and how they came to be implemented. Here I focus on the procedural manner in which Hutt introduced and defended them.

Hutt's principal administrative innovation, which paved the way for implementing complex labeling changes, was to introduce the FDA practice of establishing regulations directly through the publication of rules in the United States *Federal Register*. Instead of holding public hearings, such as the standards of identity hearings, which could drag on for years, the FDA published rules and invited interested parties to submit comments for review. So long as the FDA addressed all submitted comments in its subsequent revised rules, the agency could then make the published rules final and binding.<sup>595</sup> The change was a consequence of lessons learned from the special dietary food hearings of 1968-1970. Whereas, before, any critical comment could hold proposed regulations in abeyance until an FDA hearing settled the dispute, Hutt now believed the FDA could prevent public spectacles by streamlining the comments process. Moreover, he reasoned that the issues raised in many of the comments were of a scientific or technical nature not suited to settlement in trial-type hearings, but rather that they called for expert management within the FDA where "government administrators can be trusted to exercise discretion."<sup>596</sup> In a speech given in 1972 laying out his "philosophy of regulation," Hutt opened

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<sup>595</sup> Cornelius B. Kennedy, "The New Vogue in Rulemaking at FDA: A Foreword," *Food, Drug, Cosmetic Law Journal* Vol. 28, No. 3 (March, 1973): 172-176. Peter Barton Hutt, "Philosophy of Regulation Under the Food, Drug, and Cosmetic Act," *Food, Drug, Cosmetic Law Journal* Vol. 28, No. 3 (March, 1973): 177-188. H. Thomas Austern, "Philosophy of Regulation: A Reply to Mr. Hutt," *Food, Drug, Cosmetic Law Journal* Vol. 28, No. 3 (March, 1973): 189-200.

<sup>596</sup> Kennedy, C. B. "The New Vogue in Rulemaking at FDA: A Foreword." *Food Drug Cosm. LJ*, 28 (1973), pp. 174-175. A foundation of Hutt's argument was that, even with broad legislative powers, the FDA could not possibly come to regulate industry with total control: "One simply cannot achieve optimal regulation of a highly inventive \$135 billion a year group of industries on a budget of \$164 million." Thus agency discretion was necessary, and pragmatic tactics like the rulemaking were necessary for implementing meaningful enforcement without heavy expenditures. Hutt also believed the Agency depended on a cooperative industry willing to self-regulate, and used the example of the cosmetic industry as one which willingly took on the FDA's proposed self-regulation measures so as to avoid more restrictive and punitive congressional legislated regulations.

Regarding the claims about scientific and technical features of feedback which ought not to be held to trial-type scrutiny, Hutt was partly referring to ongoing debates about the FDA's DESI, "Drug Efficacy Study Implementation" program, begun in the 1960s and run up to 1984. Hutt believed that scientific commissions were a

by quoting the dissenting judge, Robert Jackson, in the Supreme Court *Dalehite* case twenty years earlier:

This is a day of synthetic living, when to an ever-increasing extent our population is dependent upon mass producers for its food and drink, its cures and complexions, its apparel and gadgets. These no longer are natural or simple products but complex ones whose composition and qualities are often secret. Such a dependent society must exact greater care than in more simple days. [...] The claim that a hazard was not foreseen is not available to one who did not use foresight appropriate to his enterprise.<sup>597</sup>

This call for expert management, Hutt reasoned, was not limited to the need for greater industry foresight, as was Jackson's opinion on tort liability, but also warranted innovation in administrative methods for handling the new, complex risks. He saw rulemaking as part of a general shift in the FDA's regulatory style away from reactive regulation, responding to industry abuses, towards preventive or anticipatory regulation, providing industry guidance.<sup>598</sup> Hutt noted the gradual shift in the FDA away from litigating through the courts to promulgating rules, arguing "Litigation in many instances represents the failure of effective regulation."<sup>599</sup>

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better fit for resolving concerns over risk assessment and new technologies. In *Reputation and Power*, Carpenter describes the turn to rulemaking as a direct consequence of the DESI procedures and public disputes. Carpenter, *Reputation and Power*, pp. 357-362. Here I would argue that he overstates the centrality of drug concerns, and overlooks how the polemics of the protracted "special dietary foods" standards hearings had also inspired the agency interest in more flexible procedures.

<sup>597</sup> Peter Barton Hutt, "Philosophy of Regulation Under the Federal Food, Drug and Cosmetic Act," *Food Drug Cosmetic Law Journal* (March, 1973), pp. 177.

<sup>598</sup> The specific legal change was Hutt's reinterpretation of the FDCA 701(a) clause. Hutt cited as precedent the recent Supreme Court case *Abbott Laboratory v. Gardner* 1967, which held that drug companies like Abbott Laboratories were not prohibited from challenging the FDA on regulations, in this case regulations on labeling, that were "not ripe" (not yet fully implemented). While the case was a loss for the Agency, it set an unarticulated precedent that the FDA's proposed rules could have the force of law (and thus be legally contested) even before they were finalized by public hearings.

<sup>599</sup> Peter Barton Hutt, "Philosophy of Regulation Under the Federal Food, Drug and Cosmetic Act," *Food Drug Cosmetic Law Journal* (March, 1973), pp. 181-182. Hutt cited the following statistic to illustrate the changing regulatory style of the agency: "In fiscal year 1945, for example, the Food and Drug Administration instituted 3,848 separate court actions. By contrast, in fiscal year 1971 there were 843 such actions." A critical shift in this time span was the change from post-marketing policing to pre-marketing clearance functions which occurred around the 1962 drug reforms.



If this policy change appeared to concentrate power within the FDA, it should be situated within a broader ideological climate of “open government,” in part due to regulatory reforms brought by the Freedom of Information Act of 1970 and the Federal Advisory Committee act of 1972.<sup>600</sup> Hutt defended the FDA’s new comment-soliciting practice as a means of letting consumers do the work for the agency:

this [surveillance] isn’t only the Food and Drug Administration’s job, frankly our job overwhelms us as it is now. We won’t get around to all of it. There’s nothing we would rather have than a consumer group go out, do some surveillance in the marketplace, find that there is a variation [...], and come in to us with a proposed regulation and enough facts that we can go ahead and take this kind of action. Frequently we find that consumers want to write us letters and get us to do the whole job. What we want to do is bring them in and help us do our job, because there aren’t enough of us. And, frankly, I don’t do any shopping so I don’t know as well as a lot of other people what is going on out there in the marketplace.<sup>601</sup>

Indeed, even though he was closing off the space of trial hearings for public input, Hutt believed the real breakthrough would be to give equal footing to consumers and industry in appealing FDA decisions. In practice, the hearings system favored those who could show up and sustain an argument, rather than the broader public whose interest the FDA was supposed to protect.<sup>602</sup>

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<sup>600</sup> According to Jasanoff, “one of the most interesting consequences” of the rise of social regulation and the transformation of the American administrative process in the 1970s was “the evolution of policy-relevant science into a public commodity.” Jasanoff, *The Fifth Branch*, 1990, p. 39. One example of how FOIA directly changed the FDA’s management style is given by Peter Hutt in his Harvard “Food & Drug Law” course. Hutt describes how one of the first jobs he had upon arriving to the post of General Counsel was to rename the Agency “filth guidelines,” the decades old policies the FDA had for handling food adulteration which was disgusting but not technically a health hazard. Because the FOIA meant that all the agency’s internal guidelines were subject to publication, the FDA staff in the early 1970s wanted to avoid the PR embarrassment of “filth guidelines” being given press.

Hutt was also criticized by consumer advocates at this time for not opening up the FDA enough with respect to the drug efficacy standards. Hutt established the policy that under FOIA the FDA would release only summaries of industry new drug applications (NDAs), restricting the full NDA data so as to protect trade secrets. Wade, N. “FDA General Counsel Hutt: A Man Trying to Serve Two Masters.” *Science* 177 (1972): 498–502.

<sup>601</sup> “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 21, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton.

<sup>602</sup> Hutt was not alone in these arguments. In 1974 Richard Merrill, a law professor at the University of Virginia who would later co-author a law casebook with Hutt, publish an article, “Like Mother Used to Make,” in the *Columbia Law Review* which dissected the food standards system and laid out a legal rationale for a turn to information

(Despite this democratic framing, Hutt was also effectively suggesting that government responsibilities and policies in this way could easily be crowd sourced.)

Hutt's move invited severe criticism from his professional colleagues. Tommy Austern, Hutt's own mentor from Covington & Burling, delivered a critique of Hutt's new rule-making program in a speech titled, "The regulatory gospel according to St. Peter," and made much of the dangerous presumptions that Hutt put forward about the FDA being an impartial arbiter in the public's interest. Austern called into question Hutt's assertion that scientific commissions could be relied upon to settle the matters of dispute for which trial-type hearings were legislated. Another food lawyer Merrill Thompson wrote that notice and comment rulemaking was effectively an example of the FDA, an unelected administrative body in the Executive branch, usurping Congress's authority to legislate by interpreting certain clauses with wide discretion. Thompson warned that industry and consumers should not be lulled by the fact of Hutt's extraordinary competence in adjudicating the FDA's laws or the benevolence of the nutrition labeling scheme. He warned, "would we all feel comfortable with our decision [to accept rule-making] if the next FDA general counsel were Mr. James Turner, or if the next Commissioner of

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labeling in a manner much as Hutt was attempting. In the article Merrill outlined two modes of governing, 1) "information-provision" (e.g. Fair Trade and Labeling Act), versus 2) "market replacement" (e.g. food standards), and argued:

"The underlying premise of recipe standards is that consumers—even if provided with adequate information—are not equipped to make value of distinctions among products similar in appearance and use, and are therefore unable to protect themselves against deception." Citing the recent Breaded Shrimp standards as "Innovation in Regulation," Merrill concluded that this new approach recognized that different consumers had different tastes:

"Like the "breaded shrimp" standard, the new regulation assumes that consumers are primarily concerned about the "characterizing" ingredients in foods. Like the proposed orange beverage standards, it recognizes that consumer tastes and expectations vary and agrees that consumers should be able to satisfy their disparate preferences. The underlying premise is that, as long as consumers are properly informed about the quantity of valuable constituents in foods, they should be free to make their own judgments respecting value."

Merrill did acknowledge, however, the performative aspect of food regulation, and how it potentially constitutes markets and consumer tastes. When evaluating potential costs of switching to "common or usual name," Merrill notes: "It is conceivable that consumer expectations have been tutored by, and are now geared to, existing recipe standards; and the marketing of substitutes for foods that have long been standardized might therefore engender confusion." Merrill & Collier. "Like Mother Used to Make," *Columbia Law Review*, pp. 609, 618.

Food and Drugs were Harrison Wellford?”<sup>603</sup> Hutt’s reply to these concerns was, in so many words, “Sue me!”<sup>604</sup>

What could look like an esoteric legal and institutional shift in the FDA’s labeling policies paralleled lively national discussions about what Americans were eating and whether new trends in food consumption portended bad news for the nation’s health. Information labeling was heralded as a potential game changer for a variety of food issues which had, over the course of the 1970s, captured the public’s attention. Earliest among them was the debate over breakfast cereals and whether processed cereals constituted a nutritional deceit on the nation’s children. In July of 1970 Robert B. Choates, Jr., a member of the hunger lobby who had been central in the design of the *Hunger—U.S.A. Report*, testified at a Senate consumer subcommittee that 40 of the 60 leading dry breakfast cereals were so low in nutritional value that they were what Choate dubbed, “empty calories,” because “they fatten but do little to prevent malnutrition.” Choate presented charts comparing the relative nutritional scores of the cereals, and brought in a television monitor to play television ads targeting children. Cereal companies attacked Choate’s testimony arguing it ignored “the very important factor of taste preferences,” and Harvard nutrition scientist Fredrick Stare defended the nutritional integrity of cereals, but in doing so invited further suspicions about his conflict-of-interest ties to the sugar industry.<sup>605</sup> Choate’s

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<sup>603</sup> Wellford like Turner was one of the lawyers in Naider’s Raiders team. Thompson, M. S. “FDA-They Mean Well, But.” *Food Drug Cosm. LJ*, 28 (1973): 206-207, 216-217. The two FDCA sections being disputed here were the 701 (e), which called for hearings to be held when comments disputed a new proposed rule, and 403 (a), which made criminal the marketing of a food with labeling which is false or misleading in any particular. Hutt drew upon 403(a) to argue that a food would be misbranded if it made a nutrition declaration but then failed to provide the FDA nutrition label.

<sup>604</sup> These are Hutt’s words as he narrated it to me during my interview with him, but, in a more gentle way, it was also what Hutt told participants at the Background Meeting the FDA held in 1972, when they asked how industry could protest once final rules were published. Peter Barton Hutt, personal interview, Cambridge, Massachusetts, Jan. 16, 2008.

<sup>605</sup> Jack Rosenthal, “Hunger Expert Says Many Dry Cereals Are Not Nutritious,” *New York Times* (July 24, 1970), p. 1, 38. Richard Halloran, “Breakfast Cereal Industry Tells Senators Nutrition Critic Erred,” *New York Times* (Aug. 5, 1970), p. 1. “Harvard Nutritionist Is a Cereal Defender,” *New York Times* (Jul. 26, 1970), p. 59.

testimony was respected for its thorough and effective in synthesis of many problems in vitamin enrichment and nutrition labeling into one simple issue. The story made the front page of the *New York Times*, and Peter Hutt would praise Choate's exposé as "one of the most brilliant pieces of testimony."<sup>606</sup> Over the course of the summer, food writers and journalists who covered the story began to muse over what other staple, healthy foods were similarly deceiving consumers.

The FDA's continued difficulty with the diet-heart thesis and the marketing of low saturated fat foods would also keep the subject of nutrition labeling alive at the agency. As late as November 1970 the FDA was considering limiting fatty acid labeling to just a class of special dietary foods used for fat-modified diets, including foods used in the Framingham Heart Study.<sup>607</sup> But that December the Inter-Society Commission for Heart Disease Resources, which included members from the AHA and was chaired by Jeremy Stamler, a preventive cardiologist who, like Ancel Keys, was important in the advocacy of the diet-heart thesis, published a report calling for the laws governing food labeling to be updated "to allow the consumer to easily identify nutrient content (particularly the amount and type of fat and cholesterol) in all foods."<sup>608</sup> Beginning in 1971 the FDA started to reconsider its 1959 position on fatty acid labeling, if still not wanting to give the appearance of "taking sides" in the scientific debate. Instead of restricting

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Other activist organizations would mobilize around the issue. In September of 1973, Jacobson of CSPI hosted a press conference on "Mr. Wonderful Surprise" were speakers like Esther Peterson weighed in on the questions of whether cereals in their current state had any nutritional value, and who was to blame. "Esther Peterson Dictated Notes, Mike Jacobson's Press conference on Mr. Wonderful Surprise" (Sept. 14, 1973), found in the Esther Peterson personal papers at Schlesinger Library, Radcliffe Institute > MC 450 Box 77, Esther Petersen Collection, "1519-1529, 1531-1540" Folder "1521 – Giant / Consumer initiatives / Cereals - FTC, Kellogg, et al., 1971-76." In contrast, the First Lady, Patricia Nixon, weighed in favor of packaged cereals mentioning that the President liked them. "Packaged Cereals A Morning Favorite in the White House," *New York Times* (Jul. 25, 1970), p. 10.

<sup>606</sup> Wade, N. "FDA General Counsel Hutt," *Science* (1972), p. 500.

<sup>607</sup> "FDA Weighing 'Special Dietary' Rule for Fatty Acids," *Food Chemical News* (Nov. 9, 1970), p. 18.

<sup>608</sup> "Heart Group Urges FDA to Change Fat Labeling Policy," *Food Chemical News* (Dec. 14, 1970), p. 9-11. "Heart Disease: A Call to Battle," *Medical World News* (Dec. 25, 1970/Jan. 1, 1971), pp. 14-15. On December 25, 1972, the American Medical Association and National Research Council added their support to medical professionals' calls for fatty acid labeling. "AMA, NAS Call for Fatty Acid Labeling" *Food Chemical News* (Jan. 8, 1973), pp. 13-14.

labeling to special dietary foods, the Agency began to consider whether fatty acid labeling could be incorporated into a strategy of nutrient disclosures and nutrition labeling more generally.<sup>609</sup> The FDA would still restrict statements on lipids to factual disclosures and not implied or explicit claims about disease.

Its policy on fatty acid labeling was framed by moves at this time in the Federal Trade Commission to crack down on some of the more alarming health claims being made on saturated fats. In 1971 the FTC opened an investigation on Fleischmann for its margarine ads depicting children and suggesting that parents should be concerned with their kids eating low saturated products like margarines and vegetable oils to prevent CVD (one such ad is described in Chapter 2). Such ads were considered possibly misleading for how they represented the margarines as having drug-like health promoting properties.<sup>610</sup> (The FTC case would be significant, since in 1973 the Commission would settle it by allowing Fleischmann and others to have such ads so long as they provided a “conspicuous disclosure” about how such causal relationships were an open scientific question. In other words, companies could use “minority scientific views” in ads so long as they were qualified with a statement acknowledging scientific uncertainty.<sup>611</sup>) The FDA was thus seeking a middle path that would allow industry and physicians to meet consumer-patient needs for nutrition information without sending a normative (and potentially misleading) health message about a particular food.

### **The Medium Is the Message – The FDA’s 1973 Labeling Changes**

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<sup>609</sup> “FDA Fatty Acid Labeling Proposal is Delayed,” *Food Chemical News* (Jan. 4, 1971), pp. 20-22.

<sup>610</sup> “FDA May Strengthen Ban on Cholesterol-Reduction Claims” *Food Chemical News* (Jan. 25, 1971), pp. 21-22. Morton Mintz, “FDA, FTC Question Polyunsaturate Ads,” *Washington Post* (March 1, 1971), pp. A1, A7.

<sup>611</sup> “Margarine case reveals FTC shift in minority scientific opinion view,” *Ad Age* (Jan. 8, 1973), p. 1. “Fine Distinction Drawn in FTC Order Against Fleischmann’s,” *Food Chemical News* (Jan. 8, 1973), pp. 43-44.

On January 19, 1973, the FDA published its final rules on food labeling in the *Federal Register*.<sup>612</sup> The principal authors of the rules were Peter Hutt, Ogden Johnson, Bill Randolph (Deputy Associate Commissioner for Compliance), and Bob Wilmoth (a lawyer in the General Counsel's office).<sup>613</sup> For the first time, the new labeling regulations staked out a territory for FDA mandated information disclosures. At a 1973 background conference that the FDA held with major stakeholders, Hutt noted:

The fact of the matter is that FDA has never required that any particular type of information appear in any particular place on a food label other than the statement of the net quantity of contents, which must appear on the principal display panel, namely, the front of the food label. [...] It occurred to us, particularly in putting out nutrition labeling, that if we added it to be in yet a third, or fourth, or fifth place, or allowed it to be divided up and spread throughout the label, that we would soon reach the point [...] where we wouldn't be able to find anything on the label, where the consumer will give up in frustration and simply not look for it. [...] We, therefore, have adopted a uniform information panel concept. The panel to the right of the principal display panel will be the area set aside for what we refer to [...] as the mandatory information, the information that must appear on the food label.<sup>614</sup>

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<sup>612</sup> Hutt worked out a deal with the editors of *Food Chemical News*, the main trade newsletter, where he gave them a draft, under pledge of confidentiality, two weeks in advance so that they could publish them there on the same day and broaden the audience for the rules. Hutt, Peter Barton, senior counsel of Covington & Burling, former FDA Chief General Counsel, personal interview at his Harvard Law School office, Cambridge, Massachusetts, Jan. 16, 2008.

<sup>613</sup> "Background Conference: Nutrition Labeling," FDA (February 1973), p. 8, as found in the binder "FoodNutritionLabeling1\_1970-1983" in the personal archives of Hutt, Peter Barton. Much of the rough draft of which was drafted by Peter Hutt, which he dictated onto a tape and had his secretary transcribe.

<sup>614</sup> It could also be put on the principal display panel if manufacturers were so inclined. "Background Conference: Nutrition Labeling," FDA (February 1973), p. 11, as found in the binder "FoodNutritionLabeling1\_1970-1983" in the personal archives of Hutt, Peter Barton. The model for this informative label and its placement to the right of the front panel was the National Canners Association informative label developed during World War II and in the postwar years to harmonize the presentation of canned food information across industry. The canner's label was an example of industry self-regulation, to ensure rational trade and labeling practices. Peter Barton Hutt, personal interview, Cambridge, Massachusetts, Jan. 16, 2008.

The rules also required a minimum type size font of 1/16th of an inch to ensure readability.<sup>615</sup>

These design features were intended to underscore the greater informational clarity and reliability that the nutrition labeling reforms would provide.

The substantive changes in the FDA's food labeling rules were wide-ranging and significant. The proposals listed twelve separate, but interrelated policy changes: 1) the "information panel" concept, 2) the "nutrition information" disclosure concept, 3) "setting a standard of identity for vitamin-mineral supplements," 4) a "label declaration of ingredients in standardized foods" (i.e. universal ingredients labeling), 5) "food flavor labeling," 6) designated difference between natural and artificial flavoring, 7) a policy change on fortified foods, 8) "special dietary food regulations," 9) "Incidental Food Additives" (exemptions for disclosing trace elements), 10) "Imitation Food Labeling," 11) a "Standard of Identity for Mellorine and Parevine," and 12) a uniform effective date for the labeling changes. Here I focus on three specific areas of reform—the "nutrition information" panel, the universal "Ingredient" label requirement, and shift away from the punitive "Imitation" label—to describe how the FDA reconceived the purpose of food labels and the agency's enforcement role. The overarching significance of the FDA decision to use information labeling would be to confirm the shift in Federal food labeling policy from reliance on the concept of a traditional food to an assessment of the nutritional value of foods.

### *1. The voluntary "Nutrition Information" disclosure*

The principal change was the FDA's new embrace of nutrition labeling and nutrient disclosures. Whereas before informational panels were seen to be only needed for special dietary

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<sup>615</sup> "Background Conference: Nutrition Labeling," FDA (February 1973), p. 5, as found in the binder "FoodNutritionLabeling1\_1970-1983" in the personal archives of Hutt, Peter Barton.

foods used under special care, now the agency was expanding their use to cover all foods. As

Peter Hutt reasoned at the 1973 nutrition labeling background conference:

As we started to put together the idea of nutrition labeling, it became clear that what was once 'special' is now 'ordinary'. The idea of nutrient fortification is commonplace; it's almost beginning to be the rule rather than the exception, and therefore these are no longer special dietary foods, they are conventional foods. They are intended for use by the entire population, not by small groups of people.<sup>616</sup>

The idea was to reframe labeling around the recognition that certain nutritional properties and health-promoting tools do not have to be limited to special groups. Instead, Hutt and his colleagues reasoned that, while some nutrients were of special interest to particular patient populations, other ingredients had a more popular appeal. The challenge was to design labeling policies in a way that didn't confuse or interfere with these mixed uses of the nutrition label.

Following this reasoning, the FDA team moved most fortified foods out of the "special dietary foods" category. As was proposed in the 1966 special dietary food standards, they used the National Academy of Science's RDAs in place of MDRs.<sup>617</sup> But they now allowed for the fortification of foods up to 50% of the RDAs for any given micronutrient. Any products that contained micronutrients at levels 50% to 150% of the RDAs would be treated as special dietary foods. Hutt gave the example of Special K and Total cereals as existing foods whose levels of enrichment would mark them as special dietetic products. Hutt clarified: "We aren't prohibiting that, but we are saying that we have to recognize that they are not different from a vitamin pill. They are just a vitamin pill in food form." Anything over 150% of RDAs would become a drug. He and his colleagues reasoned that the stricter scrutiny of standards invoked by the application of the drug category to these highly-enriched foods would thereby prevent a "nutrient horsepower

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<sup>616</sup> "Background Conference: Nutrition Labeling," FDA (February 1973), p. 23, as found in the binder "FoodNutritionLabeling1\_1970-1983" in the personal archives of Hutt, Peter Barton.

<sup>617</sup> Beloian, Arletta, "Nutrition Labels: A Great Leap Forward," *FDA Consumer* (Sept. 1973), p. 7.



race” from occurring in most commonly used food products.<sup>618</sup> Despite this effort at restraining excessive use of vitamin enrichment, the FDA chose to use the adult male quantities of RDAs as its baseline since “it’s the high level that does essentially achieve a coverage for all of the population.”<sup>619</sup>

In addition to the debates over fortification, another clear motive for the change was the debate over new foods and diseases of the affluent. Recognizing the continued public interest in the diet-heart thesis and related modified diets, the FDA was now going to officially allow companies to state the amounts of certain kinds of fatty acids. As Ogden Johnson noted, the allowance was for quantifiable statements about what the food contained, not claims about any health promoting properties it might have:

The fatty acid labeling, and some sections of the nutrition labeling, will make it possible for consumers [on a special diet] to identify among commonly available foods those that can be included in the diet [...] It will also give the manufacturer a means of identifying these foods without making claims. This has been a problem that I think we’re all aware of, and that is that the consumers have been bombarded with claims that a given food product provided certain medical benefits when, in fact, it does not provide benefits. Because of its composition, however, it is useful in certain diets designed to assist in the management of disease.

The turn to nutrition labeling was thus about recognizing that food labels could function as a tool for certain populations of special needs consumers, such as patients following dietary recommendations from a doctor, without necessarily being an inappropriate endorsement of that food as some medicalized product. Hutt was clear that the position of the FDA should be seen as

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<sup>618</sup> “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 26, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C. Hutt restated the concern more directly, “We simply don’t need, and don’t want, over-fortification. Or, as we call it, we are opposed to promiscuous, unnecessary fortification. We feel that if we can keep this stratification whereby foods can contain appropriate fortification at low levels, but we don’t turn every food into a vitamin pill, it will make a good deal of sense.”

<sup>619</sup> Quoting Ogden Johnson, in “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 29, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton.

neutral: “The Food and Drug Administration is not trying to arbitrate on the medical controversy. [...] The Food and Drug Administration doesn’t have the magic answer to that issue, and we’re not trying in this document to say what that answer may be.”<sup>620</sup>

Instead, the FDA team described the new labeling policy as merely a disclosure along the lines of the broader nutrition labeling reforms. Johnson framed the policy change as meeting a fundamental market need for information transparency:

We’ve all had the problem of trying to find something on a label. What we are trying to do, quite frankly, is provide a mechanism where some of these problems --the practical problems of the marketplace, of identifying what something is, finding where the information is on the label, and thus making use of it -- are reduced. Consumers in general can be directed toward a centralized and consistent information panel.<sup>621</sup>

The fat content would appear in the nutrition information panel if the manufacturer wanted it there. In allowing this, the FDA was “recognizing that since patients are trying to follow the directions of their physicians, manufacturers should be permitted to put that information on the label so that people can find it.” Indeed, the FDA staff presented the expansion of labeling as placing the information out there in the market, and letting the market decide what foods would be acceptable nutritionally. Of course, by now allowing these statements the agency was effectively reversing its official position in the previous decade that such health claims had special powers to persuade and mislead ordinary consumers.

A signature part of the label’s presentation as a “modest” change was that the FDA staff characterized the nutrition label as “voluntary.” By voluntary they meant that only those foods that made health claims about their products (on any label or in any advertisement relating to the product’s label) had to carry the standard nutrition information panel. As Hutt quipped at the

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<sup>620</sup> *Ibid.*, p. 25.

<sup>621</sup> *Ibid.*, p. 15.

1973 background meeting, in response to complaints by some that this was hardly voluntary, “if you do not add a nutrient, if you choose not to make a claim, you do not have to, and you do not have to use nutrition labeling.”<sup>622</sup> For those who do, however, labeling was mandatory and must appear in the format the FDA specifies. It was an ingenious tactic for getting industry to buy into an FDA designed standard nutrition labeling. In exchange for carrying the FDA’s label, companies were now able to make certain kinds of implied health claims. The standard format would propagate a “standard piece of information that will be available to the consumer in perpetuity.” Hutt believed this switch to nutrition labeling would generate a broad momentum towards popularizing healthy eating, saying, “It’s going to be on food labels for a long time to come. It is going to lead, I hope, to television advertising; it is going to lead to home economics courses; it’s going to lead to adult education courses,” and even industry would thus potentially “help us get the message across.”<sup>623</sup>

## *2. Universal “Ingredients” labeling*

The switch to nutrition labeling was only one part of how the new labeling system emphasized a compositional view of foods in place of an integral “standards of identity” view. Another key change in the FDA regulations was the removal of the exemptions for ingredients labeling on foods which had a standard of identity. In effect, the FDA was now going to require that all foods carry an ingredients list, not just non-standard or imitation foods. Here Peter Hutt reasoned that the switch addressed an emerging paradox under the existing standards of identity approach:

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<sup>622</sup> *Ibid.*, p. 23.

<sup>623</sup> *Ibid.*, p. 24.

What we discovered was at the same time the numbers and variety and complexity of those ingredients were growing by leaps and bounds. So we were, in effect, going in two different directions that were -- and we now, frankly, recognize it -- inconsistent. We were having fewer ingredients labeled and more ingredients in the foods.<sup>624</sup>

Instead of treating standard foods as if they were traditional and self-evident, the FDA now placed them on equal footing with technological foods regarding a consumer's interest in knowing what they contained.<sup>625</sup> This implementation of universal ingredients labeling was perhaps the FDA's most popular proposal.

The push for this change began in the spring of 1971, when five law students at GWU formed the Law Students for Buyers' Education and Labeling (LABEL), and submitted a proposal to FDA to list ingredients on all foods, standard or not.<sup>626</sup> While initially the FDA rejected the proposal for lack of legislative authority for the change, there were some precedents for this approach. In 1961, the FDA developed "Breaded Shrimp" standards of identity where, rather than specify all recipe ingredients for the bread batter, the Agency left it to producers to use whatever "suitable substances which are not food additives" they thought appropriate. Another early deviation from its food standards system were the "Orange Drink" standards proposed in 1964. Rather than set a strict, universal minimum orange juice content, the FDA allowed orange drinks with 6 percent or more orange juice to remain on the market, but only if they use standard names that corresponded to the percent of juice contained. These were prototypes for the FDA shift from defining standards of identity via recipes to "characterizing

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<sup>624</sup> *Ibid.*, p. 22.

<sup>625</sup> Though this equal footing on the label did not reflect an equal footing between whole foods and engineered foods so far as how easily they could be reengineered and manipulated was concerned. This deceptive "equality before the law" feature of nutritionism is why Gyrogy Scrinis, discussed later in the chapter, complains that "the more extensively a food is processed, the more opportunities there are for its nutrient profile to be engineered according to the latest nutritional fetish." Scrinis, G. "On the ideology of nutritionism." *Gastronomica* 8, no. 1 (2008): 43.

<sup>626</sup> U.S. Senate Select Committee on Nutrition and Human Needs, "Nutrition and Disease: obesity and Fad Diets" (April 12, 1973), Washington, DC, p. 17.

ingredients.”<sup>627</sup> In the FDA’s 1972 “common or usual name” rule, which would become the basis for the new ingredients labeling, the FDA shifted to its new information provision model by combining these approaches. Like the Breaded Shrimp standard, this rule focused on setting ingredient ranges for a food’s “primary ingredients,” those “that have a material bearing on the price or consumer acceptance.” Then, so long as the producer labeled the percent of primary ingredients and chose a suitable standard name label for the product, producers were free to market any novel product without restrictions. In turn, consumers could expect all foods to carry information about their basic ingredients, allowing them to make informed decisions about the product at the point-of-purchase.

In meetings following the release of the 1973 rules, Hutt tended to focus less on the legal precedent and more on the intuitive appeal of ingredients labeling:

The example I always use, the one I used at the White House Conference on Food Nutrition and Health, was the amount of cherries in cherry pie. As I told some people, and as my family is well aware, I happen to be a cherry pie freak. I think cherry pie is just the greatest thing going. The thing that really drives me up the wall is when I get one of those cherry pies and I have to look for about five minutes to find a cherry.

There are two ways of going about it: you can set a standard of identity and standard of quality for cherry pies, which is a long horrendous procedure; the other way of going about it is requiring on the label that the percent by weight of the cherries be labeled, so that I would have three cherry pies there and I could pick the one with the highest quality, namely the greatest amount of cherries per weight of the total pie.<sup>628</sup> Here, Hutt presented ingredients labeling as an unproblematic kind of information disclosure with a certain democratic appeal. It situated choice with consumers, avoided inflexible and tedious hearings, and most importantly, so he reasoned, let the market test the strength or

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<sup>627</sup> Merrill & Collier, “Like Mother Used to Make,” *Columbia Law Review*, p. 611-613.

<sup>628</sup> “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 19, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton.

weaknesses of a given food recipe as what consumers want. (His pie example also illustrates the way that Hutt and others believed that ingredients labeling would redress what they called the Gresham's law of food recipes – that if unlabeled, bad ingredients in the marketplace would drive out the good.<sup>629</sup>)

Yet ingredients disclosure was not in every case so “self-evident,” and the disclosure of certain ingredients subject to intense public health interest, like vegetable oils, raised problems for the FDA's policies on implied health claims. One interpretation of ingredients labeling was that companies would have to disclose what kind of vegetable oil they were using in their products. This raised two potential problems for food manufacturers. First, certain vegetable oils, such as palm and coconut oil, were in the wake of the 1960s diet-heart controversy widely recognized to be less healthy than others. The disclosure would effectively be a punitive indirect nutrient health claim for companies still using them. Second, it was common practice in food production to swap vegetable oils based on changes in market pricing or availability. This manufacturing flexibility was a crucial part of many companies' strategy for keeping costs down in food production. To address this latter concern, many companies proposed the FDA permit “and/or” labeling (e.g. “contains soybean and/or cottonseed oil”) in the ingredients panel. The Institute for Shortening and Edible Oils proposed that the use of P/S ratio labeling in coordination with permitting and/or ingredient disclosures would allow the FDA to further its public health agenda—providing readers nutrition information relevant to special diets—without forcing companies to commit to one given vegetable oil ingredient in a product (the most commonly referenced products on this issue being salad dressings).<sup>630</sup> Potential industry opposition to saturated fats labeling was somewhat tempered by the preference for such nutrition

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<sup>629</sup> Mayer, *US Nutrition Policies in the Seventies*, p. 155.

<sup>630</sup> “Economic Impact of Fat Source Labeling Stressed by Institute,” *Food Chemical News* (Sept. 15, 1975), pp. 9-10.

labeling over fat “source” labeling. Companies such as Proctor & Gamble were questioning whether consumers needed to know what specific kind of oil/fat was used if it was not nutritionally different from another one?<sup>631</sup>

### 3. *The turn away from the “Imitation” label*

If the nutrition information and ingredients panels signaled a new compositional era in food labeling, nowhere was the change in policy more visible and politically explicit than its proposal to shift away from using the imitation label to police products which didn’t match the specific requirements of the standards of identity system. The FDA would now only impose the imitation label on substitute foods that were deemed to be “nutritionally inferior to the food for which it is a substitute.” It was on this issue where Hutt most clearly articulated the changing nature of food production and the need for a similarly new food regulatory system:

Back in 1938 when the concept of imitation foods was really first put into practice, the issues were a good deal more simple. At that time, before all of our increase in food technology, the idea of a manufactured food, a fabricated food, a convenience food as we know it today, simply didn’t exist. The basic food supply was made up of raw agriculture commodities with a few -- and I mean a very few --- food additives. [...] The idea, for example, of taking vegetable oil and making products that look and taste like ice cream, or coffee cream, or milk, or whipped cream -- nobody was thinking of that at that time,

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<sup>631</sup> The marketing concern was over the use of coconut oils, now seen to be unhealthy, versus other vegetable oils. “P&G notes Consumer Survey on Fat Source Labeling,” *Food Chemical News* (November 29, 1971), pp. 10-12. Scientists were also pointing out that identifying the source of fat was sometimes less important than its degree of saturation after processing. “Wodicka Says FDA is Rethinking Polyunsaturate Labeling,” *Food Chemical News* (Nov. 8, 1971), pp. 26-27. One concern raised during this period, which is striking for how it presaged the recent labeling of *trans* fats (discussed in the Conclusion), was the dispute over whether *trans* fats could be included in the percentage of “polyunsaturated” fatty acids, thereby contributing to a food’s perceived healthfulness. Just as nutrition labeling was implemented, a study reported that margarine was found to raise cholesterol in swine, and reasoned that this might be due to the processed *trans* fats in it. Frank Carey, “Margarine Found Health Hazard,” *The Washington Post* (April 11, 1974), p. D3. In part this dispute reflected the current scientific uncertainty at the time over whether *trans* fats were digested the same as *cis* fats. But it also carried tones of arguments about whether processing foods fundamentally changed them and thus warranted special labeling. Dairy Industry argued that the *trans* fats in margarines constituted a meaningful transformation from the original, natural product, and thus should not be included as a “polyunsaturate” fatty acid in nutrition labeling.

and no one gave even the slightest idea to what should be proper labeling for those foods.<sup>632</sup>

The increasing popularity of convenience foods and special dietary foods had arisen with transformations in food processing. Hutt was proposing that the only way the FDA could meet this new food economy was to introduce an equally radical new way of thinking about the food label as a compositional window into the product rather than a generically labeled black box. Yet, Hutt was also glossing over the role that standards of identity had arguably played in slowing this transformation of food into chemical formulations and the way that the new labeling system might now encourage such reformulations.

This change effectively freed up industry to introduce a whole host of new diet recipes without first seeking FDA approval. To underscore this change the FDA included a new food standard for “Mellorine,” an ice cream substitute using vegetable oil, which after 1955 had to be labeled imitation ice cream. Mellorine now had to be fortified with protein and vitamins to be “nutritionally equivalent” to ice cream, but could be marketed as its own independent kind of food, not unlike margarine for butter, without facing legal challenges from ice cream producers.<sup>633</sup> One audience member, in response to Hutt’s mention of the mellorine standard at the Background conference, humorously noted, “I can’t get used to that: ‘Do you want some mellorine for dessert?’,” which was followed by laughter. However, Hutt quickly sobered the audience, noting:

Well, ‘Do you want some margarine on your toast?’ But interestingly, well over 50 percent of the people in the country buy margarine instead of butter. I happen to be from

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<sup>632</sup> “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 14-15, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

<sup>633</sup> *Ibid.*, p. 16.



a dairy family and it hurts me to say that. But the fact of the matter is that this is the test of the marketplace.<sup>634</sup>

Hutt went on to describe how standards for milk—skim, low fat and whole—have become “recognized articles of commerce” over time, but the dairy industry “killed itself” by blocking a similar division in butter and other products. “They are now trying to undo that old protectionist spirit in order to allow themselves through new technology to develop new products and begin to compete with the vegetable oil products. We certainly don’t want to hurt them in that; we want to allow them the same flexibility in terms of descriptive labeling as their competitors now have.”<sup>635</sup>

The FDA’s desire to change the policy on these substitute products was given further legal strength by shifting jurisprudence on the relevance of filled milk statutes to protecting consumers in a modern market. In a 1972 case *Milnot Co. v. Richardson*, an Illinois district court ruled that even though the plaintiff’s product, a blend of vitamin enriched skim milk and vegetable soya oil, should clearly be treated as a filled milk product, the use of the Filled Milk Act to remove such a product was no longer constitutionally defensible. The court reasoned:

The possibility of confusion, or passing off, in the marketplace, which justified the statute in 1944, can no longer be used rationally as a constitutional prop to prevent interstate shipment [of such products]. There is at least as much danger in this regard with imitation milk as with filled milk, and actually no longer any such real danger with either.

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<sup>634</sup> *Ibid.*, p. 17. Hutt didn’t limit his examples to synthetic substitutes, but also gave an anecdote about a Wisconsin dairy technologist who happened upon a system of making low fat butter without vegetable substitutes. Under the previous statute, it would be “imitation butter.” But Hutt felt this was a misleading label: “Well, I looked at this, and I said, If I saw ‘imitation butter,’ first, I would think it is margarine. And then, since it wasn’t labeled as margarine, I wouldn’t know what it was. And I would be thoroughly confused, and I think every consumer in the marketplace who saw that kind of a product with an ‘imitation butter’ wouldn’t really know what it was.” The terminology Hutt and his colleagues settled on, “40 percent butterfat dairy spread,” was clearly acknowledged to be a difficult thing to sell, even though they all believed it to be “a distinct improvement” for people on fat-restricted diets.

<sup>635</sup> *Ibid.*, p. 20.

In response to the *Milnot* case, the FDA published a statement of enforcement policy that “pursuant to the court decision in this case, the Filled Milk Act will no longer be enforced.”<sup>636</sup>

With the change on the imitation label rules and the end to a dual enforcement policy on imitation milk and filled milk, the FDA was sending a clear signal that it supported efforts by industry to create low fat or vegetable fat dairy substitutes sought by diet-conscious consumers.

While it was seeking to remove barriers to legitimate innovation in value-added foods, the FDA still had to ensure that the removal of the imitation clause did not again invite the production of cheap knockoffs that the statute was intended to prevent. The FDA thus had to pick a new standard by which to measure food quality, and this new measure was the science of nutrition. In the 1973 rules that got rid of the imitation label, the FDA noted, “nutritional inferiority is the only type of inferiority that is quantifiable on an objective basis.” It was this quality of being quantifiable and objective that was critical to the FDA’s move to change labeling, since, as the rule also noted:

it is not the function of the Food and Drug Administration to attempt to arbitrate between the likes and dislikes of different individuals or between the different economic considerations that motivate different producers of agricultural commodities or different manufacturers and distributors of food. The function of the Food and Drug Administration is solely to assure the safety of all foods and to prevent misleading labeling.<sup>637</sup>

Despite this “modest” presentation of the FDA as a politically and economically neutral arbiter, the agency was effectively favoring nutrition science over other ways of evaluating food. It was the quantification and accountability of nutrition information that was the grounds upon which the FDA legitimated its labeling disclosure policies as politically neutral and thus fair. Indeed, nutritional inferiority was defined in strictly quantitative terms as a reduction of 2 percent or

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<sup>636</sup> Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 176-178.

<sup>637</sup> 38 *Federal Register* 2138 (January 19, 1973).

more of the U.S. Recommended Dietary Allowances of protein or any essential nutrient, but not of fat or caloric content. So inferior was only defined as a comparison of protein or vitamins, while fats and calories could be reduced without the imposition of an “imitation” label.

With these rules set to become effective at the beginning of 1974, and required for all food products by the end of the same year, Ogden Johnson sketched out what he saw as the main lingering uncertainties of the new food labeling program: “The questions that keep coming back to us are: Will the consumers use nutrition labeling? Can they use it? How will they be assisted so that its use will be appropriate?” These questions he believed would take time to answer, and at best he expected changes in consumer behavior to occur over five to ten years rather than immediately. The FDA, according to Johnson, believed that perhaps only the “10 to 15 percent of the adult population on modified diets” would ultimately use the label. In order to promote the use of the labeling, the Department of Health, Education, and Welfare (FDA’s parent department), along with the USDA, Advertising Council, and Grocery Manufacturers Association, developed a national campaign with the simple message: “Food is more than something to eat.” Johnson, however, did not only view the label’s effectiveness through direct consumer empowerment and action, but also through indirect influence on manufacturers:

Some benefits from nutrition labeling [...] will accrue to the consumer more rapidly and inevitably. One of the most important is the current increased interest in nutrition and the greater concern being expressed by many manufacturers, not only to provide more information but to be sure that their products are produced so that nutrition qualities are maintained.<sup>638</sup>

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<sup>638</sup> Johnson, O. C., “The Food and Drug Administration and Labeling,” *Journal of Am. Dietetic Assoc.*, Vol. 64 (May 1964), pp. 17-18.

In other words, even if many or most consumers did not at first understand the new labels, companies would be changing their products to the health benefit of all consumers.

For the FDA's new system of food labeling really to endure, however, it first had to withstand legal scrutiny in the courts. Almost immediately after the rules went into effect, the Federation of Homemakers, the consumer organization led by Ruth Desmond and active in the 1960s food standards hearings, brought a lawsuit against the FDA for no longer enforcing the "imitation" label nor promulgating new standards for substitutes. The Federation's central position was that the FDA had reduced imitation to merely nutritional equivalence, noting past cases had sustained the imposition of imitation labeling based on a broader range of factors including "texture, smell, taste, appearance, manufacture, packaging and marketing."<sup>639</sup> The court decided to side with the FDA, sustaining the agency's new rules. In choosing to defer to the FDA's decision, the court recognized both the agency's pragmatic position that "the imitation requirement [...] had unduly deterred the development of new food products," but also its more principled emphasis on nutrition equivalence as the preferred language for consumer protection.<sup>640</sup> Food components, ingredients and especially nutrition, would become the new axis around which the "normal" and "abnormal," and the "natural" and "artificial" would realign. The introduction of nutrition labeling in 1973 marked quite visibly the "changing significance of food" that Margaret Mead had articulated only three years before.

### **The Vitamin and Saccharine Rebellions**

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<sup>639</sup> "Exhibit V: Statement of The Federation of Homemakers, Harry G. Shupe, Attorney" (Sept. 27, 1978), as found in the binder "5.ImitationFood3\_1969-1978" in the personal archives of Hutt, Peter Barton. See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., p. 221.

<sup>640</sup> The FDA would continue to face legal attacks well into the 1980s from the dairy industry on proposed standard nomenclatures for new substitute foods. See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., p. 196.

Shortly following the introduction of the voluntary label, two critical developments would have a significant impact on food and nutrition labeling: the 1976 Vitamins and Minerals Amendments, or “Proxmire” Amendments, and the Saccharine Study and Labeling Act of 1977. Both form an important backdrop to the agency’s food labeling policies over the next decade and vividly illustrate the emerging cultural and political landscape of neo-liberal food politics.

The FDA’s continued concern over setting appropriate levels of vitamin enrichment, its effort at creating conventions about enriching common foods up to 50% of RDAs, allowing special dietary foods with 50-150%, and then treating other products above 150% as drugs requiring premarket approval, all arose from a public dispute the agency had with two prominent proponents of “vitamin megadosing.” The first was Nobel Laureate Linus Pauling, who beginning in the late 1960s, and then more vocally from 1970 forward with the publication of his book, *Vitamin C and the Common Cold*, advocated the use of large quantities of Vitamin C and other vitamins to prevent common illnesses like the cold. Such was the ire and concern caused by Pauling’s health pronouncements that Irvine Page summed up many nutrition professionals’ opinion on it in the title of a article he co-authored about as “knowledge pollution.” Of greater concern to the FDA were the publications of and press attention given to Adelle Davis. Davis had been writing for a couple of decades touting alternative diets and vitamins as cures for many illnesses. In the early 1970s she received a flurry of media attention for her claims that mega-doses of vitamins would stave off many common illnesses. Public interest in her health claims was such that she would appear five times on Johnny Carson’s “The Tonight Show” during 1972 and 1973, and a 1972 *Time Magazine* article dubbed her the “High Priestess of Nutrition.”<sup>641</sup> Not only did FDA staff and most nutrition advisers considered the promotions by Davis and Pauling

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<sup>641</sup> Irvine Page, “Knowledge Pollution” *Modern Medicine* (April 5, 1971). “Medicine: The High Priestess of Nutrition,” *Time Magazine* (Dec. 18, 1972).

unsupported science and nutrition quackery, but FDA staff further feared that in certain contexts, such as with the ingestion of high doses of vitamin A or D, megadosing might lead to poisoning. For this reason, the FDA adopted its vitamin-mineral thresholds approach which would allow legitimate enrichment while providing the FDA a tool to address extreme “promiscuous, unnecessary fortification.”<sup>642</sup>

Much as was the case with the FDA’s 1966 special dietary food standards proposals, the new regulations on vitamin supplements provoked a fierce popular backlash, leading to the 1976 Vitamins and Minerals Amendments, or “Proxmire” Amendments. In part, the passage of the amendments reflected the personal zeal with which Senator William Proxmire, a Democrat from Wisconsin, advocated the legislation as a corrective for the FDA’s “conflict of interest” and collusion with big pharmacy at the expense of small health food business. Proxmire was a health enthusiast, having published a self-help book *You Can Do It! Senator Proxmire’s Exercise, Diet and Relaxation Plan* in 1973, and also had a history of antagonism with the FDA.<sup>643</sup> Starting in 1973 Proxmire addressed the Senate chamber on the “hostility and prejudice” of the FDA towards small retailers of health products. In August 1974, he got a fair amount of publicity at hearings on the Proxmire bill when he claimed that the FDA was “trying to play God” in setting restrictive rules on RDAs and labeling. In April 1976, after two years of failed attempts, the Proxmire Amendments passed, significantly curtailing the agency’s powers with regard to vitamin supplements: “the Secretary may not classify any natural or synthetic vitamin or mineral [...] as a drug solely because it exceeds the level of potency which the Secretary determines is

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<sup>642</sup> To use Hutt’s words, as quoted in “Background Conference: Nutrition Labeling,” FDA (February 1973), p. 26, as found in the binder “FoodNutritionLabeling1\_1970-1983” in the personal archives of Hutt, Peter Barton.

<sup>643</sup> Apple, *Vitmania*, pp. 164-174. Proxmire had been a vocal critic of the FDA’s handling of DES, mentioned above. He had a particularly colorful style and independent streak as a politician. He replaced Joseph McCarthy as the Wisconsin senator following his death in 1957, and adopted a reputation as a consumer advocate. Proxmire was also famous for issuing his “Golden Fleece Awards,” between 1975 and 1988, where he singled out examples of what he considered to be wasteful government spending.

nutritionally rational or useful.”<sup>644</sup> It was the first time in the history of the FDA that Congress had moved to restrict the agency’s powers. The amendments reflected a growing political movement which not only reframed self-help dieting as an individual liberty, but questioned governmental agencies’ authority to adjudicate what was “sound science” or “nutrition quackery.”

Following closely on the heels of the Proxmire Amendments was the Saccharine Study and Labeling Act of 1977. On March 9, 1977 the FDA announced its intention to ban saccharine, having found the artificial sweetener to cause bladder cancer in laboratory rats. Echoing the agency’s reasoning for cyclamate eight years earlier, the new FDA Commissioner Donald Kennedy defended the ban in Congressional testimony by arguing, “We should not allow even weak carcinogens in the environment if we can help it... our systems may already be overloaded.” The public reaction was fierce and swift. This time the FDA was seeking to remove the only remaining artificial sweetener on the market, and a sweetener with nearly a hundred years of history. Moreover, as one scholar writing about this “saccharine rebellion” notes, by the end of the 1970s many in the public had developed a weariness with alarming risk messages and a distrust of government agencies’ misplaced priorities in protecting consumers. As one saccharine supporter wrote on the day of the FDA’s announcement: “my life is one big cancer risk, which I am powerless to control. Surely, then, if I decide to take one further, very minor, risk of developing cancer, it must be my decision.” Among the arguments voiced in the 40,000 letters written to the FDA complaining about the ban, consumers repeatedly noted the contradiction of policies which permitted the use of tobacco products, known to cause cancer (albeit not regulated by the FDA), but prohibited a product whose carcinogenic risk for humans

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<sup>644</sup> The Proxmire amendments were attached to a larger bill, The Health Research and Health Services Amendments of 1976 (Public Law 94-278. See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 255-256.

was still uncertain and hypothetical.<sup>645</sup> In November of 1977, Congress passed the Saccharine Study and Labeling Act, which imposed a two-year moratorium against any ban on the additive, instead mandating a warning label for its risks.<sup>646</sup>

These two pieces of legislation reflected the widespread hostility towards and distrust of the FDA in “meddling” with individuals’ food choices: the first was historic for how it created an entirely new category of product, “dietary supplements,” with a special regulatory status distinct from foods or drugs; the second was a direct repudiation of the agency’s authority to interpret risk, and revealed a growing predilection for the use of informational labels and reliance on consumer choice over administrative expert discretion. Indeed, in speaking to a group of food law professionals in 1976, FDA Commissioner Alexander Schmidt recognized these populist concerns as a legitimate, perennial, even “elemental” American tradition. He likened the current concerns raised with the FDA’s new policies in that Bicentennial celebration year to “a somewhat more insistent assertion by the American people for less intrusive government” in 1776.<sup>647</sup>

### **The Unfinished Revolution**

In the debates over fatty acid labeling specifically, and nutrition labeling generally, a key point of contention was whether the new epidemic of chronic degenerative diseases—rising incidences of heart disease and stroke associated with Americans’ longer lives and relatively

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<sup>645</sup> De la Peña, Carolyn. “Risky Food, Risky Lives: The 1977 Saccharin Rebellion.” *Gastronomica* 7, no. 3 (2007): 100–105. De la Peña, Carolyn. “Artificial sweetener as a historical window to culturally situated health.” *Annals of the New York Academy of Sciences* 1190, no. 21 (2010): 159–165.

<sup>646</sup> Congress continued to re-enact the legislation every two years up until 1985, when the FDA formally stated its intention to no longer pursue the ban. The Congressional intervention would also shape the FDA’s policies on subsequent sweeteners. For aspartame’s very different path from cyclamate, see Marian Burros, “U.S. Food Regulation: Tales From a Twilight Zone,” *New York Times* (June 10, 1987).

<sup>647</sup> Alexander M. Schmidt, “FDA—Social Trend and Regulatory Reform,” *Food, Drug, Cosmetic Law Journal* (November, 1976), p. 605.



affluent standard of living—warranted marshaling public resources to ensure individual compliance, as had been done previously with infectious diseases. In the late 1970s, under the Carter Administration, two federal initiatives appeared to gain sufficient institutional momentum to end the government’s vacillating on the question of low-fat diets. The first was the introduction of National Dietary Guidelines by the McGovern Senate Committee. The second was efforts by the FDA to redesign the nutrition label and consolidate its use on all foods. Both efforts ran aground on the continued controversies about the diet-heart thesis, controversies that by the late 1970s were largely fueled by a minority of scientists and those industries most likely to lose from low-fat campaigns. A comparison of the two initiatives also reveals differences in how the public received national guidelines, directly targeted to an entire population and directly addressing food groups, as opposed to nutrition labels, an ostensibly individualized tool which reconfigured foods as nutrients.

By the 1970s positions on both sides of the diet-heart thesis debates had become entrenched. “Believers” now had ample amounts of epidemiological data to argue for a correlation between diet and heart disease, and had substantial clinical and laboratory evidence to provide a clear mechanism for how dietary fats changed physiology in a manner which gave rise to heart disease. Intervention trials directly showing an impact from changed diets, however, were much more problematic. Thus, “nonbelievers” could still assault the diet-heart thesis by pointing to the inconclusiveness of such intervention data, and also appealing to the principle of precaution – that medical professionals should not intervene in people’s diets without strong evidence of a clear health benefit. A physician and nutrition expert at Vanderbilt University, George Mann, called for an “end of an era” of the diet-heart thesis, suggesting that “the dietary dogma was a money-maker for segments of the food industry, a fund-raiser for the Heart

Association, and busy work for thousands of fat chemists.” Mann even complained that “to be a dissenter was to be unfunded because the peer-review system rewards conformity and excludes criticism.”<sup>648</sup>

The cholesterol controversy had given rise to a cottage industry of diet-heart thesis debunkers. In 1973 Edmund Pinckney published, *The Cholesterol Controversy*, which refuted the diet-heart thesis and advocated for a meat diet. In 1972, Robert C. Atkins began to market his high-protein, high-fat, and low-carbohydrate diet—what came to be called the “Atkins diet”—as a preferred program for weight loss. In many ways, the Atkins diet could be seen as the antithesis of Ancel Keys’s endorsement of the Mediterranean diet.<sup>649</sup> In short, while there was increasingly strong support for the thesis among the community of researchers who directly studied diet and heart disease, there was also continued resistance in the larger medical community on the question of whether it was in the public interest to act on it. And perhaps just as importantly, there was a widespread public perception of scientific dissensus and also commercial interests distorting medical messages about saturated fats, cholesterol, and cardiovascular disease.

Despite this uncertainty, in the mid 1970s at least one political institution suddenly became very interested in the matter of heart disease and the negative role of affluent diets in the American public’s health. In July 1976 the Senate Select Committee on Nutrition and Human Needs or McGovern Committee, named for its lead Senator George S. McGovern (Democrat from South Dakota), started to hold hearings on “Diet Related to Killer Diseases,” which focused on the problem of undernutrition. As one person would later put it, the Committee had exhausted the issue of hunger, along with related legislative actions in federal feeding programs, and was

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<sup>648</sup> Steinberg, D. “An interpretive history of the cholesterol controversy. Part II. The early evidence linking hypercholesterolemia to coronary disease in humans.” *J. Lipid Res* 46 (2005): 188–190. This language of “believers” and “nonbelievers” is Steinberg’s.

<sup>649</sup> Pinckney, E. R., and C. Pinckney. *The cholesterol controversy*. Daimon Verlag, 1973.

now looking to developments in nutrition science to explore other subjects.<sup>650</sup> But McGovern Committee staffers also felt that over-nutrition was not being addressed adequately in a coordinated manner at the level of national policy, and that the FDA nutrition label alone was not enough to change Americans' unhealthy eating habits. Indeed, the staff of the McGovern Committee had initially sought to have a public inquiry into the diet-heart thesis issue as early as 1972, but shelved the issue because of George McGovern's campaign for the Democratic presidential nomination.<sup>651</sup>

The hearings in 1976 and 1977 brought many of the more important scientists investigating the diet-heart thesis before Congress. Among the more influential testimony was that given by Mark Hegsted, who voiced the same risk/benefit reasoning he had given in the late 1960s during the special dietary hearings. Hegsted argued that "the prudent diet for Americans" emphasized eating "less food...meat...fat, particularly saturated fat...cholesterol...[and] sugar...[and] more unsaturated fat...fruits, vegetables, and cereal products." Hegsted advocated this because he believed there to be no "identifiable nutritional risks" introduced by following these recommendations, whereas the risk in maintaining the current typical American diets for many were quite high. In January of the following year the McGovern Committee released its report "Dietary Goals for the United States" based largely on the Killer Diseases hearings.

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<sup>650</sup> Porter, Donna, specialist in nutrition and food policy at the Congressional Research Service in the Library of Congress, personal interview conducted at Library of Congress staff cafeteria, Washington, DC, August 6, 2009 & August 26, 2009. Peter Hutt described these kinds of hearings as "staged plays" more than an real kind of Congressional oversight:

"In my four years at the FDA, during which I testified before Congress about 80 times, I can recall no oversight hearing that even purported to be a balanced and objective analysis of an issue, and was constructively intended to help the Agency do a better job in the future. They were, instead, uniformly prosecutorial in nature, and designed to embarrass, harass and intimidate Agency personnel. Their basic purpose was publicity."

Hutt, P. B. "Balanced government regulation of consumer products." *Food Drug Cosm. LJ*, 31 (1976): 592.

<sup>651</sup> Morton Mintz, "And the Fat Thickened," *The Post* (May 28, 1972).

Senator McGovern would herald the report as “the first comprehensive statement by any branch of the Federal Government on risk factors in the American diet.”<sup>652</sup>

Predictably, the report was received favorably by consumer groups, including the Center for Science in the Public Interest, some trade organizations, particularly in those food groups which it benefited such as the United Fresh Fruit and Vegetable Association, the national Fisheries Institute, and the National Association of Wheat Growers, and certain prominent nutritionists, including Jean Mayer and Mark Hegsted.<sup>653</sup> Equally predictable was the fierce negative reaction it received from those industry groups whose products were singled out for avoidance by the Guidelines. The Egg industry complained about recommendation to decrease consumption of “butterfat, eggs, and other high cholesterol sources.” The testimony by a member of the United Egg Producers characterized the recommendation “misleading” since it said nothing about differences in individual variations in metabolism, and presented the recommendations as “absolute -- without even the slightest hint that there is a significant number of notable scientist [...] which disagree with the recommendations.”<sup>654</sup>

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<sup>652</sup> As quoted in I. Daniel Benrubi & Gerald Oppenheimer, “Food Fight: The McGovern Senate Select Committee on Nutrition and Human Needs and the Meat Industry’s Battle over the Diet-Heart Question (1976-1977), presentation at the Second History of CVD Workshop (Jan. 5, 2011). At a press conference on the day the report was released, McGovern likened the report to the Surgeon General’s Report on Smoking, hoping it would have a similar effect on people’s habits.

Much has been made over this report since the initial draft carried the statement “eat less meat,” which was later changed to “increase consumption of poultry, fish and veal and other lean meat,” a change many have interpreted as proof of the powerful lobbying power of the meat industry. (See, for example, Nestle, *Food politics*, pp. 39-47. Adding fuel to this belief is the fact that only a month later in February 1977 the McGovern Committee was voted to be dissolved at the end of 1977.

<sup>653</sup> “Industry, Consumers, Nutritionists Support McGovern Diet Recommendations,” *Food Chemical News* (May 23, 1977), pp. 35-36.

<sup>654</sup> “Egg Industry Appeals to McGovern Committee to Change Dietary Goals,” *Food Chemical News* (Aug. 1, 1977), pp. 34-36. The Egg industry was facing scrutiny by the Federal Trade Commission at this time for ads run by the National Commission on Egg Nutrition (NCEN) which claimed there was no proof that eating eggs increased the risk of heart attack. “FTC seeks court injunction to stop egg cholesterol ads,” *Ad Age* (8/5/74), p. 43. The NCEN claimed the FTC was attempting to “muzzle” it and was infringing on its First Amendment rights. “Egg Group Seeks ‘Truth’ About Cholesterol,” *Food Chemical News* (June 16, 1975), p. 27. The issue eventually resulted in a 1976 FTC ruling which argued denying the existence of such evidence would be “false and misleading.”

Indeed, not all the negative reaction was from private industry, and two criticisms of the report and its recommendations were raised by medical experts. In March 1977 McGovern held hearings on the report, inviting testimony from experts known to be skeptical of the diet-heart thesis or of broad public recommendations for a diet change. The testimony of E.H. Pete Ahrens, a lipid researcher at the Rockefeller University, would get a lot of media attention because he was seen not to have a financial stake in the debate. Ahrens rejected the dietary guidelines despite accepting many features of the diet-heart thesis, its chain of casual explanation, as a valid and progressing scientific hypothesis. Much of Ahrens's rejection of the conclusion of the thesis, that even healthy Americans should start adjusting their diets, owed to the fact that he did not accept the validity of epidemiological data. Ahrens in his testimony instead emphasized the importance of laboratory research over population studies. Several proponents of the diet-heart thesis would focus on this distrust of epidemiology as a legitimate science to make sense of how the naysayers could continue to discount the wide range of evidence available in support of the thesis.<sup>655</sup>

A related second criticism of the National Dietary Guidelines had to do with the appropriateness of a one-size-fits-all national guideline on a risk issue which would look quite different for each individual citizen managing his or her personal health. Ahrens, for example, saw a government endorsement and national guidelines as problematically implying a guarantee of health – as if the guidelines suggested a healthful outcome would be assured. In his Senate testimony, Ahrens thus presented it as a personal wager:

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<sup>655</sup> This criticism in the controversy, and the clear role that moneyed interests (particularly the American Meat Institute) played in creating a schism in the science community, are well documented in Stephen Hilgartner's analysis of differing scientific reports in the period from 1977 to 1989 in his book *Science on Stage*. Hilgartner, S. *Science on stage: Expert advice as public drama*. Stanford Univ Pr, 2000, p. 175, n. 23.

I am betting and I am hoping, too, for I have changed my diet to some degree, no question about it. I have done so in the hope that I am stepping off in the right direction. But I have no conviction nor foreknowledge that what I am doing is prolonging my life or that of my family.... It is a matter of balancing the risks and the benefits. I truly believe the risks and the benefits are both very small. I think your report should emphasize the uncertainties that still exist and should not imply that by heeding these recommendations the public will reduce its risks of suffering the several diseases identified in this report.<sup>656</sup>

Ahrens felt this calculation of risk involved in dietary decisions ought to remain at an individual level.

Ahrens was not alone. The American Medical Association also voiced its opposition to the guidelines. The AMA expressed a general therapeutic skepticism about adopting diet-control guidelines relating to hypertension, ischemic heart disease, and certain cancers, arguing that for each the evidence linking specific food goods to the development of disease was still not complete. The Association also noted that diabetes “is a multifactorial disease” where patients “require diets tailored to the individual,” or that for obesity “the main dietary determinant...is total amount of calories (energy) in the diet and not their source.”<sup>657</sup> These criticisms centered around the enormous room for debate which still existed over whether specific foods ought to be singled out for health messages, versus overall diets, and also whether differences among individuals would be dangerously ignored if health messages were reduced to a single, national guideline. The AMA, however, continued to support its position in favor of fatty acid disclosures

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<sup>656</sup> As quoted in Benrubi & Oppenheimer, “Food Fight.” In some sense, Ahrens’s distrust of epidemiology had to do with how the medical field of study had embedded assumptions about the relationship between population risk and population responsibility.

<sup>657</sup> “AMA Opposes Adoption of Nutrition Committee’s National Dietary Goals,” *Food Chemical News* (June 20, 1977), pp. 10-11.

on food labeling.<sup>658</sup> If it opposed national guidelines, as prescriptive and directed at populations, the AMA supported labeling because of how it would work as an individualized tool that patients and doctors could draw upon as they saw fit.

Others, however, defended the need for a national message, arguing that this is precisely the role that government plays—providing advice to its citizens—and also that such messages would help counterbalance the market trends driving Americans to eat too much. In a 1979 article, “Food and nutrition policy: Probability and practicality,” published in the *Journal of the American Dietetic Association*, Mark Hegsted laid out a defense of dietary guidelines by invoking a kind of nutrition pragmatism. First he called into question many nutritionists’ assumption that “food and agricultural policy” and the “nutritional needs of the population” ought to be determined by the food processing, manufacturing, and distributing industries. This view was framed by the old nutrition policy seeking to meet basic needs. The Dietary Goals, Hegsted reasoned, were designed to meet a new national need – dietary moderation. In part this meant letting go of old national goals, including the “Basic 4” food groups which implied the advantages of all foods without noting the disadvantages of them. Hegsted argued that some foods would need to be eaten less, and this had provoked an overly defensive reaction by industry. But he believed that “the food industry has adequately demonstrated in the past couple of decades that the definition of “acceptable” does change—or that it can be changed,” and there was no reason to think that industry couldn’t adapt to the new concerns with overconsumption.

Second, Hegsted argued that the fact that any national message might not be scientifically precise did not mean it didn’t have an important social and public health value.<sup>659</sup> Finally,

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<sup>658</sup> First stated in 1972. “Diet and Coronary Heart Disease: A council Statement,” *JAMA* Vol. 222, No. 13 (Dec. 25, 1972), pp. 1647. “AMA-NRC Call for Easing of Restrictions on Fat Labeling,” *Food Chemical News* (Oct. 16, 1972), pp. 6-7.

Hegsted described a very different view of the role of government than that of Ahrens in weighing the tradeoffs of treatment versus prevention in federal health policy. Even in the absence of definitive proof, Hegsted believed policymakers could act for two reasons: because the costs of the message would be minimal, whereas the benefits for some would be great; and because Hegsted believed that such guidance was unlikely to have “immediate and drastic effects on what Americans consume.”<sup>660</sup>

Mark Hegsted would have a chance to act on this philosophy of nutrition policy. In 1978, he was invited to serve as Director of the US Department of Agriculture’s new Human Nutrition Center, created by the USDA under the Carter Administration as a response to the renewed interest in public outreach on nutrition. With Hegsted at the USDA, the Department collaborated with staff at the National Institutes of Health to put forward dietary guidelines modeled after the goals published by the McGovern Committee. In a series of meetings in 1979, USDA took the strategy of adapting easy-to-understand goals, written for the public by a science writer, based on a report published by the American Society of Clinical Nutrition. In February 1980, USDA together with HHS issued the report, “Nutrition and Your Health: Dietary Guidelines for

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<sup>659</sup> Hegsted was well versed in the problems of using narrow diet standards for broad, multiple purposes. In 1975 he wrote a series of articles which reviewed the use of RDAs, concluding “that a single set of dietary standards cannot adequately fulfill the several purposes for which they are needed and used.” He noted, for example, the inconsistency in the RDAs of taking some thresholds for vitamins based on the estimates of needs, but other recommended thresholds based “solely on customary dietary habits.” Hegsted, D.M. “Dietary Standards.” *Journal of the Amer. Dietetic Association*, Vol. 66 (Jan. 1975), 13.

Hegsted believed these inconsistencies, however, reflected the need for judgment in setting recommendations which would be used in different contexts. Thus he argued that “errors on the high side are preferable to underestimates” in a country with an abundant food supply,” while “the situation may be quite different in a country with a limited food supply. [...] Thus, even though there is little evidence of racial differences in nutrient requirements, there are rational reasons for differing dietary recommendations in different parts of the world.” Hegsted, D. M. “Editorial: Dietary standards.” *The New England journal of medicine* 292, no. 17 (1975): 915. See also, Hegsted, D. M. “Dietary goals—a progressive view [USA].” *American Journal of Clinical Nutrition* (USA) (1978).

<sup>660</sup> Hegsted, D. M. “Food and nutrition policy: probability and practicality.” *Journal of the American Dietetic Association* 74, no. 5 (1979): 534.



Americans.”<sup>661</sup> The Guidelines did not state any specific numbers, instead using a general language of moderation tied to the USDA’s older programs on balanced diets.<sup>662</sup> The Guidelines, like the Dietary Goals, also provoked an immediate backlash. Most notably, Philip Handler, president of the National Academy of Sciences was openly hostile to the Dietary Goals and diet-heart advocates. When the NAS Report, *Toward Healthful Diets*, was released later that same year, and directly contradicted the cholesterol statements in the Guidelines, it generated a public scandal over the inconsistencies in federal policy.<sup>663</sup> Thus began the seesaw of contradictory science reports on diet and health which would come out over the next ten years.<sup>664</sup>

Even as efforts to define a national dietary guideline faltered, initiatives to reform and expand nutrition labeling seemed ready to advance. In 1975 the General Accounting Office (GAO) conducted a review of food labeling and packaging to establish whether reforms since the 1966 Fair Labeling and Packaging Act had met the needs of consumers. Among the GAO report’s conclusions was a general endorsement of the FDA 1973 labeling reforms; however, the

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<sup>661</sup> Since this first 1980 publication, the USDA has continued to release revised National Dietary Guidelines every five years. These Guidelines formed the basis for the USDA Food Guide Pyramid released in 1992, and discussed briefly in Chapter 5.

<sup>662</sup> Ahrens was a member of the ASCN committee, but so were “some rather strong advocates of the Goals,” so Hegsted reasoned that adopting it would work as a compromise position. “Letter from Hegsted on Dietary Guidelines” entry for the “Preventing Heart Attack and Stroke Web Project,” last accessed on March 14, 2011: <http://www.epi.umn.edu/cvdepi/pdfs/Hegstedguidelines.pdf>. D. Mark Hegsted, “The Development of National Dietary Guidelines,” *Proc. Nutr. Soc. Aust.* Vol. 4 (1979): 96. D.M. Hegsted, “Guest Editorial: Diet, Nutrition, and Cancer,” *Preventive Medicine* Vol. 12 (1983): 470-474. Jeremy Pearce, “D. Mark Hegsted, 95, Harvard Nutritionist, Is Dead,” *New York Times* (July 8, 2009). Sanford A. Miller & Marilyn G. Stephenson, “Scientific and public health rationale for the dietary guidelines for Americans,” *American Journal of Clinical Nutrition* (October, 1985), pp. 739-745.

<sup>663</sup> The language of the report appeared to directly attack the wisdom of the USDA publishing the Dietary Guidelines:

“Any public official considering a new public health program for disease prevention must evaluate the potential effectiveness of the proposed action before recommending its adoption. If there is uncertainty about its effectiveness, there must be clear evidence that the proposed intervention will not be harmful or detrimental in other ways. In the case of diseases with multiple and poorly understood etiology, such as cancer and cardiovascular disease, the assumption that dietary change will be effective as a preventive measure is controversial.”

“Food Board’s Fat Report Hits Fire,” *Science* Vol. 209 (11 July 1980), p. 248-250. “FNB Admits Cholesterol Report is ‘Insufficient’ But Defends Its Conclusions” *Food Chemical News* (June 23, 1980), pp. 57-58. Philip L. White, “Foods and Nutrition 1981,” *JAMA* Vol. 245, No. 21 (June 5, 1981): 2239-2241.

<sup>664</sup> Hilgartner, S. *Science on stage: Expert advice as public drama*. Stanford Univ Pr, 2000.

report recommended that nutrition and ingredient labeling needed further improvements, suggesting the possibility of percent labeling to help consumers make better decisions in food selection.<sup>665</sup> The report rekindled interest both in Congress and at the FDA in considering changes to nutrition labeling. In 1977, the FDA initiated behavioral studies of how consumers read nutrition labels as a first step towards considering ways to change the label format. One issue that worried FDA staffers was that the “imitation” label, still used on nutritionally inferior products, no longer seemed to be stigmatized. The FDA was thus considering whether to require a “statement of nutritional inferiority” on such products. Adding sodium declarations to the label, and clarifying cholesterol declarations were also seen to be important issues to be resolved.<sup>666</sup> In December of 1977 the FDA’s Office of Consumer Affairs held a local “Washington Consumer Exchange Meeting” in DC with regional consumer groups to start to explore the kinds of problems consumers felt needed addressing.

From August through October 1978, the FDA, in coordination with the USDA and FTC, held a series of five 2-day nutrition labeling hearings across the United States with more than 2,800 people attending, 452 testifying (many “walk in” testimonies), and also receiving an additional 9,000 written comments. The FDA encouraged consumers to consider broad questions, such as “Is there enough information on food labels? Of the right kind” and “Is it understandable?”<sup>667</sup> Among the specific issues raised were the following: the need for universally mandatory labeling (fueled by concerns that consumers were unable to compare

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<sup>665</sup> U. S. General Accounting Office. *Food Labeling—goals, Shortcomings, and Proposed Changes, Department of Health, Education, and Welfare, Department of Agriculture, Department of Commerce: Report to the Congress*. US General Accounting Office, 1975.

<sup>666</sup> “Research Needed Before Nutrition Labeling is Changed: Vanderveen,” *Food Chemical News* (October 17, 1977), p. 16.

<sup>667</sup> “Summary of Food Labeling Notice,” Released by the Dept. of HEW Public Health Service (December 1979), found in File 33 “FDAFoodLabeling” in the Center for Science in the Public Interest (CSPI) private archives, Washington, D.C.

. “Getting Consumers’ View on Food Labels,” *The FDA Consumer* (July-August 1978).

nutrition labeled foods with those foods which had avoided the nutrition label), a review concept of imitation (no longer working as a deterrent on inferior products), confusion over what were “common” serving sizes, the abolishment of “and/or” statements (which disguised specific ingredient sources of fats), and calls for sugar and sodium labeling as important public health concerns. Improving the ingredients disclosures and adding sodium and sugars to the nutrition labeling ranked among consumers’ top concerns, though a general concern was also expressed that food labels were just a tool, and that to be useful they would need to be coupled with education.<sup>668</sup> Among the issues the agency identified as evoking strong consumer concern were the lack of clarity in ingredients labeling and the strong desire for universally mandatory labeling to allow consumer to compare all products’ nutrition profiles.<sup>669</sup> In December of 1979 the FDA published a notice of proposed rulemaking in the Federal Register soliciting further comment and proposing another round of hearings in 1980. While the agency was moving cautiously, by 1980, under Carter, the FDA appeared to be steadily on the path towards implementing some kind of substantial reform to the nutrition label. (Indeed, Congress was also moving forward with its own labeling initiatives, Senator Edward Kennedy sponsoring in 1979 and 1980 a “Nutrition Labeling and Information” bill to amend the 1938 Food Drug and Cosmetic Act and require nutrition labeling.)

### **Imagining the Informed Consumer: The Advent of Nutritionism?**

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<sup>668</sup> “Food Labeling Hearings: Background Information,” as found in the Esther Peterson archives at Schlesinger. “Food Labeling Background Papers,” US HEW & USDA, found in File34 “FDAFoodLabeling” in the Center for Science in the Public Interest (CSPI) private archives, Washington, D.C.

<sup>669</sup> “Summary of Food Labeling Notice,” Released by the Dept. of HEW Public Health Service (December 1979), found in File 33 “FDAFoodLabeling” in the Center for Science in the Public Interest (CSPI) private archives, Washington, D.C.

In a 1977 paper titled, “The Responsibility of the Individual,” John H. Knowles, an influential American doctor, argued that it was an individual's civic duty to maintain a healthy diet. “I believe the idea of a 'right' to health,” Knowles explained, “should be replaced by the idea of an individual moral obligation to preserve one's own health—a public duty if you will.”<sup>670</sup> Knowles argument, in its entirety, was not intended to be an attack on public institutions but rather a call for both individualized and collective initiatives in improving the public’s health. But in a period of growing skepticism about the healthcare system, increased scrutiny of its costs and modest returns, “The Responsibility of the Individual” was read by some as a recognition that individuals as much as public institutions should take responsibility for their future health and the economic burden it would cause.<sup>671</sup> For Knowles, the changing social burden of disease, from infectious diseases to chronic disease, called for a change in promoting health which highlighted preventive care and medicine. Within this context, nutrition labeling was part of a broader new health consciousness and movement which “situate[d] the problem of health and disease at the level of the individual,” resulting in an ideology of what Robert Crawford in 1980 called “healthism” and “reinforc[ing] the privatization of the struggle for generalized well-being.”<sup>672</sup> Here it is worth parsing two distinct but interrelated elements of this new healthism

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<sup>670</sup> According to Knowles, individuals would then be entitled to “the 'right' to expect help with information.” John H. Knowles, “The Responsibility of the Individual,” *Daedalus* 106 (1977): 59.

<sup>671</sup> For example, this was how Robert Crawford construed Knowles’s position in Crawford’s brief mention of the paper. Crawford, “Healthism and the medicalization of everyday life,” pp. 379-380.

Knowles article should be read in the context of over a decade of debates about “Medical Nihilism.” At this time, a growing number of experts were voicing skepticism about the successes of past health public campaigns. One of the most prominent attacks on the value of public health campaigns came from John and Sonja Minklay, who showed that drops in certain infectious disease mortality rates preceded important medical cures and interventions. John B. McKinlay & Sonja M. McKinlay, “The Questionable Contribution of Medical Measures to the Decline of Mortality in the United States in the Twentieth Century,” *Milbank Memorial Fund Quarterly* (Summer 1977): 405-428. For earlier criticism, see works by Thomas McKeown. Thomas McKeown, *The Role of Medicine: Dream, Mirage, or Nemesis?* Princeton: Princeton University Press, 1979. On the longer history of public health “nihilism,” see Fairchild, A. L., and G. M Oppenheimer. “Public health nihilism vs pragmatism: history, politics, and the control of tuberculosis.” *American Journal of Public Health* 88, no. 7 (1998): 1105.

<sup>672</sup> In addition to the increased consumption of “vitamins and other health aids,” Crawford described “an exercise and running explosion, the proliferation of popular health magazines, and the appearance with amazing frequency of

and the 1970s focus on the informed consumer: a political shift towards individualism, and a shift in the notion of dietary risk and the importance of preventive self-help medicine.

Nutrition labeling, and the growing interest in informational labeling in general, reflected a political shift in understandings of “consumer protection.” If under the previous system of labeling the FDA had been concerned with protecting the ordinary consumer, a consumer not especially concerned with health, with the turn to nutrition labeling the FDA was redefining ordinary to include the informed consumer, one who might want to consider health-related information in his or her choices about food. Indeed, the 1975 GAO report on food labeling emphasized the FDA’s statutory obligation to improve nutrition labeling, quoting the 1966 Fair Packaging and Labeling Act that “Informed consumers are essential to the fair and efficient functioning of a free market economy.”<sup>673</sup> The New Deal concept of food standards (which did not carry information labels) was no longer adequate for protecting consumers’ interests. The turn to information labeling reflected a different rationale: use labels to empower consumers to decide for themselves, and empower companies to design “good” foods; but don’t interfere directly in the consumer’s “freedom of choice.” The popularity of labeling was due to its appeal across political parties. For progressive organizations, information labeling continued the push to

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health themes in newspapers, magazines, and advertisements” as further evidence of this new social trend. Crawford, “Healthism and the medicalization of everyday life,” p. 365. Crawford identified two submovements of healthism, holistic health and self-care, and focused his attention on the holistic health movement. For the story of the nutrition label, the movement towards self-care is more relevant. In Crawford’s words, “Self-care and self-help, like holistic health [...] challenge professional medicine. They seek to reduce reliance of individuals on medical practitioners and substitute individual and group activities aimed at improving health...” Self-care, unlike holistic health, “is oriented more to the transfer of medical competence to the individual.” Self-help does this in group settings. For a history of other anti-healthism critiques and their relation to broader attacks on the medical establishment, particularly in relation to the diet-heart thesis, see Garrety, “Social worlds, actor-networks and controversy,” pp. 748-749.

<sup>673</sup> As quoted in, U.S. General Accounting Office, *Food Labeling—goals, Shortcomings, and Proposed Changes*. To be clear, this is not to say that legal tort concern with “the ordinary consumer” disappeared. Courts continue to seek, up to the present, the best means to determine what are the “expectations of the ordinary consumer” so as to establish product defectiveness in liability suits. Instead, the argument here is that with the introduction of nutrition labeling FDA regulators began to recognize that even ordinary consumers would have a valid interest in seeking health information on food.

protect and expand the consumer's "right to know," one of four rights in President Kennedy's 1962 "Consumer Bill of Rights," and followed liberal traditions in protecting market transparency. For pro-industry groups, labeling was both an opportunity for creating new food markets—for niche marketing and market segmentation—and a preferable mode of regulation to outright product bans. Informational regulation was effectively a passive or persuasive mode of governing – interested consumers could find the information, if they sought it, but the information panel was not meant to be a government endorsement, one way or the other, about the product.

The label's design reflected this new politics of "hands off" governance. A central characteristic of the design of this label (or really its epistemological justification) was that nutrition information be a quantifiable statement of fact, and not a kind of government sponsored advertisement. Nutrients were thus listed by weight, in grams, instead as percent recommendations. The information panel was to be placed on the side or back of the package, so as to distinguish it from front panel advertising. Because many consumers considered the extensive labeling of information as distracting, the FDA decided only to require that companies declare those nutrients that occurred in a given food product. There would be no "0 grams" statements (as would become the case in the 1990s with the Nutrition Facts panel). Moreover, the FDA repeatedly cited consumer studies that it had commissioned—studies which showed nutrition labels to be very popular among shoppers—as evidence that nutrition labeling was what consumers wanted, not some burdensome government imposition on either producer or consumer.<sup>674</sup>

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<sup>674</sup> The FDA and the Grocery Manufacturers of America together contracted the Consumer Research Institute (CRI), a private nonprofit research group, from 1979 through 1972 to study consumer attitudes, performance, and purchase behaviors when provided nutrition information with foods at the supermarket. Raymond C. Stokes, "The Consumer

The findings of the consumer studies on nutrition labeling also depicted a citizen(-as-consumer) fed up with any, even subtle insinuation of government advice. A clear example of this is the explanation for consumers' preference for numbers over adjectives and graphics articulated by the Food Marketing Institute in a 1978 survey:

Graphics tend to editorialize. That is, by their nature the design tends to predispose some products to look good and others to look bad. This is particularly significant since different consumers in our focus groups clearly used different judgment criteria in their own product decisions. [...] The mood in our sample of consumers was definitely one of 'don't editorialize.' The public told us loud and clear they would prefer to make their own judgments based on basic product information because they know their own budget limitations, their own family's tastes, and their own lifestyle patterns.<sup>675</sup>

The survey's authors left no room for doubt about what the participants' message was: "Time and again we heard the phrase: "I don't want the Government telling me what to eat."<sup>676</sup>

The rejection of graphics was partly a stylistic reaction. Graphics seemed less serious and even a bit patronizing. But it also revealed the American public's penchant for what historian Ted Porter calls "trust in numbers." Porter describes how "quantification works as a technology of trust," substituting numerical objectivity for personal trust, but also generating a politics of disciplines.<sup>677</sup> The politics of disciplines here centered on which language for food most met the institutional need for objectivity and impartiality. In the 1973 rules the FDA had emphasized, "nutritional inferiority is the only type of inferiority that is quantifiable on an objective basis." This is a reference to other measures of quality, measures such as "natural" or "organic," that had

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Research Institute's Nutrition Labeling Research Program," *Food, Drug, Cosmetic Law Journal* (May 1972): 249-262. See also, 37 *Federal Register* 6493—6494.

<sup>675</sup> Tim Hammonds, "Food Marketing Institute Nutrition Research, An Attachment to Testimony Before the Nutrition Subcommittee of the Senate Agriculture, Nutrition and Forestry Committee," (August 9, 1978), p. 7.

<sup>676</sup> Tim Hammonds, "Food Marketing Institute Nutrition Research," (August 9, 1978), p. 8, 11. Among the labeling systems the FMI tested, was Michael Jacobson's nutritional scoreboard approach, which also failed the "editorializing" test.

<sup>677</sup> Porter, T. M. *Trust in numbers*, 1996; cf. Jasanoff, S. *The Fifth Branch*, 1990.

been raised before in the standards of identity hearings on special dietary foods.<sup>678</sup> In an atmosphere where dairy industry and vegetable oil companies were pitting conflicting data against each other in food advertisements, numbers about nutrients, rather than statements about foods, appeared more concrete, more objective, and less politicized. In some sense the language of nutrition appears as (inert) information whereas the language of foods clearly evoked (potentially coercive and paternalistic) diet advice. Nutrition labeling expanded and popularized this platform for drawing “nutritional equivalences” between foods through the use of numerical (digital) representations and nutritional exchange values in place of analog vocabularies like traditional or conventional food groups.

If the advent of nutrition labeling was in part a political shift towards greater individualism, choice and autonomy, it also reflected a fundamental shift in how regulators and citizens understood dietary risk and risk management. In the context of dieting, the introduction of the nutrition label represented an institutional shift in the FDA’s policy on health food advertising. It reflected a compromise on what had been a heated debate in the 1950s and 1960s – whether choices about low-fat health claims and diet foods were best left to the discretion of doctors, or whether the promotion of such lifestyle choices should be opened up to mass media,

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<sup>678</sup> While the FDA’s emphasis was on precision and quantification and avoiding distinctions between natural and processed, the agency saw fit to build certain leeway into its nutrition assessment. Companies would be afforded an error range of 20% to account for production variability among food products. A member of the National Canners Association had voiced concern with information labeling which did not accommodate this “variation beyond manufacturer control”:

“... considerable variation do occur as the result of conditions beyond the control of the manufacturer. For example, in our work we have found that tomatoes grown in shade or during a season of less sunshine are lower in Vitamin C than those exposed to full sunlight during the full growing period. [...] No one can predict or control these growing conditions.

[...]

Perhaps we should consider different regulatory philosophies for “natural” or unfortified products in which the nutritive content is beyond the immediate control of the food processor. [...] It certainly would be more feasible to use averages or pooled analytical data to provide representative figures for most “natural” products. Imposing restrictions on the nutrient label statement cannot change their composition, or the manner in which the nutrients vary from season to season, and from one location to another. Such variation is completely beyond the control of the food processor.”

Ira I. Somers, “Quality Control Problems in Nutrition Labeling,” *FDC Law Journal* (May 1972), p. 293, 296-297.



through devices such as food labels. Nutrition labeling was a formal recognition by the FDA that, in matters of food and diet, consumers had a right to seek out information, and in this respect, bypass the doctor and take risk management into their own hands.

Critics have recently oversimplified this turn as a kind of medicalization of food. Scholars writing recently about the rise of “nutritionism” during this period have generally focused on nutrition labeling as a reductionist, medicalization of food, implying that it subjugates healthy individuals to medically determined practices.<sup>679</sup> Though labeling did promote food as a “vector for health,”<sup>680</sup> it also freed up consumers from reliance on doctors for diet management, encouraging self-sufficiency. As I will discuss further in the Conclusion, nutrition labeling is less a story of medicalization in the sense of medical institutionalization than a story of the marketization of diet information. It is worth unpacking two important consequences of embedding nutrition and public health into a market tool. First, this move had a clear politics to it, which was not the Weberian institutionalization that one associates with medicalization, but was rather a libertarian, anti-statist politics. As Crawford argues, “What has become clear with hindsight is that individual responsibility [...] proved to be particularly effective in establishing the 'common sense' of neoliberalism's essential tenets.”<sup>681</sup> With the turn to labeling there was an implicit movement of food from being a necessity to it being a lifestyle attribute. For law and policy, as well as for politics, that shift has great consequence. The more toward lifestyle a thing becomes, the less easily is it amenable to command and control styles of regulation.

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<sup>679</sup> Scrinis, “On the Ideology of Nutritionism,” 2008; cf. Pollan, “Unhappy Meals,” 2007.

<sup>680</sup> Pollan, *In defense of food*, p. 29.

<sup>681</sup> Crawford, “Health as a meaningful social practice,” p. 410. Hindsight here being an important explanatory proviso. By studying neoliberalism as it is emerging here in the 1970s, it is possible to see how the agendas of both left-wing and right-wing groups could converge on something like labeling and empowering consumers without subscribing to many of its political consequences of state divestment.

Second, despite the FDA's efforts to present it otherwise, changes in the representation of food are inherently interventions in food markets. As representations, labels are performative, not in the incorrect sense used by scholars who apply performative to mean misrepresentational, but rather in the sense that economic sociologists mean it – an articulation of the thing (food) which in its articulation also makes it so.<sup>682</sup> In other words, whether or not nutrition labeling is a reduction of food (which it undeniably is), the nutrition label was performative because it became a way in which representing food as “nutritious” led producers to make foods “nutritious” (reformulate foods to be low-fat, vitamin-enriched, low-calorie). The change described here is not unidirectional – the label did not make producers make enriched foods. Instead it was dialectical. By making nutrients visible on the label, nutrition labels incorporated nutrients into market exchange values for food. Those foods that already embodied such healthy attributes could now capitalize on them, but producers of other foods also now had an interest in adjusting their production to make “healthier” value-added foods.

This market-exchange for nutrients and apolitical depictions of food meant that food was increasingly talked about as health information rather than cultural education. In this vein, Columbia University professor of nutrition Joan Gussow, author of the popular 1978 book *The Feeding Web*, made a more trenchant criticism of nutrition labels in the midst of the controversy over the 1977 Dietary Goals. Gussow supported Hegsted and others' efforts to improve on the USDA's “Basic Four” message, which she noted was “so vague as to be able to tolerate all kinds of food horrors.” But she believed the Goals were really a sign that nutrition educators had come to rely on the federal government to “provide by regulation what cannot be accomplished by education.” This was because it is “harder to teach eating than reading,” since there was no overt

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<sup>682</sup> This is a definition taken from linguistics and the concept of a performative utterance.

anti-reading campaign, but, “The same cannot be said of teaching eating. Someone is out there promoting the joys of eating a bad diet. If you doubt it, watch children’s television for a single Saturday morning.”<sup>683</sup> Gussow further noted that nutrition educators “cannot outshout” the food industry. Her comments could also hold for nutrition labeling. Everyone could support a campaign for more nutrition information, but telling consumers what they ought to do with it in the marketplace was where the politics entered in. In other words, if the government names a food, industry argues it is an unfair attack; if you name a nutrient, the case is made that it is just information. This helps explain why the introduction of the Dietary Guidelines was heavily politicized, whereas disputes over the introduction of the nutrition information panel were largely contained to within policy circles and between the FDA and industry.<sup>684</sup>

The FDA’s turn to labeling and loosening of restrictions on advertising was, however, only partial. It was still common at this time for staff at the FDA to say that, “The food label was not the place to practice medicine.”<sup>685</sup> FDA staff felt consumers should not have to become nutritionists to use the label.<sup>686</sup> And the FDA continued to ban so-called “disease claims” – claims that linked eating particular foods to preventing particular diseases. Indeed, a test of this policy came in 1977 when the FDA ruled against the ITT-Continental Baking Co.’s use of therapeutic claims on its Fresh Horizons “High-fiber/reduced-calorie bread” product. The

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<sup>683</sup> “Leveille Says Evidence Does Not Support Need for Dietary Changes,” *Food Chemical News* (January 15, 1979), pp. 39-41.

<sup>684</sup> This has led to the recent complaint of public critics such as Michael Pollan that big food politics distorts healthy food advice through nutritionism. Pollan’s account, however, incorrectly directs the blame at the symptom, nutrition reductionism and informationalism, rather than at the political origins of the problem, the lack of political will to implement an effective nutrition education program (either because of uncertainty about the diet science or because of agribusiness interest, or some combination of both). Pollan, *In defense of food: an eater’s manifesto*, pp. 24-40.

<sup>685</sup> F. Edward Scarbrough, formerly director of FDA CFSAN Office of Nutrition (retired), phone interview with author, Sept. 30, 2009.

<sup>686</sup> Ogden Johnson later reflected on the 1980s boom in health claims: “I have some concerns that people are beginning to push this too far in relation to health claims [...] I think I have always had the feeling that there are few individual foods that can be supported with a major health claim. All these foods must fit into not only a diet but a lifestyle that is consistent with the health goal of the consumer [...]” August 21, 1987 Letter from Ogden C. Johnson to Peter Hutt; as found in binder “FoodNutritionLabeling3\_7\_86-6\_88” in the personal archives of Hutt, Peter Barton. Private library of Covington & Burling Law Firm, Washington, D.C.

company carefully labeled the product with the nutrition information panel, but included the following statement: “There is increasing scientific and medical opinion that fiber may even help prevent serious diseases.” (The company claimed to have taken the wording directly off of cereal boxes already on the market, and thus presumably accepted by the FDA.) The FDA Bureau of Drugs associate director of compliance reasoned that any claim which says a food product “prevents” or “may prevent” a disease would be considered problematic and subject to removal from the market as a therapeutic claim.<sup>687</sup> Under the 1970s “informed consumer” rationale, the FDA accepted the value of information disclosure, nutrient content declarations, but drew the line at claims that linked foods directly to illness, thus triggering the agency’s food-drug distinction.<sup>688</sup>

The trend of using administrative regulation to force industry compliance to a healthier food supply was ebbing at about the same time that medical experts were feeling an increasing anxiety about the importance, yet fallibility of patient compliance in solving many of the key public health challenges of the day. The voluntary nutrition information label can thus be understood as a tool of persuasion intended to fill this motivation gap,<sup>689</sup> to create (compliant) health-conscious consumers without infringing on the food industry's prerogative to fulfill (or, depending on how you look at it, to create) consumer demand. It also fit within a broader interest in this decade among nutrition policymakers to explore ways of merging techniques of advertising and nutrition education. One 1973 article on US nutrition policies for the seventies

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<sup>687</sup> “When does a food become a drug?,” *Product Marketing* (Jan. 1977), pp. 7-10. In 1985, following the FDA’s debacle over Kellogg’s All-Bran fiber-cancer disease claim (discussed in Chapter 5), Peter Hutt would write the ITT-Continental Baking Co. humorously mentioning the similarities between the new case and this 1977 one.

<sup>688</sup> To be clear, this is not to say that regulatory concern with “the ordinary consumer” disappeared. Courts continue to seek, up to the present, the best means to determine what are the “expectations of the ordinary consumer” so as to establish product defectiveness in liability suits. Instead, the argument here is that with the introduction of nutrition labeling regulators began to imagine that even ordinary consumers would have a valid interest in seeking health information on food.

<sup>689</sup> A “persuasive” tool as opposed to a compulsory regulatory tool, John Maurice Clark, “Government Regulation of Industry,” in E.R.A. Seligman (ed.), *Encyclopedia of the Social Sciences* (New York, 1932), vol. 7, p. 127.

stated this challenge succinctly as how to reconfigure “advertising as nutrition education.” The authors noted that “the purpose of advertising is to sell products so most food advertising speaks to the emotions rather than to the biological need.” Nutrition educators had to learn from advertisers how best to influence their audience, but the reverse was also true, they needed to engage with advertisement to “place that message in the right perspective in relation to total daily food needs.”<sup>690</sup>

This privatization of public health through nutrition labeling left unaddressed many problems in diet and health raised at the 1969 White House conference: problems such as how to reach those portions of the United States population who did not have the power to exercise consumer choice when purchasing nutritionally labeled foods, or whether information labeling would reinforce existing disparities caused by class and education. Indeed, when in 1976 the Office of Education released a report showing dismal literacy rates in the U.S., an editor for the trade journal *Food Engineering* wondered what it portended for the FDA’s labeling program if the average American wasn’t sufficiently proficient at arithmetic calculations to cope with RDAs and nutrition labels.<sup>691</sup> What’s more, by the late 1970s the subject of “stagflation,” inflationary prices on basic commodities in a stagnant economy, had far eclipsed nutrition as the primary concern of consumers buying foods in the supermarket. Many market studies of how consumers read nutrition labels found that consumers focused on price more than nutrition, and that it was reshaping their attitudes about labeling reform. Some consumers expressed concern about any government policies, including mandatory nutrition labeling, that might result in increased food

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<sup>690</sup> Helen D. Ullrich & George M. Briggs. The General Public. in Mayer, J. *US nutrition policies in the seventies*. Freeman, p. 183. Mayer was not alone in considering these private models for further public health. The *Annals of the American College of Physicians* would put forward an “Advertising-as-education” argument in 1975 before the Supreme Court, claiming that its journal’s ads should not be taxed since they were educational. Fugh-Berman, A., K. Alladin, and J. Chow. “Advertising in medical journals: should current practices change.” *PLoS Med* 3, no. 6 (2006): e130.

<sup>691</sup> Stephanie Crocco, “Adult Literacy Levels Could Doom U.S. Nutrition Education Efforts,” *Food Engineering* (Jan. 1976).

prices. In this atmosphere of increasing deregulation and anti-government sentiment, the likelihood of the FDA or Congress to push through further labeling changes had diminishing potential.

## Conclusions

The dramatic shift in the FDA's style of regulation in 1973 largely occurred in a void of public attention to concerns about food and nutrition, particularly when compared with the food politics crises of 1969 described in the previous chapter. 1973, the year informational labeling was introduced, was the year that the United States pulled out of Vietnam, the Supreme Court decided *Roe v. Wade*, the public began to learn about the Watergate conspiracies, and the Arab members of OPEC proclaimed an oil embargo initiating a decade-long energy crisis. Indeed, as Peter Hutt acknowledged in a recent interview, the FDA had more leeway at the time than usual to develop policy reforms in part because most people inside the Beltway were more tuned in to the Watergate scandal and Nixon's subsequent resignation in 1974.<sup>692</sup> Even with the election of Democratic candidate Jimmy Carter in 1976, the 1970s can be characterized by the emergence of a conservative politics and growing demand for deregulation. Carter opened his presidency stating that "One of my Administration's major goals is to free the American people from the burden of over-regulation." The end of the Civil Aeronautics Board in 1978 can be seen as the first of a series of deregulation initiatives which dismantled New Deal regulatory institutions intended to rationalize the marketplace, but were now seen as overly burdensome.<sup>693</sup> Similar

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<sup>692</sup> Peter Barton Hutt, senior counsel of Covington & Burling, former FDA chief general counsel, personal interview, Cambridge, Massachusetts, Jan. 16, 2008.

<sup>693</sup> In his comparative study of New Deal regulation and 1970s and 1980s deregulation, Richard Vietor shows that deregulation did not mean the disappearance of the state in the marketplace, but was instead a reconfiguration of where the state leveraged control over markets. One example is how the shift in aviation industry with online flight booking work as a kind of informational regulation with impacts not unlike nutrition labeling (decentralizing

attacks on the Environmental Protection Agency which reached a crescendo in the late 1970s, foreshadowed the wave of anti-federal regulation in the 1980s, but also signaled a new cultural criticism of state paternalism and expert management.<sup>694</sup> Food and diet were not immune to this anti-regulation movement. In 1979, when asked about the FDA's system of food standards, and the peanut butter standards specifically, President Carter, himself a peanut farmer, complained: "It should not have taken 12 years and a hearing record of over 100,000 pages for the FDA to decide what percentage of peanuts there ought to be in peanut butter."<sup>695</sup>

Nutrition labeling, however, does not represent a simple turn to the right. It was highly popular with leftist, consumer interest organizers like Esther Petersen and CSPI founder Michael Jacobson. The introduction of the nutrition information label in the 1970s is better understood as constituting a neoliberal ethos of personal or private responsibility for public matters, what would result in a new form of "contrived competition."<sup>696</sup> The turn to labeling was not deregulation. On the one hand, the FDA's introduction of nutrition labeling, and information labeling more generally, constituted a growth in the agency's regulatory powers. On the other hand, this "power grab" was purchased through easing up from the earlier system of rigid recipe standards, and through a market-embedded ethic of empowering the consumer through better

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management of bookings decisions). Vietor notes that the bulk of Congressional deregulation legislation was passed between 1977 and 1980 under Carter, not Reagan. Vietor also describes examples of marketization of regulatory institutions and practices in this decade. Carter's appointment of Alfred Kahn, an economist, to Chair the Civil Aviation Board during its dismantling was significant since he replaced a lawyer, a sign that market laws would govern instead of law laws and that there would be greater focus on market efficiency over legal convention. Vietor, *Contrived competition*, 1994.

While this chapter focuses on the neoliberal policy reframing among regulators that paved the way for hands-off government, the push for deregulation during this period was not simply top-down. For a bottom-up populist account of 1970s deregulation politics using the example of trucking deregulation, see Hamilton, S. "The Populist Appeal of Deregulation: Independent Truckers and the Politics of Free Enterprise, 1935–1980." *Enterprise and Society* 10, no. 1 (2009): 137.

<sup>694</sup> The result for the EPA, much like for the FDA, was to hide behind ever more complicated models and statistical calculations which disguised the politics of risk decisions. Jasanoff, S. "Science, politics, and the renegotiation of expertise at EPA." *Osiris* 7 (1992): 195.

<sup>695</sup> 15 *Weekly Comp. Pres. Doc.* 482, 483 (1979).

<sup>696</sup> On neoliberal, market-embedded ethics, see Shamir, R. "The age of responsabilization." *Economy and Society* 37, no. 1 (2008): 1–19. On "contrived competition," see Vietor, R. H.K. *Contrived competition*, 1994.

labeling. The “ideology of individual responsibility” served right-wing interests in dismantling the state and streamlining it.<sup>697</sup> Food labeling appropriated the anti-institutional, anti-bureaucratic message of the 1960s Left and converted it to a program for small government and consumerism. This shift was symptomatic of what Bruce Schulman characterizes as a broader cultural turn:

The ideal of social solidarity, the conception of a national community with duties and obligations to one’s fellow citizens, elicited greater skepticism during the 1970s, while the private sphere commanded uncommon, and sometimes undeserved, respect. Seventies Americans developed an unusual faith in the market.<sup>698</sup>

Informational labeling privatized and individualized the ethics of diet, health and self-care by placing information on point-of-purchase tools, and yet it blended this self-help with a particular government program to facilitate healthy populations through responsible eating. In this respect it exemplifies a neoliberal style of govern-mentality, “disposing” citizens towards healthy choices that match government goals, shared and bolstered by industry.<sup>699</sup>

The turn to nutrition labeling can be situated in a much larger turn to focusing on personal lifestyles instead of political institutions, a transformation caricatured by Tom Wolfe in his essay titled the “Me Decade.”<sup>700</sup> The 1976 letter to the FDA mentioned above complaining about the saccharine ban signals a public highly aware of and interested in the risks and hazards in the environment around them, but also one eager to take control of those risks themselves and wrest control from experts whose authority was now being called into question. “Informational

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<sup>697</sup> Robert Crawford has recently argued that the turn to this healthism partly explains the subsequent divestment politically in national health insurance. Crawford, Robert. “Health as a meaningful social practice.” *Health (London)* 10, no. 4 (October 1, 2006): 401-420. While I have not given much space to it in this dissertation, the concerns about population growth and stretched government resources, since at least the Nixon Administration (and discussed in Chapter 3), shaped policy on public healthcare and concerns about who should pay the bill for Americans’ health.

<sup>698</sup> Schulman, *The Seventies*, p. xv. Out of this distrust in public institutions Schulman described the decade as “unleash[ing] a frenzy of new associations and affiliations, as well as a “Politics [which] aimed more and more to protect and nourish privatism.” (p. xvi).

<sup>699</sup> Foucault, “Governmentality,” Burchell, Graham, Colin Gordon, and Peter Miller. *The Foucault Effect: Studies in Governmentality*. 1st ed. University Of Chicago Press, 1991.

<sup>700</sup> Schulman, *The Seventies*, p. 79-80. Cf. Beck, *Risk Society*.



regulation” was about empowering “individual responsibility,” but it did so through a medium which shifted citizens’ agency to the realm of consumption. In this way nutrition labeling blurs the line between education, information, and advertising, and more broadly blurs the line between the public and the private. It represents one of many ways that governments, particularly in the United States, were increasingly cultivating the “consumer-citizen.”<sup>701</sup> Nutrition labeling also reinforced the new business model of niche marketing and the process by which the new health language of nutrition (in addition to a new cult of convenience) was fragmenting and reformulating traditional understandings of food. The contrasting histories and politics surrounding the nutrition label (widely seen to be popular and have cross party support) and the dietary guidelines (regularly subject to intense political scrutiny) illustrate the ways that the structures of political food institutions has furthered this informational turn. It was the beginning of a new nutritional biosociality around dieting and lifestyle foods related to health which would characterize Eighties Americans.

The FDA’s turn to nutrition education, instead of just policing, reflected a growing focus on prevention instead of treatment. The 1970s registered an easing up in the FDA’s earlier rigid posture on nutrition quackery. This was in part a reflection of a change inside the agency with staff recognizing the food industry and many health professionals’ legitimate interest in developing innovations in health foods. Nutrition labeling helped to depict “food as a vehicle for health.”<sup>702</sup> Moreover, the FDA’s use of nutrition as a seemingly unproblematic and objective description of food reinforced the public image of nutrition science as legitimate and apolitical. The nutrition language was useful to FDA efforts for total regulatory reform in part because it

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<sup>701</sup> Cf. Spring, *Educating the consumer-citizen*, 2003.

<sup>702</sup> To use the words of one food policy analyst in 1970. Christakis, G. “Food as a Vehicle for Health.” *Food Drug Cosm. LJ*, 27 (1972): 75.

offered a language which links foods and opens up food comparisons regardless of their heterogeneity and different production histories.

Still, the turn to nutrition labeling can't so easily be characterized as the medicalization of food. In his 1980 article, Robert Crawford noted two different senses of "healthism": one which entailed the extension of professional control of medicine, and a second broader sense of it as an "extension of the range of social phenomena mediated by the concepts of health and illness."<sup>703</sup> Nutrition labeling only furthered this second sense of healthism, and in many ways conscribed the first. The 1973 reforms were partly a result of the FDA being forced to acquiesce to changing outside political forces. The 1976 Proxmire Amendments and 1977 Saccharine Labeling and Information Act reveal how previously marginal groups were by the 1970s able to recharacterize what was once considered nutritional quackery as individual liberties and legitimate lifestyle differences that should not be infringed upon by the State. Nutrition labeling wrested control of diet information and counseling from the strict control of doctors and their patients, and handed it to consumers. In this respect, as I discuss further in the Conclusion, it was more a marketization of health information on food than a medicalization of food. The FDA's continued ban on the use of disease claims up until 1984 reveals how the culture of staff members at the agency resisted a risk society model in the area of food consumption, seeking to contain medicalizations of food.<sup>704</sup>

What began in the 1970s, would accelerate in the 1980s with the Reagan Revolution. Reagan famously declared at his inaugural address on Jan. 20, 1981: "government is not the solution to our problem, government is the problem." In what could almost be a reply to Justice

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<sup>703</sup> Crawford, "Healthism and the medicalization of everyday life," pp. 369-370.

<sup>704</sup> As I will show in Chapter 5, this marketization would lead to an increasingly diffuse distinction between therapeutic and non-therapeutic discourses for food, helping to undermine this remaining distinction made in the agency between food and drug.

Jackson's famous legal defense of regulation in the 1953 *Dalehite* case, and a direct critique of rule by expert administration, the new President continued:

we have been tempted to believe that society has become too complex to be managed by self-rule, that government by an elite group is superior to government for, by, and of the people. But if no one among us is capable of governing himself, then who among us has the capacity to govern someone else? All of us together, in and out of government, must bear the burden.<sup>705</sup>

Reagan blended this revival of individualism with a populist rhetoric that rejected the kind of paternalistic expert rule which had governed in the FDA up to the 1970s.<sup>706</sup> When Reagan came to office in 1981, the flurry of activity surrounding nutrition label reform in 1979 and 1980 came to an abrupt end. For the next few years, there was comparatively little to no attention given to the nutrition label or the problem of health claims.<sup>707</sup>

Yet this absence of regulatory attention would soon have its own consequences, generating a new problem in food labeling. The same 1978 Food Marketing Institute report which had highlighted consumers' desire for autonomy and no editorializing by the FDA concluded ominously: "Information overload is already upon us." "Conflicting claims and counter claims about food and nutrition" had left the consumers in their survey confused, and had the potential of "turn[ing] the public away from this issue altogether."<sup>708</sup> Over the course of

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<sup>705</sup> Ronald Reagan, "First Inaugural Address," Tuesday, January 20, 1981. Available at: <http://www.reaganfoundation.org/pdf/SQP012081.pdf>.

<sup>706</sup> Schulman, "The Privatization of Everyday Life: Public Policy, Public Services, and Public Space in the 1980s," in Troy, Gil, and Vincent J. Cannato. *Living in the Eighties*. Oxford University Press, USA, 2009. Neoliberalism wasn't the only "neo" political movement framing politics during this period. Dionne describes how neo-conservatism was assailing "the new class, the reform-minded intellectuals and bureaucrats whose lust for power, as it was said, knew no limits." Dionne, E. J. *Why Americans hate politics: The Death of the Democratic Process*. Touchstone Books, 2004, p. 63.

<sup>707</sup> Indeed, among the Democratic casualties of the "Reagan Revolution" was Senator McGovern, who lost his seat to Republican candidate James Abnor.

<sup>708</sup> Tim Hammonds, "Food Marketing Institute Nutrition Research, An Attachment to Testimony Before the Nutrition Subcommittee of the Senate Agriculture, Nutrition and Forestry Committee," (August 9, 1978), p. 11.

the 1980s, this problem of information overload would grow to become a prominent food policy concern, such that by the 1990s there would be a new period of nutrition labeling reform.

## **Chapter 5**

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### **Drawing Nutrition**

#### **Facts Together:**

#### **The FDA “Nutrition Facts” Panel**

**1984 – 1995**

*The grocery store has become the tower of Babel, and consumers need to be linguists, scientists, and mind readers to understand many of the labels they see.*

— Health and Human Services Secretary Louis Sullivan, 1990<sup>709</sup>

*A supermarket [...] has preformatted you to be a consumer, but only a generic one [...] there are plug-ins circulating to which you can subscribe, and that you can download on the spot to become locally and provisionally competent.”*

— Bruno Latour, *Reassembling the Social*, 2005<sup>710</sup>

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<sup>709</sup> As quoted in Lyons & Rumore, “Food Labeling-Then and Now,” *Journal of Pharmacy & Law*, Vol. 171, No. 2 (1993), p. 249.

<sup>710</sup> Latour, *Reassembling the Social*, pp. 209-210.

“Americans, heal thyselfes.” This was the injunction of then Secretary of Health and Human Services Margaret M. Heckler in the preface to the 1984-85 edition of *Prevention*, a journal of the U.S. Public Health Service.<sup>711</sup> Heckler’s play on the biblical injunction, “Physician, heal thyself,” underscores the extent to which a new health movement had caught on in the U.S., emphasizing personal responsibility in maintaining health while paradoxically embracing the population models of dietary risk. This cult of “healthism,” in Robert Crawford’s phrase, would be a signature cultural feature of America in the 1980s. Fueled by the proliferation of news and scientific advisory reports on diet and health during this decade, healthism would become one important thread in the emergent fabric of late twentieth century “lifestyle politics,” a new axis of identity around which Americans could define themselves.

Yet even as this movement for personal health empowerment was taking off, another scholarly movement was reexamining its cultural assumptions and conceptual foundations. The field of risk studies emerged in the 1970s and 1980s as an area of research dedicated to making sense of the apparent irrationalities of the public or consumer behavior when faced with risky decisions or activities. Following what were perceived by many experts as serious food labeling failures, such as the public’s excessive risk-aversion to and rejection of irradiated foods, risk studies began to examine labeling as another area of critique of this irrational agent. It was a field that effectively second-guessed readers of risk labels, and in the early eighties many of its most prominent adherents expressed concern about the consequences of what one legal analyst called the “hazard of overwarning.”<sup>712</sup> The use of product warnings and informational labels

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<sup>711</sup> *Prevention* (1984-85), pp. iii-iv. found in “Box 11: Health United States, Annual Reports, 1984, , Dietary Guideline Poster, 1989” in the U.S. Department of Agriculture, National Agricultural Library Special Collections, Beltsville, Maryland.

<sup>712</sup> Noah, L. “The Imperative to Warn: Disentangling the Right to Know from the Need to Know about Consumer Product Hazards.” *Yale J. on Reg.* 11 (1994): 293-400. For an emblematic example of the risk studies movement and this tone of distrust for the risk consumer, see Douglas, M., and A. Wildavsky. *Risk and culture: An essay on the*

presupposes a rational, literate, and already informed consumer decision-maker, the kind of perfect reader who these scholars and policymakers doubted even exists. For this new community of researchers, and their wider audience of legal officials and political administrators, the challenges of “miscommunicating science,” “information overload,” and “the public’s perception of risk” undermined old models of labeling and called for new innovations in what would later be called “choice architecture.”<sup>713</sup>

One exemplary work in this field, which directly pertains to information labeling, is Susan G Hadden’s book, *Read the Label: Reducing Risk by Providing Information*, published in 1986. Hadden was a public policy analyst at the University of Texas LBJ School of Public Affairs who regularly testified before House and Senate Committees on the matter of informational regulation with respect to chemicals in consumer products, and advised then Senator Al Gore. In her work, Hadden described how information, by its nature, was a “public good” (once “available to some, it is difficult to prevent it from being used by others”) and there was for this reason little incentive for private interests to produce “socially optimal” amounts of information for consumers on many products.<sup>714</sup> This formed the foundation for why she believed governments regularly needed to intervene and regulate product disclosures. Yet even the government production of information could be inadequate for reducing risk under certain

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*selection of technical and environmental dangers*. Berkeley: Univ of California Pr, 1983. On this “anti-sectarian” spirit of risk studies, see page 201 of Jasanoff, S. “Science, politics, and the renegotiation of expertise at EPA.” *Osiris* 7 (1992): 195.

<sup>713</sup> In the conclusion I will return to this new policy paradigm of “choice architecture” and the use of labeling in efforts to “nudge” consumers to correct food purchases. I mention it here only to signal that its birth moment can best be traced to this period. A “founding text,” for example, for behavioral economics is Thaler, Richard. “Toward a positive theory of consumer choice.” *Journal of Economic Behavior & Organization* 1, no. 1 (March 1980): 39-60, which argues, “that in certain well-defined situations many consumers act in a manner that is inconsistent with economic theory.”

<sup>714</sup> Hadden, S. G. “Labeling of chemicals to reduce risk.” *Law and Contemporary Problems* 46, no. 3 (1983): p. 239. Her argument here has the character of Garrett Hardin’s “tragedy of the commons.” Hadden, *Read the Label*, 1986.



constraints. In a telling passage of her book, she notes moments “when information provision failed”:

... in instances when choice is not appropriate (because the probability or consequences of the risk are too high), when actors cannot make choices, when information is too technical to form the basis of choice, or when the existence of externalities requires collective decisionmaking and action.<sup>715</sup>

Thus she characterized labeling policy as a tradeoff between the need for direct regulatory control (such as product bans) in moments where the choice to be made was too technical or the risk consequences collective in nature, versus decentralized control through labeling, when the emphasis was on protecting individual consumers’ values.

Nutrition education in this light seemed a perfect area for labeling initiatives. As Hadden noted, “Food has so many psychological and cultural associations that people are willing to accept attendant risks that might be unacceptable in any other context.” Concerns with individualized risk and strong personal opinions about food and diet meant that nutrition labeling was a platform where governments could steer (or “nudge”) consumers in their decisions without second guessing consumers’ individual motives or interests. However, Hadden identified two problems which were undermining the public health effectiveness of the FDA’s 1970s voluntary nutrition labeling initiative. First was the problem with how people were reading nutrition labels. FDA studies in the early 1980s showed that consumers used the nutrition labels as guides for what to avoid rather than as tools for making positive decisions about what to eat. As Hadden summarized it, “people use labels designed to help them improve overall nutritional intake as

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<sup>715</sup> Hadden recognized the role of social equity in determining the contexts in which actors make decision: “Relying solely on labels to get people to take risk-reducing action is therefore especially inappropriate for people with low incomes.” Hadden, *Read the Label*, p.226. I will return to this in the conclusion.

risk labels.”<sup>716</sup> Second, manufacturers had rapidly incorporated nutrient disclosures into their advertising campaigns and product comparisons. This further confused the line between what was a (merely informative) nutrient disclosure and what was a (disputable) health claim. The result as policymakers saw it was a situation in which information overload and a lack of clearly authoritative sources of information were confusing consumers away from making healthy decisions in their food purchases. The challenge was how to develop tools that would improve consumers’ “information management.”

This chapter is a history of the introduction of the FDA’s “Nutrition Facts” panel in the 1990s, the latest version of the nutrition label to be introduced in the United States. It can be taken as an example of how institutions attempt to manage the problem of information overload through the standardization of information and the development of informative “plug-ins,” as Bruno Latour calls them, which consumers can use to enhance their decision-making at the “point of purchase.” The label’s development entailed the work of diverse interest groups, including not only government regulators at the FDA, but also public advocacy organizations, food industry, public health officials, techno-scientific associations, peer government institutions, and even design firms. For this reason, I describe the “Nutrition Facts” label here as an assemblage of different political and technical epistemologies, a collaborative space where groups with very divergent interests can exchange goods despite differences in language or culture. Moreover, designing the label to fit these various interests would be a work of

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<sup>716</sup> Hadden, *Read the Label*, p. 148. The FDA reports which Hadden drew upon for this observation also identified what was for agency staff a disturbing related trend in food labeling politics. FDA staff concluded:

“Relatively few people question the nutritive value of their food, but large numbers express concern with what they see as a proliferation of substances with long- or short-term adverse health consequences [...] It is clear that most consumer advocacy of food label revision stems from this fear, rather than from desires to achieve a more nutritious diet, from economic concerns, or from a generalized “right to know” not attached to a specific need.”

In other words, public interest groups were finding it more politically expedient to draw upon the risk politics of fear to mobilize consumers towards food labeling reform rather than cultivate broad public health interest in healthy living.

inscription, the flattening out of nutrition facts,<sup>717</sup> repackaging them into an educational tool which consumers would ostensibly use to “heal themselves.”

### Diet Science on Stage

The diet-heart thesis had come a long way since Ancel Keys and others first formalized it in the 1950s and 1960s. In 1980 Keys published the book, *Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease*, cataloging the findings of two decades of research. He and collaborators in the prospective study also published numerous articles in medical journals disseminating the findings that variations in diet, and specifically saturated fats, correlated with varying incidences of coronary heart disease in different countries.<sup>718</sup> Of perhaps greater institutional significance was the 1984 NIH Consensus Conference on Lowering Blood Cholesterol to Prevent Coronary Heart Disease. Over the summer and fall of 1984 an NIH

<sup>717</sup> A key point that Latour makes is that representations are material forms, and that when scientists translate three dimensional laboratory practice or findings into two dimensional data or diagrams, that process of inscription transforms the thing and its epistemological value. Latour, B. “Drawing things together.” In Lynch, M. and Woolgar, S.(eds.), *Representation in Scientific Practice*. MIT Press, 1990.

While the nutrition label is not a diagram, I argue that the inscription of food as nutrition onto labels has similar epistemological consequences. First, as discussed in this chapter, it makes food into information that is circulatable, and through its circulation can bring multiple parties and interests into a common virtual space, not just producer, but now also the state, consumer interest groups, experts, and so on. Thus, “packaging transforms the old bilateral relationship between the vendor and the consumer into a multilateral exchange.” Cochoy, F. “Is the modern consumer a Buridan’s donkey? Product packaging and consumer choice.” *Elusive consumption: Tracking new research perspectives/Ed. by K. Ekström and H. Brembeck. Oxford: Berg (2004): 214*. Second, which I discuss in the Conclusion, the transcription from food to text facilitates a new kind of market for food readership that has emerged in the last century.

<sup>718</sup> Keys, A. B, C. Aravanis, and C. Fund. *Seven countries: A multivariate analysis of death and coronary heart disease*. Harvard University Press Cambridge, 1980. For just a small selection of journal articles disseminating findings from the study: Keys, A, A Menotti, C Aravanis, H Blackburn, B S Djordjevic, R Buzina, A S Dontas, F Fidanza, M J Karvonen, and N Kimura. “The seven countries study: 2,289 deaths in 15 years.” *Preventive Medicine* 13, no. 2 (March 1984): 141-54. Keys, A., A. Mienotti, M. J Karvonen, C. Aravanis, H. Blackburn, R. Buzina, B. S. Djordjevic, et al. “The diet and 15-year death rate in the seven countries study.” *American Journal of Epidemiology* 124, no. 6 (1986): 903. Kromhout, D, A Keys, C Aravanis, R Buzina, F Fidanza, S Giampaoli, A Jansen, A Menotti, S Nedeljkovic, and M Pekkarinen. “Food consumption patterns in the 1960s in seven countries.” *The American Journal of Clinical Nutrition* 49, no. 5 (May 1989): 889-94. Menotti, A, A Keys, C Aravanis, H Blackburn, A Dontas, F Fidanza, M J Karvonen, D Kromhout, S Nedeljkovic, and A Nissinen. “Seven Countries Study. First 20-year mortality data in 12 cohorts of six countries.” *Annals of Medicine* 21, no. 3 (June 1989): 175-9. Menotti, A, A Keys, H Blackburn, C Aravanis, A Dontas, F Fidanza, S Giampaoli, M Karvonen, D Kromhout, and S Nedeljkovic. “Twenty-year stroke mortality and prediction in twelve cohorts of the Seven Countries Study.” *International Journal of Epidemiology* 19, no. 2 (June 1990): 309-15.

selected panel of specialists was called upon to evaluate the different kinds of evidence for and against the lipid hypothesis. The panel largely endorsed the hypothesis, advocating dietary recommendations on decreasing calories from dietary fat along the lines then supported by the AHA, and the panel advised the NIH National Heart, Lung, and Blood Institute to establish a national program, which was launched the next year as the National Cholesterol Education Program.<sup>719</sup> By 1984, then, there seemed to be closure on debates over the diet-heart thesis, and even institutional mobilization to translate it into a national education program to change people's habits.

Yet the politicized environment around the topic of cholesterol and fat recommendations, in the wake of the National Dietary Guidelines fiasco, had also led to an entrenchment among some scientific advisors and political appointees. The Reagan Administration appeared particularly hostile to the food standards system and any paternalistic efforts to adjust it for public health purposes which might hurt the food industry or increase government budgets.<sup>720</sup> In the early 1980s, scientific advisory opinions seesawed between dietary proclamations favoring a hands-off approach and aggressive warnings linking increased heart disease and cancer rates to the overeating of fatty foods.<sup>721</sup> In 1982, a new NAS committee published a report, *Diet, Nutrition, and Cancer*, which proposed interim dietary guidelines to help reduce cancer risks including a recommendation to lower fat intake,<sup>722</sup> and in January 1984 the National Heart, Lung, and Blood Institute announced to reporters it had finished a clinical trial on humans that

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<sup>719</sup> Steinberg, D. "The pathogenesis of atherosclerosis. An interpretive history of the cholesterol controversy, part IV: the 1984 coronary primary prevention trial ends it—almost." *Journal of lipid research* 47, no. 1 (2006): 1.

<sup>720</sup> In 1981, President Reagan famously suggested that schools could adjust to budget cuts by changing the school lunch program to allow condiments, such as ketchup and relish, to be classified as vegetables. The withering public backlash led to the proposal's withdrawal, but it indicates the administrations priorities on matters of food, diet, and federal budgets.

<sup>721</sup> For an analytical review of scientific dietary advice in the 1980s, see "Table 2" in Hilgartner, *Science on Stage*, pp. 34-37.

<sup>722</sup> Hilgartner, S., and D. Nelkin. "Communication controversies over dietary risks." *Science, Technology, and Human Values* 12, no. 3 (1987): 43.

“establish[ed] conclusively that lowering blood cholesterol reduces heart attacks and heart attack deaths.”<sup>723</sup> Only a year later, however, the NAS Food and Nutrition Board began reviewing a final draft of the *Tenth Edition of the Recommended Daily Allowances* and chose to reject suggestions that the new RDAs reflect efforts to combat chronic disease. Arguments among board members over the correctness of this decision eventually spilled onto the cover page of *The New York Times*, inviting further criticism of the Board's allegedly conservative recommendations. The Academy cancelled the Draft RDAs only two weeks later.<sup>724</sup>

By the late 1980s, a scientific consensus materialized in favor of more explicit recommendations for lower fat, cholesterol, and sodium diets, though more specific prescriptive measures were still disputed. This nutrition reform position was taken in the 1989 NAS *Diet and Health* report, which would be a primary source for the FDA Nutrition Facts label. A change in food labeling during this period that reflected this shift towards “Negative Nutrition” was a 1984 FDA rule that added sodium to the list of required nutrients on existing nutrition labels.<sup>725</sup> Cholesterol and fat proved to be trickier components to label. In 1986 the FDA proposed measures to define the health claim terms “cholesterol free,” “low in cholesterol,” and “reduced cholesterol,” but by the late 1980s, scientists had begun to distinguish between “bad” LDL (low-density lipoproteins) cholesterol, associated with eating foods with saturated fats (butter, cheese, eggs, and animal fat), and “good” HDL (high-density lipoproteins) cholesterol, associated with exercise and eating unsaturated fats. There was still uncertainty about the ways that the two types

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<sup>723</sup> Karin Garrety, “Social Worlds, Actor-Networks and Controversy,” pp. 727-728.

<sup>724</sup> In 1987, the NAS initiated a new RDA study, which culminated in the publication of the Tenth Edition of Recommended Daily Allowances in October of 1989. The new RDAs generally reflected a shift in favor of nutrition reform and combating chronic diseases. Hilgartner, *Science on Stage*, pp. 70-79.

<sup>725</sup> Dale Blumenthal, “A New Look at Food Labeling,” *FDA Consumer*, Vol. 23, No. 9 (Nov. 1989), p. 15. The parallel but diverging stories of low-salt claims on food during this period is of interest. Hilgartner describes how proponents of the diet-heart thesis in these science advise wars often noted the contradictions in reports which accepted sodium labeling as a prevention measure for reducing hypertension, but would not endorse low fat diets, even though the epidemiological evidence for both was similar. Hilgartner, *Science on stage*, p. 175, n. 23.

functioned differently and at what cholesterol levels doctors and nutritionists ought to sound the alarm for a patient to control his or her fat and cholesterol intake. The general message remained that Americans should exercise more and eat low fat diets. Indeed, popular coverage of this advice frequently reduced the message to all fats are bad, and nutritionists would remain divided as to whether nutrition education campaigns and food labels should emphasize a good-versus-bad-fats campaign over a simpler message of just “fats are bad.”<sup>726</sup>

An important part of the growing acceptance for stricter national standards in labeling was the emergence of a health food market. Despite conflicting scientific advice on the specifics of healthy eating, consumers demonstrated their willingness to pay extra money for foods that they believed would help them stay healthy. The intense media attention to scientific findings connecting diet to cancer scares and a heart-disease epidemic served to bolster sales of healthy foods. Improving health was only one motivation for the eighties “fitness craze.” At a time when the “working girl” was the subject of much positive and negative media attention, staying trim and looking attractive was pitched to middle-class working women as an important way for them to avoid the masculinizing effects of full-time employment.<sup>727</sup>

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<sup>726</sup> Claudia Wallis, “Hold the Eggs and Butter,” *Time Magazine* (March 26, 1984). David Brand, “Searching for Life’s Elixir,” *Time Magazine* (Dec. 12, 1988). This debate over whether nutrition labels ought to or in fact do mark foods as ‘good’ or ‘bad’ to eat continues today. Proponents of so-called street-light labelling systems, which mark healthy foods with a green light and unhealthy foods with a red one, often dismiss this concern as industry obfuscation. Yet among nutrition scientists there exists a legitimate debate over whether it is more expedient to single out specific foods, or more accurate and therefore more effective to keep the focus on one’s entire diet in the context of his or her lifestyle. Here nutrition labelling, particularly in a saturated advertising and diet advice culture, runs up against the philosophical is-ought quandary. A striking recent example of where a simple positive statement of nutrient content could end up functioning like a normative prohibition is that of ‘trans fats’ labelling in the U.S. Popular concern was so great about the ‘toxic’ effects of eating trans fats that as soon as it was included on the Nutrition Facts panel, in 2003, most companies had to remove them from their recipes or risk losing their customers.

<sup>727</sup> Naomi Wolf argues that cosmetic and diet industries push unrealistic beauty ideals on working women, exploiting their anxieties in the workplace in order to sell more products. According to Wolf, the growth of these image industries took off in the 1950s and 1960s when marketers sought new products to replace the previously lucrative domestic house appliances market, which was suffering as a result of housewives leaving the home for work. By the 1980s, there were also more and more advertisements targeting professional men selling male beauty and health products. Naomi Wolf, *The Beauty Myth: How Images of Beauty Are Used Against Women*. Anchor, 1992.

In the fall of 1984, Kellogg Company ran an ad for its All-Bran cereal that was the first from a major food manufacturer to explicitly claim it could reduce the risk of cancer. The ad included a generic public health message from the National Cancer Institute (NCI) on fiber and preventing cancer. Though critics argued that such off-label advertisements were a form of “misbranding,” Kellogg's had consulted with the National Cancer Institute before airing the ad. NCI was then just beginning a cancer prevention awareness campaign. At the campaign's inaugural event, HHS Secretary Margaret Heckler invited industry to help spread the message. When Kellogg subsequently approached NCI Director Peter Greenwald, he was excited about the prospect of having the Kellogg's large media platform offered to expand the reach of NCI's message.<sup>728</sup> Initially the FDA reacted to the Kellogg message with its usual warning against health claims on foods. However, since NCI was housed within the same Department of Health and Human Services as the FDA, the agency decided to permit the ad campaign. Having accepted this form of off-label health claims, shortly thereafter two officials stated that the “FDA is committed to opening the door, with caution, to appropriate health claims on food labels.”<sup>729</sup> Not only would it be a precedent for making health claims on foods, the Kellogg's All-Bran incident was a precedent for public-private partnerships which blurred the boundaries between what was advertising and what was public health education.

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<sup>728</sup> Peter Greenwald, director of the National Cancer Institute Center for Cancer Prevention, FDA oral history by Xaq Frohlich and FDA Historian Suzanne Junod, Rockville, Maryland, Aug. 26, 2009. In the interview, Greenwald characterized the atmosphere around diet advice and institutions like the NIH, FDA, and FNB as a clash between an older school of nutrition scientists, “traditionalists”—he referred to “some from the University of Wisconsin, the dairy state”—and “activists,” “the younger group [who] really was saying cut down the fat.” Greenwald had approached the FDA about changing their standards and labeling system to fit better with a public health message, but Sanford Miller and Commissioner Frank Young told him no (apparently without explaining the FDA's institutional interest in maintaining a food-drug line). Greenwald was not then, nor is even today, concerned with how this episode opened up a broad and problematic precedent for health messages on foods. When asked whether, with hindsight, he regretted encouraging Kellogg to run the fiber-cancer health message, he said no since he believed it was still the best way to expand the public health message to a broader audience. See also, Elliot Marshall, “Diet Advice, with a Grain of Salt and a Large Helping of Pepper,” *Science* Vol. 231 (Feb. 7, 1986), pp. 537-539.

<sup>729</sup> Hilgartner & Nelkin, “Communication Controversies over Dietary Risks,” p. 45. Nestle, *Food Politics*, pp. 239-245.

Food companies other than cereal manufacturers were also now exploring ways to transform convenience foods traditionally considered to be “junk food” into healthy snacks in order to capture the food market for kids whose working mothers no longer had time to prepare their meals.<sup>730</sup> By the 1980s the meat and dairy industry had a significant investment in the low-fat foods paradigm. The dairy industry now provided a wide variety of low-fat or skimmed products, and producers actively promoted skim or part-skim milks, cheeses, and ice creams, the last two of which were rapidly growing markets. Supermarkets offered lean-cut packages of meats, sometimes at a premium. And meat producers, in particular pork producers, had implemented programs to adjust feed so as to create leaner pigs (increase muscle tissue), breed for leaner animals, and even revise USDA grade systems to reflect the trend towards reduction in back fat.<sup>731</sup> Such changes were the basis for the commercial campaign launched in 1987 for the National Pork Board which pitched pork as “the other white meat” in attempt to reposition the meat as a healthy competitor with chicken.

Even professional health organizations participated in this growing and lucrative health-food market. In 1988 the American Heart Association decided to market a “HeartGuide” seal of approval label for healthy food products as a way for the association to raise funds.<sup>732</sup> The AHA

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<sup>730</sup> Harvey Levenstein, *Paradox of Plenty*, pp. 243-245.

<sup>731</sup> Ancel Keys noted this shift in an editorial he wrote in 1986. Keys concluded that lingering skepticism, even when commercially motivated, would inevitably give way to this new public health paradigm:

“Most serious students of the subject insist on the public health approach and will add that lowering the intake of saturated fatty acids below the current American average would be good for all but the purveyors of foods high in saturates and even these commercial interests might eventually profit. The meat and dairy industries long derided the evidence against saturated fatty acids in the diet but now they accept and even promote the trend toward leaner meat and low fat milk.”

Keys, A. “Food items, specific nutrients, and ‘dietary’ risk.” *The American Journal of Clinical Nutrition* 43, no. 3 (March 1986): 477-9. Less anecdotal evidence for this switch can be seen in the 1988 NAS report *Designing Foods*, which catalogued the ways in which the meat and dairy industry had already begun to breed for lean meats and low fat dairy products. The report was cited in the 1990s, during height of interest in nutrition labeling reform, as one of the instigators for labeling reform. National Research Council (US). Board of Agriculture. *Designing Foods: Animal Product Options in the Marketplace*. Natl Academy Pr, 1988.

<sup>732</sup> This was not the first time a medical association had tried to implement a healthy food labeling program. In the 1940s the Council on Food and Nutrition of the AMA tried a “Food Acceptance Program. James R. Wilson, “Food



would have a product approval unit that would evaluate the nutritional content of packaged, processed foods submitted by manufacturers. It would also have a “Consumer Health Information Program” with a hotline consumers could call. All of this would be funded by fees from manufacturers whose products received AHA approval. The FDA, however, did not approve of the program, first, because third-party medical endorsement was not permitted under food-drug laws (since it implied the product had health promoting properties), and, second, because the agency believed it would send the message that some foods were always “good,” and that consumers would overindulge in those foods, when the agency’s position was that health depended on one’s total diet and lifestyle.<sup>733</sup> Industry was also not excited about the program. Some companies worried the program might pose a “substantial legal risk” if a consumer got a heart attack after eating only their AHA approved product.<sup>734</sup> The AHA program also faced criticism because the price of admission was high. Companies would have had to pay a \$40,000 annual administrative fee plus an annual “education fee” (for advertising and promotion) which was prorated based on market share, and which could amount to as much as \$1 million per brand per year. One industry representative said the program looked like “an extortion racket.”<sup>735</sup>

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Acceptance Program of the Council on Food and Nutrition American Medical Association,” *Food Drug Cosmetic Quarterly* (Dec. 1946), pp. 508–517. The program was ultimately not run because the FDA and some at the AMA decided the third-party endorsement would lead consumers to interpret the food to have specific health properties, and mark some foods as “good” and others as “bad.”

<sup>733</sup> October 19, 1989 Letter from Lester M. Crawford (FDA) to Myron L. Weisfeldt (President, AHA) found in the binder “8.AHALabel” in the personal archives of Peter Barton Hutt. Commissioner Frank Young condemned the AHA HeartGuide Program as a highly problematic “for-profit regulatory approach.” “FDA’s Young Says Heartguide Program Is Regulation For Profit,” *Food Chemical News* (Nov. 13, 1989), pp. 15-16.

<sup>734</sup> Alex M. Freedman, “Heart Association to Put Seal of Approval on Foods—but Will Consumers Benefit?,” *Wall Street Journal* (Dec. 13, 1988), p. B1. Mark Bloom, “Controversy Continues Over Food Labeling,” *Washington Post* (Jan. 17, 1989), C1.

<sup>735</sup> Carole Sugarman, “What Price Approval?,” *Washington Post* (August 30, 1989), pp. E1, E4. “Heartguide Program ‘Looks Like an Extortion Racket,’ AFI charges,” *Food Chemical News* (August 28, 1989), p. 11-12. Marion Nestle describes the AHA “heart-healthy” label as one of many examples how industry was “co-opting nutrition professionals” in the 1980s and 1990s. Another example includes the American Dietetic Association’s collaboration with McDonalds to develop the “Food FUNdamentals” toys for McDonalds happy meals. Nestle, *Food Politics*, pp. 111-136. While Nestle narrates 1990s food politics as a story of “how the food industry influences nutrition and health,” often at the expense of following “good science,” the history of the FDA’s Nutrition Facts

Despite legal uncertainty and steep costs, 114 companies did seek the endorsement. The FDA, along with a strongly opposed USDA, killed the program, and also commenced to end other seal programs such as those being developed by the American College of Nutrition (endorsing Mazola vegetable oil and P&G's Puritan oils) and the AMA Campaign Against Cholesterol as inappropriate third-party endorsements.<sup>736</sup>

The release of the *Surgeon General's Report on Nutrition and Health* in 1988 helped remobilize media attention to the subject of unhealthy diets and generate a sense that America was facing a national health crisis. The report opened by stating that two-thirds of all deaths in the United States were attributable to heart disease, atherosclerosis, stroke, diabetes, or some form of cancer, and that the risk for all of these illnesses was deeply affected by what we eat. The Surgeon General's Report was also very clear about what particular eating trend had led to this health crisis: "for most of us the more likely problem has become one of overeating—too many calories for our activity levels and an imbalance in the nutrients consumed."<sup>737</sup> The close coincidence with the publication of several other expert advisory reports making similar calls for diet reform underscored its strong message.<sup>738</sup> The report generated a lot of media coverage. As one author at the time described it, "Every authority, every institution in our society urges us to

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label suggests that all parties, even industry, are constrained in the influence and choices they exercise over national health policy and regulation.

<sup>736</sup> Marsha F. Goldsmith, "'HeartGuide' Food-Rating Program Attracts 114 Applications as Controversy Continues," *JAMA* Vol. 262, No. 24 (Dec. 22/29, 1989), pp. 3388, 3391. Janet Meyers, "HeartGuide Legacy: FDA may shoot down other seal programs," *Advertising Age* (May 2, 1990), p. 60.

<sup>737</sup> U.S. Department of Health and Human Services, Public Health Service DHHS (PHS), *The Surgeon General's Report on Nutrition and Health*, Publication No. 8840210 (1988), p. 17.

<sup>738</sup> Other reports include the NAS Board of Agriculture's *Designing Foods: Animal Product Options in the Marketplace* (1988), the NAS Food and Nutrition Board's *Diet and Health* (1989), and the World Health Organization's *Healthy Nutrition: Preventing Nutrition-Related Diseases in Europe* (1988). Nestle, *Food Politics*, p. 49.

fight our fat.”<sup>739</sup> One of the report's principal recommendations regarding dietary guidance was that “Food manufacturers should be encouraged to make full use of nutrition labels.”<sup>740</sup>

The Food and Drug Administration heeded this call for state action. In the spring of 1989, Department of Health and Human Services Secretary Louis Sullivan announced that the FDA would take major steps to reform its food labeling guidelines.<sup>741</sup> The FDA’s Center for Food Safety and Applied Nutrition would head the project. The agency further alerted consumers and industry of its plans for label reform in the August 8, 1989 *Federal Register*, the official journal where federal agencies declare their policies, announcing a series of open hearings where public feedback would be solicited.<sup>742</sup> David Blumenthal, writing in the FDA's public outreach periodical, *FDA Consumer*, identified the key problems as the following: What foods should have nutrition labeling? What nutrients should be declared in the nutrition label? Should nutrient amounts continue to be declared according to the amount in a serving? What is the best format for the nutrition label? The breadth of these questions revealed the FDA's desire to start fresh and remain open to reinventing nutrition-labeling rules. The most difficult question Blumenthal saved for last, and he left it open for the hearings: “Is food labeling an appropriate vehicle for disseminating health-related dietary information about specific diseases?”<sup>743</sup> But as the FDA was gearing up to take on the national health crisis through label reform, representatives in Congress were taking steps to ensure that the FDA had a clear federal mandate to implement these reforms.

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<sup>739</sup> Roberta Pollack Seid as quoted in Levenstein, *Paradox of Plenty*, p. 242.

<sup>740</sup> U.S. Department of Health and Human Services, Public Health Service DHHS (PHS), *The Surgeon General's Report on Nutrition and Health*, Publication No. 8840210 (1988), p. 18.

<sup>741</sup> Kessler, et al., “Developing the Food Label,” p. 14.

<sup>742</sup> “Advance notice of proposed rulemaking; request for public comment,” *Federal Register*, Vol. 54, No. 151 (August 8, 1989). “Notice of public hearings and extension of comment period on advance notice of proposed rulemaking,” *Federal Register*, Vol. 54, No. 181 (Sept. 20, 1989).

<sup>743</sup> Dale Blumenthal, “A New Look at Food Labeling,” *FDA Consumer*, pp. 15-17.

In one of history's ironic moments, the bill that would become the Nutrition Labeling and Education Act (or NLEA) was introduced to the House on the same day that millions of American kids would take to the street for their annual saturnalia of candy consuming indulgences, Halloween. On October 31st, 1989, Representative Henry Waxman, a Democrat from southern California, entered bill H.R. 3562 as an amendment to the Federal Food, Drug, and Cosmetic Act of 1938, which would “prescribe nutrition labeling for foods, and for other purposes.”<sup>744</sup> The bill required that all standardized and packaged foods, with certain exceptions,<sup>745</sup> would have to include the following four kinds of food information:

1. The serving size or other common household unit of measure customarily used;
2. The number of servings or other units per container;
3. The number of calories per serving and derived from total fat and saturated fat;
4. The amount of total fat, saturated fat, cholesterol, sodium, total carbohydrates, complex carbohydrates, sugars, total protein, and dietary fiber per serving or other unit

Furthermore, the Secretary of Health and Human Services (and more specifically the FDA) was given discretion to include any vitamins, minerals or other nutrients based upon the best scientific evidence available. With these universal nutritional labeling expectations met, food industries would be allowed to make certain health claims about their products without facing classification as a drug:

[The NLEA] Declares that a food which makes a claim which characterizes the relationship of its constituents to a disease or a condition in accordance with the

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<sup>744</sup> The bill was a revised version of a previous bill (H.R. 3028) Waxman introduced into the House in July. Senator Howard Metzenbaum also introduced a Senate bill (S. 1425) that July which was later dropped in favor of the amended House bill. The Library of Congress THOMAS, “H.R. 3562” entry at: [http://thomas.loc.gov/home/bills\\_res.html](http://thomas.loc.gov/home/bills_res.html). Last accessed on May 19, 2006.

<sup>745</sup> Some of the more significant exceptions included foods sold in restaurants, infant formula (whose nutritional content labeling was covered under the 1980 Infant Formula Act), and on packages that were too small to carry the nutrition label. Restaurant menu exemption would prove to be a polemical issue and tricky for the FDA. Restaurant menus technical fell under the agency’s broad “labeling” oversight, and it was difficult for the FDA to justify why nutrition labeling should apply to all food labeling, but not menus.

requirements of this Act is not, solely because of such claim, a drug under specified provisions of FDCA [Food, Drug, and Cosmetic Act].

The NLEA would thus open the door to advertising health-conscious food products while ensuring federal oversight of content labeling.

Over the course of the following year the House and Senate modified the bill slightly, but it would pass both Houses easily, and on November 8, 1990 President George Bush signed the Nutrition Labeling and Education Act into effect making it Public Law 101-535.<sup>746</sup> The 1990 NLEA erased any doubt as to whether the FDA had the authority to lead the national nutrition label and education campaign. The Act directed the Secretary to “carry out consumer education on nutrition labeling” and demanded that the Secretary “require the nutrition information on labels to be conveyed in a manner which enables the public to readily observe and comprehend it and to understand its relative significance in the context of a total daily diet.” Congress sought a solution to the national health crisis that would permit Americans, at a minimum, the freedom to choose a healthy lifestyle through label literacy.<sup>747</sup> The NLEA thus strengthened agency officials’ resolve to act, but efforts by the FDA to revamp the nutrition label were already well underway. Through a series of open solicitations and community outreach initiatives, the Food

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<sup>746</sup> The principal modification in the House was the addition that the Secretary “require certain information to be highlighted” on the nutrition label. There were two additions in the Senate. Senator James Jeffords, a Vermont Republican, sought to ease food standards restrictions on maple and dairy products, reflecting his state’s peculiar interests. Senator Howard Metzenbaum, an Ohio Democrat, however, introduced a more portentous change. Metzenbaum’s amendment included under the clause allowing companies to make disease-related claims any food that “makes a claim with respect to a dietary supplement of vitamins, minerals, herbs, or similar nutritional substances. The addendum was intended to loosen restraints on industries hoping to capitalize on the market success of nutritional fortification, and foreshadowed future legislation, the Diet Supplement Health and Education Act, discussed below, designed to prevent “unreasonable regulatory barriers” to selling dietary supplements. The Library of Congress THOMAS, “H.R. 3562” entry, S.AMDT 3125 & S.AMDT 3562. [http://thomas.loc.gov/home/bills\\_res.html](http://thomas.loc.gov/home/bills_res.html). Last accessed on May 19, 2006.

<sup>747</sup> The extent of Congress’s no-nonsense resolve to bring consistency and clarity to food labeling was registered in the fact that the NLEA also gave the FDA the authority to establish standards for defining serving sizes. This was a liberty that the food industry had exercised over its own goods up until then, to the chagrin of nutrition reformers, and was the issue that would soon bring the FDA into direct conflict with the US Department of Agriculture.

and Drug Administration hoped to smoothly usher in the largest changes in food labeling regulation since the 1938 Food, Drug, and Cosmetic Act.

When the Department of Health and Human Services Secretary Louis Sullivan faced attendees of the 13th Annual National Food Policy Conference in 1990, he identified the current health crisis as being related in no small part to the flood of health information that overwhelms consumers when they make decisions on what foods to buy: “The grocery store has become the tower of Babel, and consumers need to be linguists, scientists, and mind readers to understand many of the labels they see.” Sullivan did not conclude that policymakers should work to curb this information overload, but rather viewed the problem as largely a lack of sound dietary advice reaching the public: “Vital information is missing, and frankly some unfounded health claims are being made.”<sup>748</sup> The design of what would become the 1993 “Nutrition Facts” label would thus be an exercise in how to cut through that noise and clarify the messages about diet and health.

### **Drawing Things Together**

The challenge the FDA now faced was how to best standardize health information about foods. The FDA didn’t want to tell consumers what to eat, that is, to standardize the foods consumers eat, but rather to standardize the information that consumers get, and thereby shape what they deem to be credible information. To accomplish this, the FDA (in particular the Center for Food Safety and Nutrition) worked with a wide variety of actors: public advocacy organizations (Center for Science in the Public Interest), food industry, public health officials, techno-scientific associations (AOAC International), peer government institutions (USDA), and

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<sup>748</sup> As quoted in Lyons & Rumore, “Food Labeling-Then and Now,” p. 249. Nestle, *Food Politics*, p. 249.

a design firm (Greenfield-Belser Ltd.). In this section, I will provide brief descriptions of each group, their perspective on the new label, and the ways that perspective were subsequently inscribed into the Nutrition Facts design.<sup>749</sup>

Whereas with the standards of identity system the FDA envisioned an “ordinary consumer,” and, with the 1970s nutrition information label, an “informed consumer,” this third period of labeling rests upon the commensuration of healthy consumers. The concept of “commensuration” here comes from Wendy Espeland’s work showing how scientific and legal rationalizations of social disputes transform participants’ positions into measurable, quantifiable equivalences, and in doing so recreates social worlds.<sup>750</sup> In other words, bureaucratic tools intended to make sense of constituent groups play an active role in reconstructing identity.<sup>751</sup> The Nutrition Facts panel can similarly be understood to enable a new kind of food readership in two ways. It adds another platform with which particular “biosocial” groups<sup>752</sup> such as diabetics, heart disease patients, dieters, and other health-conscious consumers can interact. And it extends the increasingly informational experience of eating in modern America, furthering a new civic epistemology embodied in the literate, “active” food consumer.

### *1. Food or drug?: The FDA*

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<sup>749</sup> As much as it is described here as a “trading zone,” it is also interesting to consider the mobilization of resources by different groups around the nutrition labeling as an example of what Latour calls a “parliament of things,” the assemblage of objects or material things (foods, laboratories, paperwork) and subjects or social things (political and scientific discourses and arguments) which constitute the politics of nature and life. Described here are the various institutional and organizational interfaces of engagement which propagated the nutrition label.

<sup>750</sup> Espeland, W. N, and M. Sauder. “Rankings and Reactivity: How Public Measures Recreate Social Worlds1.” *ajs* 113, no. 1 (2007): 1–40; Cf. Epstein, S. *Inclusion: The politics of difference in medical research*. University of Chicago Press, 2007.

<sup>751</sup> This line of analysis follows from Ian Hacking’s notion of “making up people,” the way science configures persons through the classification of groups of people. Hacking, I. “Making up people.” In *The science studies reader*. M. Biagioli. Routledge, 1999, pp. 161–171.

<sup>752</sup> Rabinow, P. “From Sociobiology to Biosociality.” In *The science studies reader*, pp. 407–416.

For the FDA, the Nutrition Facts panel had to solve two problems. First, it addressed the problem of how handle a growing number of products which for either marketing reasons or because of new food technologies, or usually some blend of the two, complicated its institutional mission to distinguish between “food” or “drug.” Here the label worked to standardize market information and centralize its flow. Second, the label can be seen as the FDA’s attempt to be responsive to a variety of special needs groups in the area of public health, and, in this respect, the label’s design was a composite of these interests.

Aggressive and sometimes inaccurate marketing claims in the last few years of the 1980s along with continued scientific uncertainty about some claims created a legal problem: how should governmental agencies regulate food products marketed with health benefits, as foods or as drugs? Companies marketing foods with health claims or drugs with little more medical effect than most foods continually tested this regulatory distinction.<sup>753</sup> As mentioned above, more than any other, the product which first opened the floodgates to health claims on foods was Kellogg’s All-Bran cereal. In 1984, the All-Bran cereal box carried a statement, endorsed by the National Cancer Institute of the NIH, that fiber had health properties shown to be associated with a reduction in incidences of colon cancer. Because Kellogg’s had received NIH approval (behind the back of the FDA), the NIH being a peer government institution with high scientific standing, the FDA’s hands were tied in removing the product from the market as a drug. In the years that followed, more and more companies flooded the market with foods which purportedly prevented disease in an attempt to capture the growing health foods market.

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<sup>753</sup> In practice, the significance of classifying something as a food or a drug lies in how it shifts the regulatory burden of proof in establishing safety from a low safe-until-proven-otherwise burden for foods to a stricter standard for drugs. Roseann B. Termini, “Product Classification Under the Federal Food Drug and Cosmetic Act: When a Food Becomes a Drug,” *Journal of Pharmacy & Law*, Vol. 1, No. 2 (1993), pp. 1-14.



On-label health claims soon tested this ambiguous and permissive regulatory policy. In November 1987 the FDA seized a food supplement product called “Exachol” from its New York manufacturer, Health Club, Inc., on the grounds that its labeling stated Exachol would “prevent cholesterol deposits from forming on the walls of a person's arteries.”<sup>754</sup> Because of these medical assertions, and despite the fact that Exachol was composed of products generally recognized as food, the FDA argued that it should be branded a drug and therefore subject to FDA scrutiny and removal from the market. Two years later, however, the United States District Court for the southern district of New York ruled in favor of Health Club, Inc., citing the similarities between the Exachol case and Kellogg's All-Bran, and the FDA's decision not to sanction Kellogg's.<sup>755</sup> Kellogg's was itself the object of a product seizure by the Texas Attorney General under similar food-drug misbranding rules. In 1989, Kellogg's introduced Heartwise cereal, which contained a substantial quantity of psyllium, the primary ingredient in many laxatives. Because the FDA had not determined psyllium to be GRAS, or “Generally Recognized as Safe,” at the levels found in Heartwise, the State of Texas had it seized as an untested drug. In this case, the United States District Court for the northern district of Texas ruled in favor of enforcement, supporting the Texas Attorney General's motion to remove Heartwise from the market. In the decision, the Court noted that the cereal's labeling, which included a heart symbol and endorsements by a hospital and heart institute, suggested it was intended as a medical cure and therefore legitimately subject to scrutiny as a drug.<sup>756</sup>

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<sup>754</sup> *United States of America v. Undetermined Quantities of an Article of Drug Labeled as “Exachol,” et al.* (1989), p. 4.

<sup>755</sup> *Ibid.* Roseann B. Termini, “Product Classification Under the Federal Food Drug and Cosmetic Act,” *Journal of Pharmacy & Law* (1993), pp. 8-9.

<sup>756</sup> *Kellogg Company v. Jim Mattox, Attorney General of the State of Texas, et al.* (1991). Roseann Termini, “Product Classification Under the Federal Food Drug and Cosmetic Act,” pp. 9-11. Only a year after the decision, the representatives from the Texas Department of Health felt compelled to write a letter to the FDA in response to its proposed label guidelines, commenting on how statements like “contains \_\_\_\_\_” or “contains no \_\_\_\_\_” become an implied claim. FDA Dockets: 90N-0135, Vol. 108, C4147.

By the end of the 1980s the market for health products that bordered between food and drug classifications had expanded dramatically, putting pressure on agencies like the FDA to rework regulatory practices to better rationalize this new health food market. Some of that pressure for stricter labeling standards was even coming from the food industry itself. In 1989, Proctor & Gamble called on the FDA to challenge General Mill's new cereal Benefit and its health claim that eating the fiber in the cereal, also psyllium based, would reduce one's cholesterol levels. In September of that year, the FDA sent a letter to firms indicating that Benefit may have crossed a line, since the agency was "concerned that the potential levels of psyllium consumed by eating Benefit (Heartwise) will result in a psyllium intake equivalent to the levels found in over-the-counter drug products." The letter concluded that the FDA "is of the opinion that no food product in general distribution should be a vehicle for the delivery of a drug in quantity generally recognized as pharmacologically active." As a Consumer Reports article queried, were these cereals "breakfast food or nutritional supplements"? The decision on the Benefit case prompted the FDA to send numerous letters to other companies stating their products needed approval as drugs, and cannot be marketed as food. As discussed below, by the time the NLEA was passed many companies were eager for regulatory clarification on nutrition labeling and health claims, so as to release their products without fear of subsequent litigation.<sup>757</sup>

On the same day that the Nutrition Labeling and Education Act was signed, Dr. David A. Kessler was sworn in as the new FDA commissioner. Just under the age of 40, the youngest commissioner to date, Kessler held both a medical degree from Harvard Medical School and a law degree from the University of Chicago. With both solid medical experience working at Montefiore Medical Center in Bronx, New York, and political experience as a consultant on

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<sup>757</sup> Carole Sugarman, "Cholesterol-Reducing Fiber: Food or Drug?," *Washington Post* (August 1, 1989), p. 6. "FDA May Propose Drug Status for Psyllium-Containing Cereals," *Food Chemical News* (October 9, 1989), p. 22. "Cereal: Breakfast Food or Nutritional Supplement?," *Consumer Reports* (October 1989), pp. 638.

cancer-causing chemicals in food working for Republican Senator Orrin Hatch, Kessler came to the office with high approval across partisan lines.<sup>758</sup> Within his first six months, Kessler confirmed the impression that he would be tough on food label enforcement. One of his first acts as commissioner was to seek the removal of hearts used on food labels that implied the food was good for the heart.<sup>759</sup> In April 1991, the Food and Drug Administration went further, stopping the distribution of a leading brand of orange juice, Citrus Hill Fresh Choice, owned by Proctor & Gamble, and saying the orange juice was falsely labeled as “fresh.” Seizing 2,000 cases of the product from a Minnesota warehouse, the agency contended that calling the juice “fresh” was misleading because it was made from concentrate. Kessler warned, “Today’s action will send a clear message that the F.D.A. will not tolerate such violations of the law.” Referring to the efforts then underway within the FDA to fix food-labeling practices, Kessler proclaimed, “The time has come to end the din of mixed messages and partial truths on food labels in this country.”<sup>760</sup> The incident illustrates Kessler’s confrontational style of leadership at the FDA, but also the FDA’s new mission to rationalize the information on food in the marketplace.

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<sup>758</sup> Past Commissioners > David A. Kessler, M.D.,” Last accessed on May 8, 2011:

<http://www.fda.gov/AboutFDA/CommissionersPage/PastCommissioners/ucm113239.htm>. Kessler described some concern about his partisan ties to Hatch expressed when he was hired, David Kessler, *A Question of Intent: A Great American Battle with a Deadly Industry* (New York: Public Affairs, 2001), pp. 5-6.

<sup>759</sup> Upon taking the oath as commissioner, Kessler said “The FDA is a policeman.” Despite this tough enforcement ethic, some felt the focus on field enforcement would redirect resources away from what many believed to be the FDA’s principal problem at the time, the backlog on drug approvals. Marian Burros, “Eating Well: F.D.A. Plans to Take the Fantasy Out of Food Labels,” *New York Times* (Sept. 18, 1991): Section C, Page 1, Column 6. Gibbons, A. “Can David Kessler revive the FDA?” *Science* 252, no. 5003 (1991): 200.

<sup>760</sup> The FDA had requested that the terms “Fresh Choice,” “Pure Squeezed,” “100 Percent Orange Juice,” “100 Percent Pure” and “Fresh,” and the statements “We pick our oranges at the peak of ripeness, then we hurry to squeeze them before they lose their freshness,” “We Don’t Add Anything” and “Guaranteed: No Additives,” be removed from Citrus Hill because they gave the consumer a false impression of freshness of orange juice squeezed straight after being picked. Warren E. Leary, “Citing Labels, U.S. Seizes Orange Juice,” *New York Times* (April 25, 1991): Section A, Page 18, Column 1. Peter Hutt characterizes this incident as an unfortunate example of how companies can become victims of a changing FDA regime. According to Hutt, Proctor & Gamble in the eighties had pushed the FDA to force competitors to tighten up their claims for “freshness.” When the FDA refused (on the grounds of the *de minimis* principle), Proctor & Gamble moved forward with its own campaign, only to have it attacked by Kessler here as an example to the rest of industry. For a deeper history of the social and technological construction of “fresh,” see Freidberg, S. *Fresh: a perishable history*. Belknap Press, 2009.

The centerpiece of the FDA's new, aggressive initiative to label healthful foods was the development of the nutrition information label. Between October 15 and December 14, 1989 the agency had hosted four one-day public hearings in Chicago, San Antonio, Seattle, and Atlanta. FDA district branches also held consumer exchange meetings in 22 states with a total of about 1,500 attendees.<sup>761</sup> After hearing from over 3,500 people, the FDA's Center for Food Safety and Applied Nutrition (CFSAN) proposed a first draft of the guidelines in the July 19, 1990 *Federal Register*.<sup>762</sup> The first round of proposed rules for reforming food labeling introduced a new system of daily reference intakes for nutrients, proposed guidelines for servings sizes, and made the status for nutrition labeling now mandatory.<sup>763</sup>

Following the release of the proposed guidelines, an even greater flood of letters arrived (addressed directly to Commissioner Kessler) regarding a story in the September 18, 1990 issue of *The New York Times* describing his heroic efforts to toughen food labeling enforcement. The article recounted that Kessler had sent an FDA staff member to a grocery store to see how many food products were either improperly labeled under existing regulations, or would fail to meet the new proposed rules. The staff member returned with 12 bags of groceries. Kessler expressed doubts that the numerous violations of food labeling regulations were simply owing to industry confusion over the federal rules. When asked about the difficulties the FDA foresaw in revising the food label standards, Kessler said "The biggest problem is how to make the numbers useful

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<sup>761</sup> FDA Dockets, 91N-0162, Vol. 1, NAD 1.

<sup>762</sup> Food and Drug Administration, HHS, "Food Labeling; Mandatory Status of Nutrition Labeling and Nutrient Content Revision," *Federal Register* (July 19, 1990) 55: 29487 [Docket No. 90N-0135].

<sup>763</sup> Food and Drug Administration, HHS. 21 CFR Parts 101 and 104, "Food Labeling; Reference Daily Intakes and Daily Reference Values" [Docket No. 90N-0134] 55 FR 29476 (July 19, 1990). Food and Drug Administration, HHS. 21 CFR PART 101 "Food Labeling; Serving Sizes" [Docket No. 90N-0165] 55 FR 29517 (July 19, 1990). Food and Drug Administration, HHS. 21 CFR Parts 101 and 105 "Food Labeling; Mandatory Status of Nutrition Labeling and Nutrient Content Revision" [Docket No. 90N-0135] 55 FR 29487 (July 19, 1990). In the same issue of the *Federal Register* the agency also published "tentative final" rules clarifying the terms used for health claims about cholesterol. Food and Drug Administration, HHS. 21 CFR Part 101 "Food Labeling; Definitions of the Terms Cholesterol Free, Low Cholesterol, and Reduced Cholesterol" [Docket No. 84N-0153] 55 FR 29456 (July 19, 1990).

to consumers who have no idea what 15 grams of fat are. Unless you have some reference point on the label the whole thing is meaningless.”<sup>764</sup> The principal (and most controversial) changes to the nutrition label were thus the ones that would meet the NLEA’s expectation that food labels provide “contextual” information. It would not be enough for nutrition labels to just list nutritional content, but they would need to place the information in the context of a person’s daily diet. Readers who wrote in to the FDA showed enthusiastic support for Kessler’s toughened reform measures.<sup>765</sup>

On November 27, 1991, almost exactly a year after the NLEA was signed into law, the FDA published its slightly revised and much more detailed nutrition labeling guidelines.<sup>766</sup> At a nearly unprecedented length of over 500 pages, the proposed guidelines reflected the Agency’s strengthened resolve to act upon its Congressional mandate and popular support. The guidelines provided 26 new food label regulations including instructions on standard permissible health claims, nutrition information labeling, standard serving sizes, and a new measure for all nutrients called the “Reference Daily Intakes” (RDIs). The announcement also called for further final input from industry, health organizations, and the public, all of which the FDA’s Center for Food Safety and Nutrition would review before establishing final guidelines. Over the next three months the FDA received 40,000 written comments, which would be one of the largest responses ever to an FDA rule proposal.<sup>767</sup> In a speech given two weeks after publication of the proposed guidelines, David Kessler framed the tougher standards and “push to inform” as key to ensuring

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<sup>764</sup> Burros, “Eating Well: F.D.A. Plans to Take the Fantasy Out of Food Labels,” *New York Times* (Sept. 18, 1991): Section C, Page 1, Column 6. Kessler gave Marion Burros the interview in order to make public the close-door disputes between the USDA and FDA over the stricter FDA labeling standards, Kessler, *A Question of Intent*, pp. 58-59.

<sup>765</sup> FDA Dockets, 90N-0135, Vols. 57, 58 & 60.

<sup>766</sup> Food and Drug Administration, HHS, “Food Labeling; Reference Daily Intakes and Daily Reference Values; Mandatory Status of Nutrition Labeling and Nutrition Content Revision,” *Federal Register* (November 27, 1991) 56: 60366-60878 [Docket No. 91N-0384].

<sup>767</sup> Kessler, et al., “Developing the Food Label,” p. 15.

the nation's competitiveness. "Product standards established efficiently and thoughtfully," Kessler argued, "provide incentives to improve quality, adopt new technologies, and meet the needs of consumers. In short, they make an industry more competitive -- not less."<sup>768</sup>

Much of the media coverage for the FDA labeling reforms characterized it as the personal campaign of David Kessler. In fact it was the culmination of work by a small group at the FDA under the supervision of the agency's Center for Food Safety and Applied Nutrition (CFSAN), its director Fred R. Shank and the head of the nutrition department, Edward Scarbrough. The Center approached the labeling reform using a work group approach, dividing up the different kinds of work into teams. One team, led by Virginia Wilkening, a nutritionist in the FDA Division, focused on the nutrition labeling content and drafting the regulations. A second team included nutritionist Youngmee Park and Elizabeth Yetley, Acting Director of the FDA Office of Special Nutritionals, who worked on the new serving sizes. "Descriptors," definitions for the kinds of nutrient content claims or adjectival terms ("lite," "fresh," etc.) to be allowed in the regulations, were handled by Elizabeth Campbell, Director of the FDA Division of Programs Enforcement Policy, with help from Vic Frattali and Jim Taylor.<sup>769</sup> Christine Taylor, Acting Director of the FDA Division of Technical Evaluation, conducted focus groups with help from Elizabeth Yetley, while further consumer studies on formats were run by Alan Levy. Finally, Phil Derfler of the FDA's General Counsel's Office provided legal advice throughout, while Jerry Mande, David Kessler's executive assistant, acted as the Commissioner's liaison to various outside groups.

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<sup>768</sup> David Kessler, "The New, Old-Fashioned FDA," Annual Conference of the Food and Drug Law Institute, Washington, D.C., December 10, 1991.

<sup>769</sup> Compiled from various interviews with former FDA staff, as well as from Judith E. Foulke, "Cooking up the new food label" *FDA Consumer, Focus on the Food Label: An FDA Consumer Special Report*, (May 1993), pp. 15-18.

Even with this team in place, the FDA had to draw upon further human resources to handle the flow of feedback from different interest groups and individuals. From 1990 to 1992, the period in which the nutrition labeling guidelines were open for comment, the agency received over 5,500 written responses. To handle this flood of public and private feedback, the FDA hired an outside firm, a small business company in Maryland, to categorize comments according to their relevance to a particular part of the nutrition labeling law and then score them as supportive or critical. CFSAN also recruited volunteers from FDA regional field offices and labs to help with the work. The goal was to use a crowd-sourcing approach to gain critical feedback and to construct a sensible and defensible food label.

## *2. Democracy in action: CSPI, Phil Sokolof, and AARP*

The FDA's strategy in introducing the new label all along had been to keep the public involved throughout its design and implementation. Among the many groups that wrote in to the FDA, the non-profit organization Center for Science in the Public Interest, led by founder Michael Jacobson, played the most prominent role. The rise of CSPI, a group focused almost wholly on the low-fat diets campaigns and consumer advocacy, illustrate the merger between lifestyle politics more broadly and biosocial identities tied to the diet-heart thesis. CSPI blended scientific messages about diet and health with an explicitly politicized vocabulary of special-interest politics and consumerism. For such groups, the nutrition label was a platform for enacting a new kind of health issues activism in politics.

Throughout the 1980s, despite the reduced attention by the FDA to labeling issues, CSPI had continued lobbying for improvements to nutrition labeling and better enforcement of health claims which distorted public health messages related to chronic degenerative diseases like

cardiovascular disease and hypertension. In particular it launched campaigns to introduce sodium labeling in the early 1980s, and campaigns against the use of tropical oils high in saturated fats (palm and coconut oils in particular) in 1987.<sup>770</sup> (In what would later prove to be an embarrassing move, CSPI promoted products that used *trans* fats instead of saturated fats as a healthier alternative.) In 1981, one of CSPI's staff nutritionists published *Jack Sprat's Legacy*, a book which promoted the diet-heart thesis and argued that important public health messages were being undercut by meat, dairy, and egg industry efforts to sabotage the public's confidence in the new health science.<sup>771</sup> That same year Bruce Silverglade, a lawyer, would join CSPI as its director of legal affairs, and would lead the Center's campaign in the late eighties to lobby legal institutions, specifically Congress for legislation (leading to the 1990 NLEA) and the FDA on enforcement and reforms on nutrition labeling. In 1989, CSPI published the "Food Labeling Chaos Report" to draw attention to the problems at the time with inconsistent policies on food labeling, and to offer possible alternative labeling tools the CSPI had long advocated, such as pie charts and adjectival statements on nutrients like "good source of" or "high in."<sup>772</sup> These publications were often put to double use as both informational pamphlets for distribution to

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<sup>770</sup> The campaign against tropical oils in 1987, which even led to House and Senate agriculture committee hearings, was so successful that countries which relied on exports to the use of such oils invested in public relations campaigns and lobbying government officials in an attempt to restore their products' public image. The Malaysian government, for example, a major exporter of palm oil, directly intervened in public debates in an unsuccessful attempt to counter the CSPI campaign. The PR campaigns were infused with a language of nativism since palm oil imports were competing with the use soybean oils (especially processed, partially hydrogenated versions of soybean oil) used in packaged foods. Schleifer, D. Dissertation: *Reforming food: How trans fats entered and exited the American food system*. New York University, 2010, pp. 70-71.

<sup>771</sup> To give you a sense of the hyperbolic tone of CSPI reports, the preface for *Jack Sprat*, written by Jacobson, described, "the mountain of scientific evidence that indicts the high-fat diet as a major killer, a killer of far more Americans than all our nation's wars combined." As quoted in, Schleifer, Dissertation: *Reforming food*, p. 58. "Center for Science in the Public Interest -- Part II," as found at the CSPI website, last accessed March 12, 2011: <http://www.cspinet.org/history/cspihist.htm>.

<sup>772</sup> Another prominent example was CSPI's "Saturated Fat Attack" booklet published in 1988, which focused on fast food companies and their use of tropical oils instead of low-saturated fat vegetable oils.

CSPI also practiced a more conventional form of public-interest, political advocacy. While Congress was drafting the NLEA in 1989 and 1990, Bruce Silverglade and CSPI kept tabs on individual representatives and senators and how they were likely to vote, and made sure to meet with swing voters so as to move the Congressional vote on specific issues towards adopting CSPI positions on nutrition label format and implementation timeline.



CSPI constituents, to raise awareness, and also reference tools for constructing a literature around an advocacy issue while drawing press attention through their publication.

CSPI used a variety of other advocacy tactics to influence governmental and corporate institutions. Two tactics geared towards pressuring Congress and the FDA rested on mobilizing its members as representatives of general consumer interest in labeling through CSPI constituency surveys and write-in campaigns. CSPI had conducted a survey of 5,715 people through its “Nutrition Action Healthletter” circulated in November of 1989 that asked respondents yes/no and multiple choice questions about what nutrients should be mandatory, who should determine the “serving size” (the FDA or manufacturers), and what kinds of graphical formats (pie/bar charts, percentages, and “traffic lights”) would consumers like to see on the new label. Results of the survey showed very strong support for greater information requirements, FDA oversight of labels, and more prominent graphical displays.<sup>773</sup> Over the summer months of 1990, CSPI also promoted a grassroots write-in campaign. Hundreds of scripted letters reached the FDA all asking for universal labeling of nutrition facts, labels that list “naturally occurring and added sugars separately,” and clarity in using terms like “less cholesterol.”<sup>774</sup>

One of CSPI’s most effective tactics involved shaming companies or the federal government through the Center’s own press platform, the Nutrition Action Healthletter, or even more broadly through its special access to the press as an authoritative and visible advocacy organization. The Center regularly featured in its Healthletter examples of food products with health messages that belied the products’ poor nutrition profile (for example, cereals which featured vitamin content, but ignored or disguised the high sugar content). Silverglade and

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<sup>773</sup> “CSPI Survey & Summary,” FDA Dockets, 90N-0135, Vol. 1, BKG 5.

<sup>774</sup> See, for example, FDA Dockets, 90N-0135, Vol. 9, C115, C160, & C187. Among these campaign letters was even one from US Congressman Pete Stark, FDA Dockets, 90N-0135, Vol. 9, C148.

Jacobson were also regularly quoted in newspaper columns covering issues in food politics, and would drop specific names of companies they singled out as misleading the American public. Occasionally, this case-by-case shaming led to companies removing the product or campaign in question. During the 1989-1990 campaign on nutrition labeling reform, they turned these shaming tactics on the US government. Bruce Silverglade, for example, gained a more public profile when various major US newspapers printed a picture of him holding up a Kellogg's cereal box from Thailand showing that country's superior nutrition label.<sup>775</sup> CSPI also organized a "Food and Nutrition Labeling Group," teaming up with prominent and respected organizations, such as the American Association of Retired Persons (AARP, discussed below), the American Cancer Society, the American Dietetic Association, the AHA, among others. Silverglade drafted letters on behalf of this Group to prominent political figures and Washington power brokers at critical moments in the legislation of the NLEA, drawing on the authority of these groups to paint the picture of a wide public health mandate for CSPI's positions on the nutrition label reforms.<sup>776</sup>

Two other consumer interest groups are worth mentioning partly for contrast, and because of their special and, at times, colorful roles in the popular mobilization around the Nutrition Facts label. The first is the National Heart Savers Association (NHSA), which was literally a one-man show. Phil Sokolof, founder and sole member of NHSA, was a millionaire industrialist from Omaha, Nebraska. Having had a near-fatal heart attack in 1966, he decided in 1984, after the release of the NIH Consensus Conference statement on Lowering Blood Cholesterol to Prevent Coronary Heart Disease, to personally finance a national advertising

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<sup>775</sup> Elaine S. Povich, "New food labeling rules get stuck in states-rights dispute," *Chicago Tribune* (April 23, 1990).

<sup>776</sup> "Food and Nutrition Labeling Group April 18, 1990 Letter to the Honorable Louis W. Sullivan" found in the box "Food Labeling NLEA" in the Center for Science in the Public Interest (CSPI) private archives, Washington, D.C. Robert Earl, at Grocery Manufacturers Association, former American Dietetic Association representative for Nutrition Labeling Coalition, phone interview, Sept. 23, 2009.

campaign against the food industry (in particular the meat industry) by promoting the importance of a cholesterol lowering diet. As nutrition labeling began to gain momentum in the late 1980s, Sokolof bought full-page ads in major newspapers across the United States with headlines such as “Who Wins the War of the Labels?” and “I’m giving away \$1 million... just to show you how great the new food labels really are!” These dramatic antics and his colorful statements against companies like McDonald’s earned him regular spots in newspaper coverage of labeling reform and helped keep the issues visible.<sup>777</sup>

Another important interest group, the AARP, took a much more conventional approach to lobbying, limiting its actions to letters of support to Congress for labeling reforms and extensive comments to the FDA during the proposed rules period. (Though AARP did air an informational TV ad on the NLEA and what it meant for its constituents.) What is interesting about the role of AARP is that seniors were the only special interest group repeatedly identified by former FDA staff as directly and specifically influencing the final format of the nutrition label. Concern for seniors, who were both a strong voting block and a substantial target population for public health, bolstered the agency’s resolve in prioritizing readability and font size, despite intense pressure from companies to compromise and allow for flexibility.

CSPI’s role in the nutrition labeling debates illustrates the changing nature of consumer politics. Whereas in the 1960s and 1970s groups such as the Federation of Homemakers lobbied for better labeling through a (largely middeclass) class-based language of food shopping, by the 1990s CSPI and other groups saw their consumer constituents through a language of healthy lifestyles. In this way, CSPI’s actions illustrate the ascent of a lifestyle politics in America, where groups attached themselves to scientific languages for risk and used specific public health issues

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<sup>777</sup> William Robbins, “One Man With a Purpose Takes on Heart Disease,” *The New York Times* (22 July 1990), p. 16.

to mobilize constituents. For such issues-driven groups, nutrition labeling became a platform for gaining visibility and also showing themselves to be actively pursuing a public agenda in contradistinction to an overly powerful private industry influence. This meant that CSPI and NHSA adopted tactics which would capture media attention, choosing visible, prominent targets such as cereal and fast food companies, and reduced their nutrition and health messages to simple risk statements, such as “saturated fats are bad.” These tactics helped them mobilize an interest group base of risk-conscious consumers skeptical of Big Food.

### *3. A uniform national food market: The food industry*

It is difficult to talk about “the food industry” as having a unified, shared interest, given that it includes groups of such different types, regional production concerns, and contradictory economic interests such as the Institute of Shortening and Edible Oils, the Florida Citrus Commission, Hershey Food Corporation, the National Coffee Association, Kraft General Foods, Slim-Fast Food Company, New Mexico Cattle Growers’ Association, Utopia Spring Water, Burger King Corporation, ConAgra Frozen Foods, and the Grocery Manufacturer’s Association.<sup>778</sup> The only issues upon which most of the food industry agreed were on the need for federal preemption (consistency across U.S. states) and, more importantly, the need to push back the effective date for manufacturer compliance.

The issue of preemption arose out of industry concerns over new legislation in the state of California. In 1985, David Roe of the Environmental Defense Fund, Carl Pope of the Sierra Club, and Barry Groveman, an environmental prosecutor, authored a ballot initiative titled, “Safe Drinking and Toxic Enforcement Act,” which stringently limited the toxic discharge of

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<sup>778</sup> All of these groups, and many, many more, wrote letters, comments, and petitions to the FDA on its 1990s food labeling reforms. This vast diversity of concerns is regularly ignored by critics and “reduced” to a single label, “food industry,” in a manner that defeats real analytic scrutiny.

carcinogenic chemicals into the state's drinking water and required businesses to provide warning labels or signs whenever their activities or products exposed people to toxic environments. The statute placed the burden on manufacturers to prove that discharged chemicals did not pose a "significant" danger. The labeling clause in "Proposition 65," as it came to be known, particularly frightened industry since it required the following statement to be included on any such chemically risky goods:

"WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE  
OF CALIFORNIA TO CAUSE CANCER."

The ballot was approved by California voters in 1986 and went into enforcement in February 1988. The statute quickly became the object of attacks by those who claimed it was not "sound science." They argued it wouldn't prove effective as a tactic to improve "information economics," since it didn't provide adequate information to the consumer about the specific risks, and might even confuse consumers if the statement appeared for some toxic chemicals (named in the ballot) but not others.<sup>779</sup>

Industry groups quickly framed Proposition 65 as introducing the threat of a patchwork regulatory system in which each state had its own differing labeling laws and industry was left with the costs of having to tailor its products to fifty different jurisdictions. Industry began to mobilize around the principle of federal preemption, that federal laws once passed override state laws, and many trade groups saw the congressional debates around the NLEA as an opportunity to potentially overrule California's threatening legislation at the federal level. In the summer of 1990, as the two houses of Congress were debating specific provisions of the legislation, several

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<sup>779</sup> Some also suggested it was merely a political vehicle to help Democrats in an election year. Stenzel, P. L. "Right-to-Know Provisions of California's Proposition 65: The Naivete of the Delaney Clause Revisited." *Harvard Environmental Law Review* 15 (1991): 493. Barsa, M. "California's Proposition 65 and the Limits of Information Economics." *Stanford Law Review* 49, no. 5 (1997): 1223-1247. Kizer, K. W, T. E Warriner, and S. A Book. "Sound science in the implementation of public policy." *JAMA: The Journal of the American Medical Association* 260, no. 7 (1988): 951-955.

prominent trade organizations offered to throw their support behind nutrition labeling at the federal level so long as the new bill removed the passage which gave states the authority to adapt provisions to their local legislative requirements.<sup>780</sup> While consumer and environmental groups cried foul and lobbied to keep this states' rights clause in, most congressmen, as well as the FDA, were satisfied with the compromise. NLEA and the FDA's nutrition labeling rules would, in principle, preempt local state laws on nutrition labeling in the interest of creating a uniform national market for food labeling. (If this appeared to be a victory for industry, in the long run preemption did little to help businesses with Proposition 65. Since the NLEA was construed as a nutrition and health bill, and not as a toxic chemicals bill, the legislation was interpreted not to affect local state food safety provisions, only nutrition labeling.)

Another issue around which industry rallied together was the need for a time extension. In the 1990 NLEA, Congress provided only six months from the date of the FDA's rules for industry to implement nutrition labeling unless businesses showed that a severe economic hardship would be incurred. The issue of the time extension and economic hardship would dominate the submitted comments to the FDA from 1990 to 1992. A good example of how industry mobilized around this topic can be seen in the response of the National Food Producers Association (NFPA). The NFPA dedicated a team of five staffers, headed by Regina Hildwine, to addressing the FDA's new labeling provisions. Team members sent mail, held meetings, made conference calls, circulated draft documents and met with outside counsel.

The NFPA also compiled a "regulatory impact analysis" by "survey[ing] our members [to] come up with data that would support an argument to extend the implementation period for as long as the statute would allow." They were able to document with numerical data how, in

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<sup>780</sup> W. John Moore, "Stopping the States," *National Journal* (7/21/90), pp. 1758-1762.

Hildwine's words, "the longer implementation period that you allowed for changing to the new nutrition label the better that the cost of that event would diminish." In the end, the NFPA team submitted what was "Essentially a book of comments" to the FDA.<sup>781</sup> The hardships described in most of the comments were industry's need to, 1) compose nutrition profiles for its many different kinds of foods (discussed below), and 2) redesign and print packages so that they incorporated the new standard label. Not discussed as openly, but enormously important in terms of both costs to industry and impact on consumers, was the fact that companies were reformulating their product recipes to minimize the nutritional sticker shock of the label on products which did not previously carry one.<sup>782</sup> The FDA eventually accepted this appeal from numerous trade groups, and even though final rules were published in late 1992, industry was not required to fully comply until the summer of 1994. By then companies had almost four years to adapt their product lines for the new labeling regime.

Beyond this broad consensus, industry reaction was largely and not surprisingly driven by self-interest. (Although, again, it is difficult to identify the precise self-interest of companies with broad arrays of food products such as Kraft General Foods, which had subdepartments that

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<sup>781</sup> Many of the industry comments submitted could easily be described as a book. What's more, for some companies, different departments (such as the legal department versus the nutrition department) submitted separate book-length comments. Regina Hildwine, senior director of food labeling and standards at the Grocery Manufacturers Association, phone interview, Sept. 29, 2009.

<sup>782</sup> This reformulation of products between 1990 and 1994 seems to be an open secret. So far as I can tell, it was not discussed in public debates about the costs of NLEA or the FDA regulations, but many of the people I interviewed quickly pointed it out, and one need only scan the ads of food technology journals at the time to see that reformulation technologies and goods were of sudden interest to food processors.

An excerpt from my interview with Regina Hildwine provides some insight into the way companies were discussing this behind closed doors:

RH: "Because there were actually companies that said, well, we're looking at reformulation because there is no way on earth that we're going to be able to publish those numbers. We're not going to put those numbers... you know, what they are now. We're not going to put them on our packages."

XZF: "Are you in a position where you can tell me a company or a product?"

RH: "No, I can't tell you a company or product. I cannot do that. I can tell you that it was more than one company."

Regina Hildwine, senior director of food labeling and standards at the Grocery Manufacturers Association, phone interview, Sept. 29, 2009.

benefited and others that lost from the introduction of the label.) The food industry's response to the mandatory labeling was, not surprisingly, resistant. Certain companies, especially those that sold snack foods, found the new mandatory guidelines onerous, particularly when forced to put them on products that were clearly unhealthy and not intended to balance one's diet. Coca-Cola Company, in a position common among soft drink industry, complained that the nutrition labels should only be for core dietary foods, not fringe foods like soda. In a response letter to the FDA, Coca-Cola argued that consumers were cognizant of the lack of health benefits of soda and that it was therefore unnecessary to include all of its nutrition information on the can:

[N]ot all foods play the same role in the diet and, therefore, the nutrition labeling required can and should be adapted to the nature of the labeled food. Accordingly, soft drinks, which are consumed on a variety of occasions throughout the day, which do not offer or purport to offer any meaningful nutritional contribution but which do provide pleasant testing [sic] refreshment and which are recognized as such by their consumers need not be labeled in the same fashion as foods which are consumed primarily at meal times and which offer and are represented as offering specific nutritional benefits to the consumer who purchases them for that purpose.<sup>783</sup>

In other words, Coca-Cola interpreted the NLEA mandate for more comprehensive nutrition labeling to extend only to the products that compose a person's core diet, not “extras” like soft drinks. While the reasoning was transparently self-serving, Coca-Cola's complaint underscored the extent to which a standardized nutrition label would gloss over culturally significant, product-specific connotations such as “junk food” or a “proper” meal.<sup>784</sup>

#### 4. “*Treating sick populations*”: *Public health and the commensurated consumer*

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<sup>783</sup> FDA Dockets, 90N-0135, Vol. 23, C849.

<sup>784</sup> What is striking is how much Coca-Cola's classification of core versus fringe food resembles Mary Douglas's famous discussion of a proper meal. Mary Douglas. “Deciphering a meal.” *Daedalus* (1972): 61–81.



The Nutrition Facts panel reflected a significant expansion of the emerging paradigm that *all* foods have nutrition and health properties. The label was no longer voluntary. The FDA now required nutrition labels not only on foods sold and marketed for health purposes, but on every packaged food in the United States. From a sociological perspective, this commonplace of Nutrition Facts arguably has a hegemonic effect. The label catapults the language of nutrition science into new contexts; it brings it into every American household. Whether or not a consumer is interested in knowing the nutritional properties of a food, the label indicates to her that all foods have such properties and that the government believes them to be important enough to take up space on the package.<sup>785</sup>

The new label furthermore embodied a translation in that it no longer merely displayed content declarations but now encoded recommendations. Unlike the “Nutrition Information” label of the 1970s, a quantitative declaration of nutritional content, the “% Daily Values” of the Nutrition Facts panel was an indication to consumers of how much of that food (what percent out of a daily total) they ought to eat per day if they were an “average” American consumer. Moreover, regulators used population-level data as the foundation to design this tool for individualised recommendations. This leads to the problem in public health that epidemiologists call the “paradox of prevention” – when a public intervention “brings large benefits to the community [but] offers little to each participating individual.” For example, encouraging U.S. citizens to eat less saturated fat might reduce a particular individual’s risk of cardiovascular disease very little, while at the population level many fewer cases of heart disease would probably occur. The label therefore embodied epidemiologists’ concern with collective risk—

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<sup>785</sup> It also allows for novel marketing comparisons. For example, you can now have foods that are “defined by a lack” (to use Jacques Lacan’s expression), which opens up new kinds of product competition, such as between water and diet soda. Both, at least as seen through the Nutrition Panel, are now “substantially equivalent.” Cf. Noguez, E. “Measuring the differences between two ‘identical’ products: The case of generic drugs in France.” SASE Conference, 2005. Available online at: [http://www.sase.org/oldsite/conf2005/papers/noguez\\_etienne.pdf](http://www.sase.org/oldsite/conf2005/papers/noguez_etienne.pdf).

what one scientist called “treating sick populations not sick individuals”<sup>786</sup>—and reflected a utilitarian approach to the problem of how to move from aggregate statistical data about population risk to an inference about individual risk.<sup>787</sup>

This shift to prescriptive labeling reflected a change in how the FDA imagined its readers. No longer were FDA staff solely or mostly concerned about the housewife. FDA press releases and articles about the new label in the *FDA Consumer*, the agency’s public dissemination journal, described a heterogeneous mix of constituents and reflected a broad awareness and anxiety about the dissolution of the structured family meal in favor of snacking and convenience eating. Issues such as childhood obesity, higher incidences of hypertension and diabetes among blacks and Hispanics, and an emerging awareness that obesity was as much or more a problem for working classes than for the affluent, all served to erode the old framing of negative nutrition as a middle-class problem. (No longer did people refer to cardiovascular disease as a “disease of the affluent.”) These new discourses about the burden of disease and its socioeconomic contours registered a transformation in the imagination of the consumer-patient.

The label embodied this new calculation of risk, but also commensurated many different groups and health concerns into a single information panel. The commensuration occurs at several levels. First, the Nutrition Facts label reflects a composite of constituent interests. The label’s content responded to the concerns of a mix of special interest groups: seniors (for whom the FDA put in a minimum type font requirement), mothers (for whom the vitamin thresholds were set high), aging men (the imagined target population of concern for heart-disease and fat

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<sup>786</sup> Rose, Geoffrey, “Sick individuals and sick populations,” *International Journal of Epidemiology*, Vol. 14 (1985): 32–38.

<sup>787</sup> Elsewhere I have discussed the ethical challenges that nutrition labeling, and food labeling in general, poses for social reform movements. X. Frohlich, “Buyer be-aware: The ethics of food labeling reform and ‘mobilizing the food consumer’,” in *Global food security: ethical and legal challenges*, Carlos M. Romeo Casabona, Leire Escajedo San Epifanio and Aitziber Emaldi Ciri6n (Eds.). Wageningen Academic Publishers, 2010, pp. 221-227.

consumption), and hypertensives and diabetics (with sodium and sugars).<sup>788</sup> In this way the label's design reflects how the FDA incorporated comments from consumers and stakeholders. The issue-ranking system used by the firm the FDA hired to categorize public comments helped the FDA staff to incorporate popular concerns, including ones they may not have foreseen, in a systematic manner that did not change the basic institutional framing of the problem.

Second, the perfect reader of the Nutrition Facts panel wasn't an individual but rather a population of readers. The data used to inform the reader came from National Dietary Guidelines intended to shape the American population as a whole. Among the most controversial of the FDA's measures was its decision to replace the Recommended Dietary Allowances (RDAs) with its new RDIs, Reference (or Recommended) Daily Intakes. The RDAs, the original nutrition measuring system, had been set by the NAS Food and Nutrition Board to address nutritional deficiencies, and specifically deficiencies in vitamin consumption. They were set at population-based levels "adequate to meet the known nutrition needs of practically all healthy persons."<sup>789</sup> The FDA's newer measure, RDIs, utilized the RDAs to determine what the *average* American's minimum vitamin needs would be. The end result on labels would be a general lowering of the quantity recommended for daily consumption, an acknowledgement of the fact that nutrition deficiency was no longer a concern for the vast majority of Americans.

As if this "alphabet soup" was not confusing enough, the FDA intended to combine the RDIs with the "Daily Reference Values" (DRVs) in order to establish "Daily Values" (DV) for all nutrients, which it could then require on all labeling. The Daily Reference Values were introduced for the nutritional content (specifically total fat, saturated fat, cholesterol, total

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<sup>788</sup> The choices of what nutrients were not included is also indicative of the public health priorities at the time. Potassium was not listed, despite its role in kidney failure. Vitamin B was dropped from the mandatory vitamins listed since there were no incidences of a deficiency disease related to it then. Virginia L. Wilkening, formerly worked in FDA CFSAN in charge of nutrition labeling (retired), phone interview, Sept. 24, 2009.

<sup>789</sup> Kessler, et al., "Developing the Food Label," p. 16. Nestle, *Food Politics*, pp. 306-307.

carbohydrate, dietary fiber, and sodium) that was not covered in the RDAs. The FDA derived these quantities from the recommendations of three advisory reports: the Institute of Medicine's 1989 *Diet and Health*, a 1990 expert panel report of the NIH's National Cholesterol Education Program, and the 1988 *Surgeon General's Report*. Unlike the RDIs, DRVs were set at maximum intake levels. Combined, RDIs and DRVs provided the recommended quantities for *all* mandatory nutritional disclosures. The FDA decided to label them both under "Daily Values" to avoid confusing the consumer.<sup>790</sup>

Several health organizations, not to mention the dietary supplement industry, remained concerned over the possible confusion this shift from RDAs to RDIs might cause. The American Medical Association criticized the FDA proposal to use RDIs as a usurpation of other expert and regulatory agencies' authority. The AMA argued that the shift amounted to the "replacement of a scientifically-derived standard, the RDA, with a mathematically-derived variant." In particular, the association worried that, "with some numbers posing as minimums and others intended to be maximums and all numbers presented on the label without distinction," consumers would be poorly equipped to determine their individual needs in each category.<sup>791</sup> The American Dietetic Association agreed that "[d]ifferentiation is needed among referenced values for those nutrients to be minimized versus those to be maximized," but it otherwise supported the FDA's changes.<sup>792</sup> The Daily Values information was designed to play a central role in ensuring that consumers could integrate food products within a daily diet, and despite expressed concerns with the nutrition label's internal consistency, the FDA chose to keep it as proposed.

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<sup>790</sup> Kessler, et al., "Developing Food Label Policy," p. 16.

<sup>791</sup> American Medical Association, "Statement to the U.S. Department of Agriculture and the Food and Drug Administration," (January 31, 1992), FDA Dockets, 90N-0135, Vol. 108, TS33, pp. 3-4. The American Heart Association also advised the FDA against using the new RDI system, though it also acknowledged the weaknesses of the old USRDA system. FDA Dockets, 90N-0135, Vol. 73, C2832, pp. 3-5.

<sup>792</sup> "Comments of the American Dietetic Association on the Food and Drug Administration's Proposed Rule on Food Labeling," (February 24, 1992) FDA Dockets, 90N-0135, Vol. 90, C2992.

Third, the label averaged out consumers' needs, favoring practicality and utility over accuracy and the accommodation of individual variation. The FDA's initial decision to calibrate the daily values to a 2,350-calorie diet generated a lot of criticism. At stake were two related, but distinct questions: first, who is the assumed reader of the nutrition information, and second, who is the target audience for nutrition education? Health and consumer-advocacy groups like the Center for Science in the Public Interest, American Heart Association, and the American Dietetic Association were warily tolerant of the use of daily value percentages, but strongly opposed the choice of basing them on the 2,350-calorie diet. The FDA had chosen the 2,350-calorie figure because it was the population adjusted mean of the recommended energy allowances for persons four or more years of age. The figure ignored vastly different energy needs between genders—the average male's daily-recommended level was around 2,500 – 2,700 calories, and the average female's 1,800 – 2,000 calories—and across age groups, where children ages 4 to 14 usually only need on average around 2,150 calories. Critics argued that setting the figure so high above the needs of the average women (the primary shoppers) and elderly men (a target demographic group for heart-disease) would encourage continued over-consumption by the American public. The ADA proposed a compromise baseline of 2,000-calories. Use of this lower diet target would help to offset the rising rates of obesity and, the ADA argued, “Use of 2000 would also lower the likelihood of it being misconstrued as an individualized goal since a round number has less implied specificity.”<sup>793</sup> The FDA would ultimately accept this reasoning and replace DVs based on the 2,350-calorie diet with a 2,000-calorie one.<sup>794</sup> Mike Taylor also later boiled it down to a

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<sup>793</sup> “February 24, 1992 Letter from the American Dietetic Association,” FDA Dockets, 90N-0135, Vol. 90, C2992.

<sup>794</sup> Kessler later described this battle over a 2,000-calorie baseline versus 2,300 calories as one waged principally against the USDA, who preferred the higher threshold and was generally pro-fat (discussed below). Kessler wrote that the definitive evidence that settled the matter for him was the discovery that McDonalds claims of healthfulness on tray liner cited the National Research Council's nutrition guidelines at a daily intake of 2,000 calories. David Kessler, *A Question of Intent*, pp. 56-58. Kessler, et al., “Developing the Food Label,” pp. 16-17. In fact, the

basic public health judgment: “you could do no harm to any consumer by providing them a reference that would cause them, if they took it literally, to shoot low on fat. [...] But you could do significant harm if you misled consumers to consume more fat than they ought to be consuming.”<sup>795</sup>

Finally, unlike the 1970s “nutrition information” label, the Nutrition Facts panel was a government-endorsed recommendation. This time the label was explicitly an educational tool, not simply an information device. The FDA staff was no longer satisfied with simply meeting consumer wants. Edward Scarbrough, who was director of the FDA office in charge of nutrition labeling during this period, describes three kinds of consumers that they had in mind when designing the label: 1) “information seekers,” often patients, who actively sought health information, and were able to use any format of label no matter how much “information overload” they were exposed to; 2) people who would not read the label, no matter what the FDA did; and 3) a “middle group” of consumers with some interest, but not dedicated readers. The FDA staff was mostly concerned about targeting this middle group, with the hope of steering them towards taking a more active interest in the nutritional makeup of their food purchases.<sup>796</sup>

In 1991, the FDA chartered consumer studies of the proposed nutrition labels, to see how consumers performed on basic tasks of nutrition comprehension versus consumer preferences for different label formats. The studies found that consumers preferred the original label, revealing a status quo bias. However, on performance tests, consumers scored just slightly better with the

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nutrition labeling rules have a certain amount of flexibility built into them to accommodate manufacturing difficulties in getting exact uniformity in food product. For example, on both the old and the new nutrition labels the RDAs and Daily Values only had to be accurate within +/- 20%, except for products enriched by a predetermined amount of vitamins. Carole Sugarman, “Trial and Error Behind the Label,” *Consumers' Research Magazine* Vol. 74, Issue 4 (April 1991): 29-32.

<sup>795</sup> Mike Taylor interview, p. 21

<sup>796</sup> F. Edward Scarbrough, phone interview with author, Sept. 30, 2009.

new label.<sup>797</sup> Industry cited these studies as evidence that the FDA ought to keep the original nutrition information label, arguing that information labeling was about giving consumers what they want to know. But since the FDA's goal in the 1990s was not simply to inform consumers, but also to educate them, the FDA responded that performance was more important than consumer preference. The purpose of the new nutrition label this time was to reshape consumer preferences so that their decisions would lead to healthier lifestyles.

### *5. Measured meals: The AOAC*

If nutrition facts now provided a platform where public health advocates could engage the public with their calculative language for population health, it also posed a technical challenge for how to measure and quantify the many and dramatically different kinds of foods that were now required to have a nutrition profile. One group of technical experts, who largely worked backstage but would prove vital to the implementation of nutrition labeling, were the analytic chemists, and especially the Association of Official Analytic Chemists (AOAC) who developed the standard methods to evaluate label claims. The nutritional quantifications and calculations they developed provided a new language of equivalences between food products—opening up comparisons between fatty foods, or starchy foods, or carbohydrate-rich foods—for foods that otherwise had very different production histories and cultural contexts.

The AOAC's primary objective is “to obtain, improve, develop, test, and adopt uniform, precise, and accurate methods for the analysis of foods, vitamins, food additives, pesticides, drugs, cosmetics, plants, feeds, fertilizers, hazardous substances, air, water, and any other

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<sup>797</sup> Alan S. Levy, Sara B. Fein, & Raymond E. Schucker, “A Study of Nutrition Label Formats: Performance and Preference,” FDA Dockets, 91N-0162, Vol. 1, RPT1, pp. 19-20. Levy, A. S., and S. B. Fein. “Consumers' ability to perform tasks using nutrition labels.” *Journal of Nutrition Education*, 30, no. 4 (1998): 210–217. Levy, A. S., S. B. Fein, and R. E. Schucker. “Performance characteristics of seven nutrition label formats.” *Journal of Public Policy & Marketing*, 15, no. 1 (1996): 1–15.

products, substances, or phenomenon affecting the public health and safety, the economic protection of the consumer, or the protection of the quality of the environment.”<sup>798</sup> While some trace the field’s roots back to Pliny the elder, and his early tests of food adulteration, most identify the modern origins of the profession with the 19th century German-trained scientist, Frederick Accum, who in 1820 published a treatise in England on chemical methods of analyzing adulteration of food and drugs. Importing Accum’s ideas to the United States, Lemuel Shattuck published a similar treatise in 1850 recommending government regulation of the food and drug supply as being critically important to the protection of the public’s health. One of the most important early advocates of chemistry’s importance to the regulation of food safety in America was Harvey W. Wiley. Wiley played an important role in the passage of the 1906 Pure Food and Drug Act and the early years of the FDA, and was also founding president of the Association of Official Agricultural Chemists. The AOAC was initially organized, with the USDA as its sponsor, by chemists working in public positions interested in studying the methods used to evaluate food or drug adulteration and other technical tests of value for regulatory agencies.<sup>799</sup> When the FDA moved out of the USDA in 1927, the AOAC’s sponsorship passed to the FDA. In 1979, the AOAC became a wholly independent organization.

One of the Association’s early concerns was the introduction of a set of shared standards for common food additives and pharmaceutical ingredients, as well as methods of analysis which would serve to standardize practice and make enforcement consistent among chemists working for different government agencies. For the profession, verifiability was the principal test of enforceability, and it thus prioritized “promot[ing] uniformity and reliability in the statement of

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<sup>798</sup> As stated in its journal, the *Journal of Association of Official Analytic Chemists* in 1985.

<sup>799</sup> In addition to food adulteration, early AOAC members were concerned with the precise measurement of product weights, often for taxation and importation reasons. Warner, D. J. “How Sweet It Is: Sugar, Science, and the State.” *Annals of science* 64, no. 2 (2007): 147–170. On the AOAC’s changing name, see Op cited, Chapter 1, #17.



analytic results.” In 1885, Wiley oversaw the publication of the “AOAC Methods of Analysis,” a 49-page bulletin of methods for analyzing fertilizers; starting in 1912, the AOAC began publishing the *Official and Provisional Methods of Analysis of the AOAC*. Since the late 19th century, the AOAC had lobbied to create a standard reference codex for food additives analogous to the U.S. Pharmacopeia for drugs. In the 1960s, in the wake of the Food Additive Amendments, AOAC members worked with the Food and Nutrition Board of the NAS to develop the Food Chemical Codex, a list of all standard food chemicals and additives with their analytic profiles. (These chemical profiles were different from food standards, which were just common recipes.)<sup>800</sup> In 1985, addressing the AOAC at the Association’s one hundredth anniversary, Peter Hutt could justifiably say that “the history of food and drug regulation during the past 20 centuries has been the history of the development of analytic chemistry.”<sup>801</sup> Much of modern food law practice rested upon the development of standard tests that provided a legally defensible framework for verifying product safety. To be regulated, food need to be verified, and standards for verification were determined by the AOAC’s community norms about what were the correct analytic tests to use.

The FDA 1990s nutrition labeling rules designated the AOAC methods as the tests the agency would use to evaluate the accuracy of companies’ product labels. The AOAC thus had to mobilize its community to establish agreement on what those methods should be. The Association created a Task Force on Methods for Nutrient Labeling Analysis, which identified five steps: 1) identify and publicize currently available AOAC methods, 2) identify methods

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<sup>800</sup> AOAC webpage on “History,” last visited February 16, 2011: <http://www.aoac.org/about/History.htm>. Larrick, George, “FDA Reports to the Association of Official Agricultural Chemists” found in RG 88: Division of General Services: General Subject Files, 1938-1974: 1955: 45.8-45.9A: Box 1914, of NARA.

<sup>801</sup> Hutt, P. B. “Importance of Analytical Chemistry to Food and Drug Regulation, The.” *Vand. L. Rev.* 38 (1985): 479. Hutt took the opportunity to also criticize another distinctive feature of the Association’s membership rules – that only public, nonindustry chemists could attain full membership. Industry scientists were limited to “associate membership.” Hutt argued that science recognizes no such boundaries. These artificial distinctions are both insulting and unnecessary.”

needing revision, 3) identify nutritional analyses in need of validation and official action by AOAC, 4) develop , and 5) identify and publicize “standard reference materials” (SRMs) to be used to calibrate nutrition analyses in food labs across the country. Among the problems identified were the “lack of a single, clear concise definition for fat as an analyte” and the difficulty that food moisture posed for consistent analysis across food products. In 1992, the AOAC Task Force and FDA settled upon a single definition for total and saturated fats, which the FDA published in the Federal Register. In 1993, the AOAC published a handbook, *Methods for Analysis for Nutrition Labeling*, to serve as an industry reference. One of the more interesting moves by the AOAC Task Force was to create a matrix which divided all foods into twenty food groups by “fat (high or low), moisture (high or low), protein (high or low), and carbohydrate (high or low).” The subcommittee ultimately chose to drop moisture since the “moisture level of a sample can readily be adjusted by drying or adding water,” and settle upon a “Food Triangle” matrix with nine categories. All a lab would need to reproduce the standard AOAC measurements for nutrient analysis, in principle, was this matrix, used to identify the appropriate analytic method, reference samples (from either the National Institute of Standards and Technology or the European Community Bureau of Reference), and the AOAC Methods book, though they might perhaps also need to consult the USDA Human Nutrition Information Service’s (HNIS) *Handbook No. 8* (the “red book”) database listing common foods and nutritional components.<sup>802</sup>

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<sup>802</sup> Sullivan, D. M, and D. E Carpenter. *Methods of analysis for nutrition labeling*. Association of Official Analytical Chemists Inc. (AOAC), 1993, see especially Chapter 3, “Report of the AOAC INTERNATIONAL Task Force on Methods for Nutrient Labeling Analyses,” pp. 33-68, and Chapter 7, “Reference Materials,” pp. 111-122. See also, Ralph Shapiro, “Analytic Methods and Databases for Nutrition Labeling,” in Shapiro, R. *Nutrition Labeling Handbook*. CRC Press, 1995, pp. 551-585. “AOAC Lists Methods of Fat, Calls for One Definition,” *Food Chemical News* (September 14, 1992), pp. 52-53. Jonathon W. DeVries and Amy L. Nelson, “Meeting Analytic Needs for Nutrition Labeling,” *Food Technology* (July 1994), pp. 73-77.

This sudden demand for nutrition profiling also created a market for private laboratories offering their services to analyze and generate nutrition facts for food companies scrambling to meet the FDA's deadline. One industry assessment estimated that there were over 257,000 products that would need new labels, and for which nutrient profiles would have to be determined. To meet this need, and profit from the new regulations, analytic chemistry laboratories ran ads in food trade journals asking, "Are you label-ready?," offering their services to companies that didn't have adequate in-house labs to meet the timeline for the nutrition label. One article in 1992 recounted a joke by one private lab employee that they called the NLEA the "National Laboratory Employment Act."<sup>803</sup> Over the course of the 1990s the USDA HNIS developed the *Handbook No. 8* List database and made it available online through new computing technologies so that companies could access the nutrition profiles for basic ingredients and foods there, and add their own food products' profiles to the database.<sup>804</sup> Indeed, today it is common for many companies to simply enter the ingredient or recipe profile of their processed food into a database and generate a nutrition profile for the label, thus avoiding the expense of laboratory measurement.

The role of quantification in the story of the nutrition labeling raises at least two broad concerns worth mentioning here. The first addresses the history of this profession as a bureaucratic science, and the nature of the relationship between techniques of quantification and the State. The AOAC has carved out a function in society solely from the State's interest in producing "legible," "objective" data about its otherwise heterogeneous food supply. In this respect the AOAC fits within a longer history of what James Scott describes as the state's tactic

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<sup>803</sup> Eben Shapiro, "Food Labs Gaze Hungrily at Potential in Labeling Rules --- Manufacturers May Grumble, but Scientists See Feast of New Business," *Wall Street Journal* (10 Dec. 1992), p. B2. Carole Sugarman, "Burger in a Beaker: The Inexact Science of Testing for Nutrition Information," *Washington Post* (Sept. 12, 1990), p. E1, E5.

<sup>804</sup> F. Edward Scarbrough and Mary M. Bender, "FDA Policy on the Use of Databases for Nutrition Labeling," *Food Technology* (May 1995), pp. 142-145.

of rendering heterogeneous subjects, in this case food and agriculture, legible and portable, so as to facilitate governance from a distant centralized authority.<sup>805</sup> Analytic chemistry is marshaled for reasons of state expediency to handle the large, complicated, impersonal market, favoring mechanical trust over interpersonal, local trust. Yet, (delocalized) expediency here was not only working in the interest of the state. The AOAC, the FDA, and other public health officials saw themselves as acting in the interest of their public by creating a more rational market, not simply centralizing command and control.

A second related concern addresses the publics that this expertise sought to reach. Many scholars, in an effort to explain why it is (or why they believe it to be) that nutrition has failed to motivate the public to eat more healthfully, have identified the alienating and abstract language of quantification as the culprit, often pitting it as an expert language against “vernacular” languages for food.<sup>806</sup> Here I want to briefly address one specific version of this argument, which I believe flattens out quantification as a discourse, ignoring the specific functions of the standardizing methods and instruments I have described in this section in transforming food as an object. Jessica Mudry, in her analysis of USDA's nutrition science and education, describes nutrition as a rhetoric, “eating by numbers,” and argues that the problem with nutrition is that it is a nonnative and impersonal language for food. She makes a compelling case about how these translations efface a food's place and history (though much of that effacement occurs not through language, but through the industrial processing it undergoes before being labeled).<sup>807</sup> But Mudry fails to recognize how the analytic language is more than just “rhetoric” in the sense of a language, but also a “platform” for combining measurement and instrumentation with the

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<sup>805</sup> Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*. 1999.

<sup>806</sup> One variety of this critique is to focus on how nutrition quantification is a form of reduction. This is the critique of Pollan and Scrinis, what they label nutritionism, which I have discussed briefly in Chapter 4 and will return to in the Conclusion.

<sup>807</sup> Mudry, J. J. *Measured meals: nutrition in America*. State Univ of New York Pr, 2009.

accounting language of diet and health. Such accounts therefore do not pay attention to the specific kinds of novel (if problematic) exchanges that nutrition measurement makes possible.<sup>808</sup> These scholars also do not acknowledge the popular appeal of numbers (at least for the American public) as a seemingly objective strategy to inform and equip consumers without (what is often seen to be) unsolicited editorializing.

#### 6. 'A government brand': Greenfield/Belser Ltd

More so than with the previous nutrition label, design was a central concern of the Nutrition Facts panel. The FDA wanted the label to stand out and stand apart from the colorful art on the rest of the food package. To accomplish this task, Associate Commissioner Sharon Natanblut put David Kessler in touch with Burkey Belser, President of Greenfield/Belser Ltd. design firm.<sup>809</sup> At the time Greenfield/Belser Ltd. worked mostly on professional services design, but through that work had been called upon by the FTC to design the energy guide that is on all major appliances. Kessler asked the firm to help the FDA with the new label, and Belser took the work on *pro bono*.<sup>810</sup> In an article recounting the experience suggestively titled "Feeding Facts to America," Belser described the firm's challenge as follows: "Four thousand pages of regulations had to be reduced to a few square inches, flexible enough to appear on a candy-bar wrapper or a

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<sup>808</sup> Nutrition labeling allows for novel nutritional concepts like "empty calories" and conversely "super foods," whereby certain value-added nutritional properties are augmented, and others diminished, independent of the whole food conventional concept

<sup>809</sup> Unless otherwise specified, much of this section comes from the author's interview with Burkey Belser. Burkey Belser, president of design firm Greenfield-Belser Ltd., phone interview, Oct. 14, 2009.

<sup>810</sup> In his interview, Belser noted that "Congress had mandated that the science change to reflect the new concerns with diets of surfeit rather than diets of paucity," but "the Government had not mandated that it be designed as we consider design, graphic design. They considered the design of the label having to do with the nutrients." (I.e. Congress reduced label design to content, not aesthetic.) When Kessler called Belser, the commissioner worried: "We're going to launch this new label and no one's gonna know we've even done anything, because it won't look any different."

cereal box. And the process was hampered by the byzantine maze of American politics, plus the usual issues package designers have to face.”<sup>811</sup>

Starting in September of 1991, working with a Macintosh computer and a fax machine, Belser plus one other staff member in the firm began receiving daily comments from Congress and its constituencies, and consulting with Jerry Mande, Mike Hubbard, and Sharon Natanblut as point-persons for the FDA.<sup>812</sup> Among the many content concerns raised, these comments also suggested various design styles with which the firm might approach the label, including pie charts, bar charts such as a “loading bar,” and variations on simply listing the nutrients. The challenge was to create a design that would meet the needs of a very mixed audience of readers. The challenges Belser ran up against included:

- low levels of literacy among a sizable chunk of the public
- significant populations for whom English is a second language
- older Americans with failing eyesight, and younger Americans just learning how to read
- production issues such as varying-quality label papers, like wax paper and cellophane, that tend to blur small print.”<sup>813</sup>

The main principle underlying many of the solutions to these challenges was to simplify.

Belser first and foremost weighed the different design issues raised by the label. The format the firm started with was a slightly modified version of the 1970s voluntary label, with

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<sup>811</sup> Burkey Belser, “Feeding Facts to America,” *AIGA Journal of Graphic Design*, Vol. 14, No. 2 (1996).

<sup>812</sup> Belser made a specific point in the interview that the firm had just acquired the new Macintosh computer, which according to him had only just become usable from a design perspective. (They had only one Apple in the studio and people had to sign up for it.) Belser acknowledged the importance that it and personal computers had on design practices in this period. He also noted the novelty of the fax machine in the firm (purchased only six months before). As he described it:

“These two pieces of technology had an interesting bearing on the design of the label, and ultimately I believe the success of the label, because we would do a design, say during the day. We would fax it up to the Hill the next morning. Various groups who were looped in, important constituencies, industry and consumer groups... they would comment on the label, and we would respond to their comments with different designs.”

The computer facilitated rapid digital redesign, and the fax machine provided for a more frequent and continuous feedback loop with the firm’s client.

<sup>813</sup> Burkey Belser, “Feeding Facts to America,” *AIGA Journal of Graphic Design*, Vol. 14, No. 2 (1996).

more or less the same content but in a tabular layout and organized by “functional clusters” (the macro versus micro nutrients). The firm used ad-hoc focus groups to experiment on different font and format styles.<sup>814</sup> Designers decided to use Helvetica (“black and light” Helvetica, not “bold and regular”) because it was a “widely available, commonly used font.”<sup>815</sup> They experimented with reversing the type on certain portions of the label (such as using a column with black background and white type), but in studies people tended to just skip over the column. To address the economy of space, the firm played with hairlines and indentation of subgroups to guide the reading of nutrient content. They also experimented with visual symbols for branding and aesthetic reasons, but ran up against the problem of sending mixed cultural signals to a culturally heterogeneous community.<sup>816</sup> Two design decisions had critical political implications. They put a black line around the panel, forming a box which marked off the government’s space from the rest of the package.<sup>817</sup> Belser also defended the minimum 8pt font size, concerned with the elderly and other people with vision problems.

But Belser and his FDA collaborators also had to weigh an important substantive issue in the design of the label – to what extent should the design direct consumers towards good foods and away from bad foods. David Kessler insisted that the order of nutrients should reflect their priority for health messaging, i.e., the negative nutrients (macronutrients) would be listed first, followed by the desirable (micronutrients). But a tension emerged between the design firm and scientists at the FDA CFSAN. The scientists’ were concerned with representing the absolute

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<sup>814</sup> Belser also consulted with Cheryl Achterberg, then director of the Nutrition Center at Penn State University, who had conducted studies on nutrition literacy and had submitted extensive comments to the FDA which Belser and the FDA staff found useful.

<sup>815</sup> Helvetica was chosen over Times Roman font partially because of the times, this being at the tail end of a modernist movement inspired by Swiss design and Bauhaus, and also for the font’s “efficiency and simplicity.”

<sup>816</sup> One format placed a rising sun at the top of the label. Belser said that, though the sun was about the only symbol that was universally recognized by all cultures, it failed because it was considered to be distracting.

<sup>817</sup> It is difficult to determine whether this was David Kessler’s idea or Burkey Belser’s. FDA staff interviewed attributed it to Kessler, but Belser was clear that he stated at the beginning that such a box was crucial for distinguishing the label from other package “territories.”

value of nutrients, not their relative value. CFSAN staff was upset by how the firm in some formats boldfaced certain content—carbohydrates, sodium and cholesterol, but not other content (micronutrients). According to Belser, for the FDA staff nutrition scientists:

Simply putting it in a list was really all they were willing to do. But the commissioner said, ‘No. This is the intersection between science and public policy. And public policy demands that we not only design it up, but we make some decisions about what’s important and what’s not important.’

The firm thus designed and experimented with “prescriptive” labels, with statements such as “Do not eat food high in these products, or eat foods that are high in these,” as well as adjectival and street-light labels,<sup>818</sup> and the percentage figures for Daily Value that were ultimately used. The firm grappled with how it could organize these different types of information on the label in a way that users would find intuitive, placing, for example, the grams quantity declaration for a nutrient flush against the nutrient label on the left, but on the same line listing the percent values vertically aligned in a column on the right.

In the November 1991 *Federal Register* announcement of proposed guidelines, the FDA presented seven final format candidates and six potential graphic designs that it planned to review.<sup>819</sup> The FDA intended to continue its scientific assessments of the label formats, while contracting the label's graphic design to Greenfield/Belser Ltd.<sup>820</sup> The final seven formats were 1) the current “Control” label format, 2) the “Control with DRV,” or a “Daily Values” column listing recommend quantities for non-vitamin nutrients, 3) the “Adjective” format with both the DV recommendations and a “low,” “medium,” or “high” adjective qualifying all nutrients, 4) the

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<sup>818</sup> Once again consumers showed a preference for numbers over symbols or adjectives. As Bill Hubbard said it in a subsequent oral history: “They wanted real information; they wanted the numbers.” FDA Oral History of Michael R. Taylor at Parklawn Building, Rockville, MD taken on Dec. 23, 1992, p. 13.

<sup>819</sup> The six graphic designs were selected from about 35 different designs the firm experimented with.

<sup>820</sup> Kessler, et al., “Developing the Food Label,” pp. 19-21. Alan S. Levy, Sara B. Fein, & Raymond E. Schucker, “Performance Characteristics of Seven Label Formats,” *Journal of Public Policy & Marketing* Vol. 15, No. 1 (Spring 1996), pp. 1-15.



“% Daily Value with DRV” format which gave the percent for all nutrients (based on FDA Daily Values) plus a column with DRVs listed, 5) the “% Daily Value without DRV,” 6) a “Grouping” format where nutrients were divided into those that one should “choose a diet low in” versus those they should “choose a diet high in,” and 7) the “Highlighting” format where asterisks were used as footnotes to mark nutrients “low” or “high” in quantity relative to FDA recommended values. The Agency had removed almost every punctuation mark, required the use of larger type size, and the use of both upper and lower case (as opposed to only upper case on the old labels) on all the potential formats, in order to “make the nutrition information compete more effectively with the rest of the package.”<sup>821</sup>

The feedback to the FDA during this comment period showed a strong consensus for the more understated formats, in particular the 1970s label and what would become the new label. Color was ultimately not used because industry pointed out that if the color was anything other than the one they were already using on the package it would entail enormous expense in ink. Black and white ink was accepted as a reasonable compromise.<sup>822</sup> Industry and non-industry alike supported the FDA's contention that one of the proposed formats, “highlighting,” represented more of a marketing tool than an educational one.<sup>823</sup> Food companies therefore felt that as a common marketing tool it should be voluntary, while consumer advocates only endorsed its use if it was mandatory and carefully proscribed by the FDA.<sup>824</sup> Even though the Nutrition Labeling and Education Act had specifically recommended highlighting, the American Dietetic Association requested it be dropped entirely as it would potentially confuse users as to

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<sup>821</sup> Kessler, et al., “Developing the Food Label,” pp. 19. Belser said these characters were “slowing readers down” and were an impediment to readers whose literacy was a challenge.

<sup>822</sup> Belser characterized this as a fortuitous accident for the ultimate branding, the staid colors contrasted with the puffery elsewhere on the package.

<sup>823</sup> Food and Drug Administration, HHS, “Food Labeling,” *Federal Register* (November 27, 1991), p. 60373.

<sup>824</sup> “Comments of the Center for Science in the Public Interest,” (February 26, 1992) FDA Dockets, 90N-0135, Vol. 100, C3842, pp. 17-19.

the educational mandate of the label.<sup>825</sup> The FDA's eventual retraction of both requirements reflected its desire to keep the nutrition-labeling panel distinct from the regions of the label associated with advertising.

The black box was a triumph of clarity and economy of space over extended scientific explanation or accuracy.<sup>826</sup> The Nutrition Facts panel did, however, mark the literal ascension of public health concerns with macronutrients triumphing over micronutrients. The two were divided by a 12-point black bar, with macronutrients raised above and given greater prominence. Belser listed these design features embedded in the label as both political and public health accomplishments:

- By defining the point size of the type, we staked out a sizable chunk of real estate on each product package— considerably more than had been used before. The label is visible to the naked eye!
- By giving the label a boldface title, we ensured scanning readers could recognize the label immediately.
- By putting a one-point rule around the label, we defined its territory, making certain that manufacturers could not encroach on public property and disguise nutrition information as something else.
- By using bold rules to separate sets of information, we gave the reader an easy road map through the label.<sup>827</sup>

The label would become eye-catching almost because of its understatedness in stark contrast to the bright, colorful advertising on the rest of the package. The friendly, stately and even slick

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<sup>825</sup> “Comments of the American Dietetic Association,” (February 24, 1992) FDA Dockets, 90N-0135, Vol. 90, C2992.

<sup>826</sup> By contrast, in his description of the Drug Facts panel Belser noted that legal concerns about giving abbreviated instructions on appropriate use “doomed” the label’s usability and clarity, resulting in an extended package insert approach with “too much information.”

<sup>827</sup> Burkey Belser, “Feeding Facts to America,” *AIGA Journal of Graphic Design*, Vol. 14, No. 2 (1996). In the interview, Belser made much of this concern with advertisers’ interest in “invading” the space and meanings of the label. At the end of this chapter I mention ways that companies have, in some sense, attempted to accomplish this through front-of-package selective references to the Nutrition Facts panel, through a kind of informational “parasitism.”

company logos and slogans might be in large, two-inch tall lettering, shadow bolded, or “lit up” so as to give the lettering 3D depth, using the more comforting or sexier font variations on serif, script or ornamental typefaces, and accompanied by colorful or vivid illustrations and photos. By contrast the Nutrition Facts panel would always appear in the same sans-serif font type and size and black-on-white color, a (largely) unchanging box shape on vastly different kinds of food packages. From Belser’s point of view, they had created “an iconic government brand, a style of labeling that *should* appear on every single type of label that the government wants to mark for consumers to pay attention to.”<sup>828</sup>

The austere and understated design of the Nutrition Facts panel was not lost on design critics, nor was its political message. In the November 1996 issue of the *AIGA Journal of Graphic Design* critic Massimo Vignelli heralded this new aesthetic:

There are no highlights, no balloons, no flashes; in short, none of the marketing devices normally associated with the junkyard of packaging design. The label is a clean testimonial of civilization, a statement of social responsibility, and a masterpiece of graphic design.

Vignelli positioned the label clearly on one side of “a schism” that was “rocking our profession”:

On one side are information architects, rooted in history, typography, semiotics; on the other side are graphic designers rooted in advertising, pictorial arts, and trends. It seems to me that the development of our profession, as we have seen in countless annuals, awards, and magazines, is clearly pointing out that this dichotomy is in action. Personally I

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<sup>828</sup> Thus, the “Drug Facts” label that his firm later helped design was for Belser an opportunity to “extend the brand.” He felt they failed because the drug labels used such difference in typography and design principles that it didn’t continue the brand aesthetic.

In the interview, Belser carefully articulated this branding power of the label, and in a way, articulated how advertisers and product designers attempt to construct hegemony:

“Convention improves comprehension. In other words, something that you see over and over and over and over again, across all media or all packaging and the like, gradually becomes iconic and gradually seeps itself in the mind so that you start to, by seeing it over again, understand it and absorb it in ways that supersede reading.”

Belser believes this “fact of labeling” in some respects “belies the fundamental complexity of the Nutrition Facts label in the first place.”

feel I no longer have anything to share with the so-called graphic design of today: not the concept, not the typefaces, not the layout—nothing.

[...]

For me, to be an information architect means to organize information in a way that is essentially retrievable, understandable, visually captivating, emotionally involving, and easily identifiable. Information should be semantically rooted, syntactically correct, pragmatically efficient. It doesn't work otherwise.<sup>829</sup>

Vignelli's call to functional, utilitarian design underscores the Nutrition Fact panel's design emphasis on utility and simplicity. The firm and the FDA had developed an aesthetic of trustworthiness and reliability, in contrast to the colorful puffery of promotional labeling. Belser describes it as "design working in the public interest." According to Belser, the label also launched Greenfield/Belser Ltd. onto the national stage, giving it the public credibility to move upstream in its client base and also branch outside of Washington, DC.

One further concern voiced in the feedback to the proposed labels related to the name of the label itself. Belser made it clear to the FDA in his early proposals that, for branding purposes, the label needed a title. In the various graphic designs the FDA had proposed, it had experimented with alternatives to the original title, "Nutrition Information Per Serving." The National Food Processors Association expressed strong disapproval of the titles of "Nutrition Guide" and "Nutrition Values," preferring the more unobtrusive sounding "Nutrition Facts" or retaining the original title:

The word "guide" suggests guidance or a recommendation, and the word "Values" implies a similar valuation. To be accurate, the listings of the components of the food are "Nutrient Facts."<sup>830</sup>

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<sup>829</sup> Massimo Vignelli, "A Masterpiece!," *AIGA Journal of Graphic Design*, Vol. 14, No. 2 (1996): 5.

<sup>830</sup> "August 19, 1992 Letter from the National Food Processors Association," FDA Dockets, 91N-0162, Vol. 21, C964, pp. 24-25.

The food industry was not alone in its preference for the original title, and in its 1993 finalized labeling guidelines the Food and Drug Administration acknowledged that the majority of comments supported retaining the former 1970s labeling heading because it was familiar to consumers. The Agency's chose to go with "Nutrition Facts." In the final ruling the FDA claimed that this did not arise from any concern with the label's perceived facticity, but instead owed to pragmatic design reasons:

This more succinct term also allows the title of the nutrition label to use a larger typeface in the same space so that the nutrition label will be more readily noticed, and thus, more readily observed by consumers.<sup>831</sup>

Yet the choice of an objective term, "Facts," over the more prescriptive "Guide" reflected a shift within the FDA in 1992 away from its initially hard-line approach to labeling reform, towards a more moderate position. Criticisms from industry, the USDA, and the Bush Administration had begun to wear down Kessler's earlier enforcement enthusiasm.<sup>832</sup>

### *7. Two Kingdoms of Food: The USDA and the Food Guide Pyramid*

Ever since 1940, when the FDA was moved out from under the US Department of Agriculture and into the Federal Security Agency (soon to be the Department of Health, Education, and Welfare), tensions had existed between the two agencies over the nature and scope of their roles in the rational management of the nation's food supply.<sup>833</sup> One product of this overlapping mandate was a patchwork of jurisdictions on food labeling. The Food Safety and Inspection Service (FSIS) of the USDA oversaw labeling requirements and accuracy on meat

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<sup>831</sup> Food and Drug Administration (FDA), "Food Labeling: Mandatory Status of Nutrition Labeling and Nutrient Content Revision, Format for Nutrition Label, Part IV," *Federal Register* (January 6, 1993) 58: 2079.

<sup>832</sup> For the purposes of consistent government branding, Belser also later insisted, against the FDA staff's initial wishes, that the 'Drug Facts' label use the word facts.

<sup>833</sup> Marion Nestle erroneously dates the separation of the two agencies to the creation of the Department of Health, Education, and Welfare out of the Federal Security Agency in 1953. Nestle, *Food Politics*, p. 368.

and poultry products while the FDA oversaw those of all other food products.<sup>834</sup> In the 1970s and 1980s, however, there were also disputes over which agency was best suited for accumulating and disseminating nutrition information. These disputes repeatedly found their way to Congress with the hope that new federal legislation could provide a clearer mandate. When congressmen began to debate the best solutions to an emerging health crisis in 1989, a central preoccupation was how such legislation would affect these complementary, yet competing roles of the FDA and USDA.

In January 1992, laying the groundwork for a presidential election year, President George Bush announced a regulatory reform initiative intended to ease the burden that “unnecessary” regulation placed on companies trying to compete in a global “free market.” Bush established the White House Council on Competitiveness headed by Vice President Dan Quayle, to oversee the initiative. Food industries seized upon the regulatory reform initiative to pressure the FDA and its maverick commissioner to ease up on its restrictions on food labeling.<sup>835</sup> In April, the Grocery Manufacturers of America petitioned the FDA to “defer” its proposals on the new Daily Reference Values claiming they constituted “excessive and burdensome regulation.” Over the next few months, the U.S. Office of Management and Budget (OMB) entered the fray, delaying FDA announcements claiming the agency was overstepping its authority.<sup>836</sup> Even before the Food and Drug Administration met this assault from the White House and OMB, it had begun to face a more troublesome challenge to its food labels. The U.S. Department of Agriculture was independently developing its own new label for products under its jurisdiction, and industry and

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<sup>834</sup> Leading to humorous subtleties in jurisdiction. Pizza, for example, is regulated by the FDA, unless it has pepperoni on it, in which case it falls under the USDA FSIS’s authority. See the FSIS’s online history page at [http://www.fsis.usda.gov/About\\_FSIS/Agency\\_History/index.asp](http://www.fsis.usda.gov/About_FSIS/Agency_History/index.asp). Last accessed May 18, 2006.

<sup>835</sup> “February 25, 1992 G.M.A. Letter,” FDA Dockets, 90N-0135, Vol. 73, C2827, p. 2-3.

<sup>836</sup> “July 29, 1992 Testimony of Bruce A. Silverglade [of CSPI] Before the Committee on Government Operations,” FDA Dockets, 91N-0162, Vol. 23, TS3, Appendix 1, pp. 5- 8.

health representatives worried that if the USDA and FDA labels varied too greatly, consumers would find both labels confusing. The clash between these two agencies over the new food label would focus specifically on setting serving sizes, but disagreements reflected deeper antagonisms over which agency had greater legitimacy in setting nutrition education policy.

Disputes over the parts that the USDA and FDA play in “government as educator” as opposed to “government as regulator” were old, though in the realm of nutrition policy they had become especially tense since the 1970s, when the FDA shifted away from just setting food standards to a practice of increased consumer information as a way of regulating the food industry.<sup>837</sup> The 1990 Nutrition Labeling and Education Act established that the Nutrition Facts label would be fairly uniform across state borders, but only designated how the FDA, not the USDA, should handle its label reforms. It was still an open question whether the FDA’s new label, or something like it, might also appear on the meat and poultry products that fell under the USDA’s purview, and whether standards of disclosure on one would match those on the other. Yet the stakes for setting a consistent serving size were high, as determining serving sizes for a given product would determine every other numeric value on its Nutrition Facts panel. Previously the manufacturer had set serving sizes, but dating back to the late 1970s the USDA and FDA had received consumer requests for greater clarity in setting serving sizes. In 1979, the two agencies along with the Federal Trade Commission had concluded that the standardization of serving sizes was needed, but neither the FDA nor USDA took action.<sup>838</sup>

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<sup>837</sup> Emily J. Schaffer, “Is the Fox Guarding the Henhouse? Who Makes the Rules in American Nutrition Policy?,” *Food and Drug Law Journal*, Vol. 57 (2002): 371.

<sup>838</sup> Food and Drug Administration, HHS, “Food Labeling; Serving Sizes,” *Federal Register* (July 19, 1990) 55: 29517 [Docket No. 90N-0165].

In its 1990 Proposed Guidelines the FDA decided finally to act, proposing to establish 159 food product categories, and standard servings for each.<sup>839</sup> The NLEA provided some assistance, suggesting a definition, “amount customarily consumed,” which meant sizes should be based on eating habits not recommended dietary guidance.<sup>840</sup> The FDA still faced a question of how to determine a customary amount, and would have to choose between varying consumption data.<sup>841</sup> The Agency would also have to settle upon whether to label serving sizes based on quantities “as packaged,” or as found in the food package when bought at the store, versus “as consumed” when the packaged food has been cooked after purchase. Medical associations like AMA felt quantities should reflect “as consumed” because the reform was intended to inform readers' consumption habits, and cooking dramatically changed a food's nutrition value.<sup>842</sup> Industry, and to some extent both of the two regulatory agencies, favored “as packaged” labeling because it was more easily testable and did not have to account for individual differences that might arise in cooking methods.

The problem with these efforts was that the USDA was at the same time incorporating new serving size standards as a component of its new Food Guide Pyramid.<sup>843</sup> The Food Guide Pyramid was intended, like the Nutrition Facts Panel, to educate consumers on how to place the foods they eat within the context of a healthy daily diet. While the Nutrition Facts panel represented a digital approach to conveying food information by using numeric referents, the

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<sup>839</sup> Food and Drug Administration, HHS, “Food Labeling; Serving Sizes,” *Federal Register* (July 19, 1990) 55: 29517 [Docket No. 90N-0165].

<sup>840</sup> Food Safety and Inspection Service, USDA, “Nutrition Labeling of Meat and Poultry Products,” *Federal Register* (November 27, 1991) 56: 60302 [Docket No. 91-006P].

<sup>841</sup> These included: the National Health and Nutrition Examination Survey (NHANES), conducted by the National Center for Health Statistics; the Nationwide Food Consumption Survey (NFCS) and the Continuing Survey of Food Intakes by Individuals (CSFII), conducted by USDA; or serving sizes in standard food composition references such as USDA Agriculture Handbook. Food and Drug Administration, HHS, “Food Labeling; Serving Sizes,” *Federal Register* (July 19, 1990) 55: 29517 [Docket No. 90N-0165].

<sup>842</sup> “American Medical Association Feb. 25, 1992 Letter,” FDA Dockets, 90N-0135, Vol. 100, C3860, p. 8.

<sup>843</sup> For a description of the design and testing of the USDA Food Guide Pyramid, see Mudry, *Measured Meals*, pp. 91-92. For a political “insider’s” history of the Food Pyramid, see Nestle, *Food Politics*, pp. 51-66.



Food Pyramid was a more analog approach incorporating images of food in the “Basic Four” food groups and relating the proportions of each to the visual hierarchy of the pyramid. The USDA determined serving sizes through a combination of “*typical portion sizes* (from food consumption surveys), *ease of use*, *nutrient content*, and *tradition* (of use in previous food guides).”<sup>844</sup> Once determined, the serving sizes in the USDA Food Pyramid would function much like the %DRVs did in the Nutrition Facts to calibrate the proportions of foods from each food group a person should eat in a day. In other words, they were a crucial element of the USDA's new education tool, and the adoption of differing serving sizes on the Nutrition label could potentially confuse consumers and undermine both education programs.

On April 4, 1991, officials from the USDA's Food Safety and Inspection Services (FSIS) participated in a public meeting conducted by the Food and Drug Administration on the subject of serving sizes. In the meeting, participants explored three possible solutions to standardizing serving sizes across the two agencies. The first option involved using a set metric value, such as 100 grams, and basing the number of serving sizes upon that objective value. This system had the advantage of being harmonized with other countries' food systems, which dealt in metric units, but was problematic in America where people were unfamiliar with the metric system. Option 2 entailed each agency establishing its own food product categories for foods under its jurisdiction (159 categories by the FDA, and one standard serving size for meat and poultry products). The third option, which was unpopular with the nutrition experts present, involved setting USDA serving sizes using dietary recommendations.

No clear consensus was reached at the meeting on which of the three approaches to take, but participants unanimously agreed that the USDA and FDA should settle the matter together.

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<sup>844</sup> USDA Center for Nutrition Policy and Promotion, “Insight 22: Serving Sizes on the Food Guide Pyramid and on the Nutrition Facts label: What's Different and Why?,” *Nutrition Insights* (December 2000).

The FDA established the “Interagency Committee on Serving Sizes” to coordinate the final decisions, composed of members from the FDA's CFSSAN and the USDA's FSIS.<sup>845</sup> In separate but coordinated listings, the USDA and FDA announced a consistent standardized serving size process in their 1991 proposed guidelines. Of the 131 total categories the Interagency Committee had established, 23 categories were meat products and 22 were poultry, giving a total of 45 that would be set by the USDA FSIS. Servings would be labeled using household units with a voluntary inclusion of metric units permitted, and based on the quantities “as packaged” rather than “as consumed.” The serving sizes listed on USDA food products would not be the same as the serving sizes the USDA used in its educational materials like the Food Guide Pyramid. Following its decision to match labeled serving sizes to those of the FDA's, the Department of Agriculture also adopted a “Mandatory/Voluntary Program” for the new food label that would parallel the FDA's.<sup>846</sup> All USDA regulated products would now carry mandatory nutrition labels like those of the FDA's, except single-ingredient, raw products, which would be allowed to make voluntary use of the new label at the producer's discretion.

Resolving differences over servings sizes was a matter that the peer USDA and FDA staff were able to accomplish without recourse to higher officials. Choosing a suitable population weighted mean for calorie intake that both agencies could agree upon proved to be much more difficult. The USDA had preferred the FDA's initial value of 2,350 calories, the mean for both genders, and felt that the lower 2,000 calorie figure was overstepping the Department of Agriculture's authority by directing consumers to change their diets. The USDA was similarly not eager to endorse the DRVs over absolute values, because they felt there was no one value

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<sup>845</sup> Food Safety and Inspection Service, USDA, “Nutrition Labeling of Meat and Poultry Products,” *Federal Register* 56: 60302.

<sup>846</sup> *Ibid.*

appropriate for everyone.<sup>847</sup> This concern has to be viewed in light of the polemics the USDA was facing over the Food Pyramid as a one-size-fits-all nutrition education tool, polemics reflecting the fundamental tensions of a pro-industry and a pro-public health mission being housed under one agency's roof.<sup>848</sup> Moreover, though the November 1991 proposal mentioned above addressed much of the content of the nutrition label, it did not cover the format. All of the eye-steering design tricks that Greenfield/Belser had added further emphasized the label as an educational tool rather than just an informational device.

With neither side budging, and the FDA facing the so-called “hammer clause” of the NLEA, which required they have the label rules passed by November 8, 1992, the decision had to be made from above. FDA staff, worried they might be outgunned by a USDA teamed up with the OMB and White House Council on Competitiveness, cooperated with several news organizations to help publicize their position.<sup>849</sup> Still unable to come to an agreement, but not willing to accept two different labels, the White House held a series of meetings towards the end of October intended to both establish the points of disagreement, but also keep the decision on hold until after the November 3rd presidential elections. Not until the evening of Monday November 30, 1992, did the two Secretaries and their staff meet with President George H.W. Bush to make their case.<sup>850</sup> The following morning, following a long night of argument and

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<sup>847</sup> The agency's “fallback” position from pushing absolute values was to present a range of daily values which would take into consideration the range of possible calorie intakes in the U.S. population, from 1,600 to 2,800.

<sup>848</sup> If one is tempted to reduce the USDA's position on nutrition labeling to industry influence, especially concern with the meat industry (as many FDA staffers suspected), it must be tempered by the fact that the USDA was under no statutory obligation (or mandate) to introduce labeling. The USDA initiative was largely due to the strong support of USDA Secretary Edward Madigan, and the agency faced the real threat of litigation from producers who could claim there was no legal right to require this kind of labeling.

<sup>849</sup> Mike Taylor mentioned how this press not only played to their favor, but also inspired groups like Phil Sokolof's Heart Savers to put out ads challenging President Bush to do the right thing. Taylor, Michael, FDA Oral History of Michael R. Taylor at Parklawn Building, Rockville, MD taken on Dec. 23, 1992, p. 27.

<sup>850</sup> At the meeting were President George H. W. Bush, Sr., Vice President Dan Quayle, Mike Taylor, David Kessler, Secretary Louis Sullivan, Jim Baker, Secretary Edward Madigan, Marling Fitzwater, and Bob Zoellick (Deputy Chief of Staff). Among the props the FDA staff brought with them to make their case was the McDonald's tray liner discussing nutrition and using the 2,000 calorie figure.

counter argument on the two formats, the USDA's and the FDA's, President Bush ultimately sided with the FDA. A version of the "Nutrition Facts" panel, calibrated to the 2,000 calorie figure, would appear on products under both agencies' jurisdiction. It was only the second time in the history of the FDA that a United States President had to intervene directly in a decision relating to food labels.<sup>851</sup>

The resolution between agencies over the new common label did not mean a resolution of tensions between food and agriculture regulators. The arguments over how to determine standard serving sizes and "contextual" information like the Daily Reference Values were really arguments over whether the Nutrition Facts label was just an additional FDA informational disclosure (from which consumers could make their own choices), or an educational tool intended to discipline consumer choices. USDA Extension Service representatives from numerous states wrote in to the FDA in 1992 angry that educational reforms the FDA built into the label undermined their own localized nutritional measures and expertise:

The food label must not be viewed as a program for educating U.S. citizenry in the area of nutrition and health. The labels provide information from which an educated decision can be made. By themselves, the labels cannot educate the consumer [...] It would be an incredible waste of human capital and material resources to try and develop a new system of consumer education [underlined emphasis in original].<sup>852</sup>

These complaints represented a widespread feeling among nutrition specialists in branches of the U.S. Department of Agriculture. If the new label was intended to be a stand-alone nutrition guide, these experts felt it did the job poorly, and, moreover, threatened to compete with their own programs and advice. These questions regarding the FDA's educational authority and intent,

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<sup>851</sup> The first being Teddy Roosevelt's intervention, mentioned in Chapter 2, to allow saccharine to continue to be used in the marketplace in 1906 despite the apprehensions of Harvey Wiley. It is a reflection of the high stakes and politically charged atmosphere around diet and food labeling at this time, but also of the relative discretionary autonomy that the FDA and USDA normally exercise within the Executive branch.

<sup>852</sup> "February 20, 1992 Letter from William D. Evers, Extension Nutrition Specialist," FDA Dockets, 91N-0162, Vol. 1, C52.

and the Nutrition Facts' validity as an informational tool, were never fully settled, but were instead steamrolled over by the impressive media show that the FDA would unveil as the 1994 industry compliance date approached.

The disputes between the USDA and FDA over the nutrition label were partly just routine jurisdictional disagreements about an area of the law where the two agencies' authorities overlap. They also reflected deeper differences in how the two agencies were organized and operated, who they represented, and perhaps most importantly, differences in their mandates. The USDA continued to see nutrition education within a "productivist" framework, the use of food consumption to promote and support the nation's producers.<sup>853</sup> The diet-heart thesis and "negative nutrition" ("eat less" messages), threatened that paradigm and was thus considered a threat to the USDA's constituents and concerns with fostering agricultural production and supporting agribusiness. The FDA, on the other hand, on food matters was driven by a clearer mandate of "consumer protection," and the agency's focus was largely consumerist. The specialization of the two bureaucracies reflected over a century of specialization in the politics of urban food and rural agriculture. The new label, however, cut through these two "kingdoms of force" requiring the agencies to reconcile consumer and producer interests.<sup>854</sup> In some sense here, the urban consumers' concerns simply trumped the agricultural ones.

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<sup>853</sup> On the rise of a "productivist" mentality in the USDA, and its social equity problems for farmers and food consumers alike, see Hightower, J. *Hard tomatoes, hard times: A report of the agribusiness accountability project on the failure of America's land grant college complex*. Schenkman Pub. Co., 1973.

<sup>854</sup> On "two kingdoms of force" as I mean it here, see Marx, L. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. Oxford University Press, USA, 2000. The constructed division between food as an urban concern and agriculture as a rural one has a long and problematic history in America. While I would not want to oversimplify by wrongly suggesting that the FDA is not concerned with agriculture, nor the USDA with food consumers, I am simply suggesting that increasingly both agencies have come to specialize in these two constituent groups, particularly as legislation like the NLEA seeks to create cleaner divisions of labor between the two governmental bodies. If you recall Margaret Mead's 1970 article, she foreshadows this outcome: "[S]hifting food relief programs from Agriculture to Health, Education, and Welfare [... does not] really meet the particular difficulties that arise because we are putting food into two compartments with disastrous effects; we are separating food that nourishes people from food out of which some people, and some countries derive their incomes." Mead,

All of these different concerns shaped the design of the Nutrition Facts panel and were, to some extent, inscribed into the label. It was a medium for centralizing and certifying nutrition information. It was a platform for special interest groups and lifestyle politics. It was a legal instrument for ensuring uniform rules and promoting a national food marketplace. It was a way to treat sick populations, to encourage individuals to act in the health interest of the population. It was a validation of a professional association's authority to determine "correct" measurement standards and exchanges for very different food products. It was a modern, austere branding tool which reinforced design principles of simplicity, functionality, and utility. And it was an expansion of the government's role as public educator. Once inscribed into the Nutrition Facts panel, the label became a platform for each of these differing and in some cases contradictory agendas. This heterogeneity or disunity of interests constrained the label's effectiveness in any given realm, but ensured the label had a wide political mandate and numerous vested interests to sustain it down the road.<sup>855</sup>

### **Drawing Nutrition Facts Apart**

On January 6, 1993, with seven permitted health claims,<sup>856</sup> an established % Daily Reference Value for all listed nutrients, a flashy new Nutrition Facts panel, and standardized

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Margaret. "The Changing Significance of Food," *American Scientist*, Vol. 58, Iss. 2 (March 1970): 176-181. Cf. Fitzgerald, D. "Eating and Remembering." *Agricultural History* 79, no. 4 (2005): 393-408.

<sup>855</sup> Perhaps the most striking evidence for this subsequent shared ownership of the Nutrition Facts panel is how all of the people I interviewed about the design and implementation of the label repeatedly framed their recollections of decisions with the subject "we," "we decided to do x" or "we ended up with y label feature." Those interviewed were clearly quite proud of the accomplishment of the label. This was true not only for the FDA CFSAN staff members, but also the USDA collaborator, industry representatives, design firm president, and CSPI advocate with whom I spoke. One can find a similar spirit of collegiality in the record of the ten-year anniversary workshop that they held in 2003. Transcript of the Workshop Celebrating the 10th Anniversary of the NLEA, provided by Suzanne Junod, FDA History Office.

<sup>856</sup> These diet-health correlation claims were "calcium and a reduced risk of osteoporosis," "sodium and an increased

serving sizes for 139 food product categories, the FDA published its final guidelines for food labeling in the *Federal Register*.<sup>857</sup> The new rules went into effect February 14th, and all manufacturers were expected to be in compliance by May 8, 1994. (The USDA's compliance date for meat and poultry products would be July 8th.) The food labeling revisions were the largest in U.S. history, requiring enormous governmental resources to implement, and projected costs for the food industry over the next 20 years ranged from \$1.4 billion to \$2.3 billion. "It's been a long haul," Fred Shank, the director of the FDA's Center for Food Safety and Applied Nutrition, admitted, "But the greatest challenge lies ahead—in educating consumers."<sup>858</sup> Over the next year and a half the FDA would execute an unprecedented nutrition education media campaign with the new Nutrition Facts label at its center.

The initial targets of the FDA's education campaign were health professionals and educators. The objective of this first wave attack, according to Commissioner David Kessler, was to "institutionalize" the message about the new food label by making sure it made it into related school textbooks, such as home economics and health books, and materials used by nutritionists, dietitians, and health educators.<sup>859</sup> The USDA and FDA assisted public health organizations and food industries in publishing an extraordinary variety of How-to Guides that would serve as educational aids to explain how the new Nutrition Facts label worked. Three million copies of

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risk of hypertension," "dietary saturated fat and cholesterol and an increased risk of coronary heart disease," "dietary fat and an increased risk of cancer," "fiber-containing grain products, fruits, and vegetables and a reduced risk of cancer," "fruits, vegetables, and grain products that contain fiber, particularly soluble fiber, and a reduced risk of coronary heart disease," "fruits and vegetables and a reduced risk of cancer." Dixie Farley, "Look for 'Legit' Health Claims on Foods," *FDA Consumer* Vol. 27 (May 1993). The FDA also set 11 "core" terms of nutrition claims: "free," "low," "lean," "extra lean," "high," "good source," "reduced," "less," "light," "fewer," and "more." There were also clarifications on what foods could be labeled "fresh" or "healthy." Dori Stehlin, "A Little 'Lite' Reading," *FDA Consumer* Vol. 27 (May 1993).

<sup>857</sup> The publication date was, not coincidentally, two weeks prior to when the 1992 election presidential victor, Bill Clinton, would be sworn in to office; the Bush Administration hoped to have the guidelines set before the new Administration took over. Food and Drug Administration (FDA), "Food Labeling," *Federal Register* (January 6, 1993) 58: 2079.

<sup>858</sup> Paula Kurtzweil, "Good Reading for Good Eating," *FDA Consumer* Vol. 27 (May 1993).

<sup>859</sup> Paula Kurtzweil, "Food Labeling Education Serves Many Groups," *FDA Consumer* Vol. 28 (May 1994), p. 6.

*How to Read the New Food Label*, a brochure developed by the FDA and the American Heart Association, were distributed in the first six months of its availability. The National Food Processors Association, in cooperation with the USDA and FDA, published a 92-page educator's resource guide.<sup>860</sup> FDA representatives also went grass-roots, meeting with educators at community colleges and university extension services, and community health organizations like the Phoenix-based Concilio Latino de Salud, which focused on bilingual populations, to help them prepare short-courses and information sessions for local communities. To coordinate these various informational outreach efforts, the FDA and USDA established the National Exchange for Food Labeling Education (NEFLE) whose centerpiece was the Food Labeling Education Information Center housed in the National Agricultural Library in Maryland, which kept a database of all education and research activities on the subject.<sup>861</sup>

By the spring of 1994, as the industry compliance date neared, the FDA ramped up its media efforts for a second round of ads directed at the general public. It disseminated ready-to-print articles to newspapers, hundreds of which published them, and it released a logo featuring the Agency's new slogan, "The *New Food Label, Check it Out!*," which organizations were encouraged to print in their periodicals and health literature.<sup>862</sup> The first week of May the media blitz reached new heights. TV ads aired on public stations featuring baseball player Roger Clemens, and children's favorite animated monkey, Curious George, served as the label's official mascot, appearing in public service announcements and on educational material. The FDA's new slogan would even wow crowds of sports fans flashed on electronic scoreboards in Yankee

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<sup>860</sup> Paula Kurtzweil, "Food Labeling Education Serves Many Groups," *FDA Consumer* Vol. 28 (May 1994), p. 8.

<sup>861</sup> *Ibid.*, pp. 8-9.

<sup>862</sup> *Ibid.*, pp. 8, 10.



Stadium and beaming from three Goodyear Blimps across the country.<sup>863</sup> The extraordinary media coverage was all coordinated to get across the FDA's message about the new label.

So what was the message? David Kessler believed, "This campaign is not simply about a better food label on food packages," but rather, "It is about Americans living longer, better quality lives, and about lowering health-care costs."<sup>864</sup> For Kessler, the Nutrition Facts label was not just another information disclosure, but a tool that took "all the dietitian's guidance and reduces it to something people can use."<sup>865</sup> Though the nutrition content was calibrated to an average (literate) American consumer, the education campaign was clearly targeting more specific audiences. In a series of specials on "The New Food Label" published in 1994 and 1995, the *FDA Consumer* highlighted special dietary concerns such as diabetes and heart disease prevention. The reports also prominently featured minority groups, such as African Americans and Hispanics, the elderly, and mothers, all primary targets for U.S. public health campaigns. Images of the Nutrition Facts label depicted it as a liberating force for these groups, and explained how the new label (used in coordination with other tools such as the USDA's new Food Guide Pyramid and the U.S. *Dietary Guidelines*) would help consumers tackle dietary challenges.<sup>866</sup>

By the late 1990s the popularity of the Nutrition Facts label had become a near fact in and of itself. On October 30, 1997, representatives of the Food and Drug Administration received the Presidential Design Achievement Award from Tipper Gore for the Nutrition Facts

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<sup>863</sup> Marian Burros, "F.D.A. Throws Its Best Pitches For Food Label," *New York Times* (May 1, 1994): Section 1, Page 1, Column 2.

<sup>864</sup> Paula Kurtzweil, "Food Labeling Education Serves Many Groups," *FDA Consumer* Vol. 28 (May 1994), p. 6.

<sup>865</sup> Marian Burros, "F.D.A. Throws Its Best Pitches For Food Label," *New York Times* (May 1, 1994): Section 1, Page 1, Column 2.

<sup>866</sup> See, for example, *FDA Consumer* Vol. 28 (Dec. 1994), p. 19. Paula Kurtzweil, "Coping with Diabetes," *FDA Consumer* Vol. 28 (November 1994), pp. 20-25. Paula Kurtzweil, "Help in Preventing Heart Disease," *FDA Consumer* Vol. 28 (December 1994), pp. 19-24. Paula Kurtzweil, "Better Information for Special Diets," *FDA Consumer* Vol. 29 (January-February 1995), pp. 19-25.

panel's "very useful, consumer-friendly design." Several studies by the Food Marketing Institute suggested that a majority of consumers were familiar with the label, and a significant proportion had made decisions not to eat certain foods based on it, though the label's broader impact on American consumer habits was still unclear.<sup>867</sup> The apparent popularity of the new label, which gave users a feeling of choice over their health needs and decisions, trumped any pessimism about its real consequences. Voicing a widely held view at the time, a design critic chose to describe the Nutrition Facts label simply and enthusiastically as "A Masterpiece!"<sup>868</sup>

In spite of its visibility and popularity, this most recent mode of regulating food labels—standardizing food labels and certifying diet information—was also contested. The first major assault on the FDA's new nutrition and health claims system was the enactment of the Dietary Supplement Health and Education Act (DSHEA) by Congress, signed into law by President Clinton on October 25, 1994 (just on the eve of the 1994 "Republican Revolution" midterm elections). Much as occurred in the 1970s with the Proxmire Amendments, industry urged Congress to "preserve the consumer's freedom to choose dietary supplements" and claimed the FDA would take away people's vitamins under its new rules. DSHEA for the first time defined "dietary supplements" by law as a new and distinct category from drugs or food additives.<sup>869</sup> Dietary supplements now represented a category of product which did not have to pass any safety or regulatory standard, and for which the entire burden of risk calculation rested with the

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<sup>867</sup> Bruce A. Silverglade, "The Nutrition Labeling and Education Act—Progress to Date and Challenges for the Future," *Journal of Public Policy & Marketing* Vol. 15 (Spring 1996): 148-156.

<sup>868</sup> Massimo Vignelli, "A Masterpiece!," *AIGA Journal of Graphic Design*, Vol. 14, No. 2 (1996): 5.

<sup>869</sup> DSHEA defines "dietary supplement" as: "a product (other than tobacco) intended to supplement the diet that bears or contains one or more of the following dietary ingredients: (A) a vitamin; (B) a mineral; (C) an herb or other botanical; (D) an amino acid; (E) a dietary supplement used by man to supplement the diet by increasing the total dietary intake; or (F) a concentrate, metabolite, constituent, extract, or combination of any ingredient described in clause (A), (B), (C), (D), or (E)." The statute also describes the category based on labeling claims—a dietary supplement is a product labeled as such which is not represented for use as a conventional food or as a sole item of a meal of the diet—and common forms of delivery—capsule, powder, softgel, gelcap, tablet, liquid, or other form.

consumer who purchased it.<sup>870</sup> As one industry informant characterized it, DSHEA represented a direct attack on the FDA's longstanding "foods first approach" – that nutrition labeling and health claim policies should always promote the idea that foods, not drugs or supplements, were the best conveyor of nutrition.<sup>871</sup>

One sticking point on dietary supplements and disputes between the FDA and industry was over the expression "significant scientific agreement," which was used in the 1990 Nutrition Labeling and Education Act as the standard by which the FDA could allow for the use of health claims on foods. The FDA at this time did not appear interested in implementing this NLEA mechanism for expanding health claims, and indeed, had ultimately only accepted seven of the ten health claims originally authorized in the NLEA. From 1993 to 1995, the "Keystone National Policy Dialogue on Food, Nutrition, and Health" was held, a series of closed meetings with members from many different interested sectors, to discuss lingering uncertainties about the implementation of the NLEA and problem areas such as health claims or how to address the best mediums for communicating "emerging scientific information" about food and diet.

The report identified some of the difficulties in establishing definitive and specific health claims. It noted "confounding factors" such as the fact that "Foods are seldom composed of a simple mixture of chemical components" (like most drugs), but instead are "a complex mixture

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<sup>870</sup> Unless the FDA determines that the supplements cause direct harm. However, it is probably safe to say that dietary supplements are the least regulated product on the market, at least within the jurisdiction of the FDA. They represent the clearest return to a "buyer beware" model of consumer responsibility. Beckstead, T. L. "Caveat Emptor, Buyer Beware: Deregulation of Dietary Supplements upon Enactment of the Dietary Supplement Health and Education Act of 1994." *SJ Agric. L. Rev.* 11 (2001): 107–135.

<sup>871</sup> Robert Earl, at Grocery Manufacturers Association, former American Dietetic Association representative for Nutrition Labeling Coalition, phone interview, Sept. 23, 2009. On the one hand, it is tempting to say, and to some extent hard not to accept, that the passage of DSHEA reflected both a clear Republican vendetta against the FDA for over-reaching (Kessler was at that time embroiled in the controversy over the tobacco industry lawsuits and the question of whether the FDA could and should regulate cigarettes) and the commercial interests and financial lobbying of the supplements industry. On the other hand, some of the debates surrounding health claims and supplements should be situated within a larger context of discussions about alternative medicines and whether they had not been given adequate attention from mainstream medicine. See, for example, Joanne DeCandia, "Dietary Supplements and Drugs: Is the Line Blurred?," *Regulatory Affairs Focus* (Dec. 2003), pp. 29-33.

of various chemically reactive constituents.”<sup>872</sup> It also identified the issues in defining a “population” in health claims research, balancing the differences in studying the “general population,” which could mean a “healthy population,” versus “a variety of subgroups forming a population continuum from being at low risk to being at high risk for a particular disease.” Despite these challenges, the Keystone Report recommended that the FDA develop an “objective, flexible, and responsive” process for evaluating significant scientific agreement that would allow for moving forward with new health claims. Congress, not satisfied with the slow pace at which the FDA was considering this recommendation, in 1997 allowed companies to circumvent the FDA and use health claims if other government agencies or peer institutions like the National Academy of Sciences had issued “authoritative statements” endorsing them.<sup>873</sup>

The FDA’s troubles over dietary supplements and health claims were not limited to the Congress. In 1999 the DC Circuit Court ruled on a dispute over the FDA’s powers to regulate health claims on foods. In the case, *Pearson v. Shalala*, the court rejected the FDA’s arguments that the use of unreviewed scientific claims in advertisements for foods and dietary supplements were especially dangerous and misleading. The case brought against Donna Shalala, Secretary of the US Department of Health and Human Services (the parent department for the FDA), involved two dietary supplement marketers, Durk Pearson and Sandy Shaw, supported by two other appellants, the American Preventive Medical Association, a healthcare advocacy organization whose members were health practitioners, and Citizens for Health, a healthcare advocacy organization for consumers of dietary supplements. Pearson and Shaw brought suit

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<sup>872</sup> Keystone Center. *The final report of the Keystone national policy dialogue on food, nutrition, and health*. Keystone, CO and Washington, DC, 1996, pp. 36-46.

<sup>873</sup> Keystone Center. *The final report of the Keystone national policy dialogue on food, nutrition, and health*, see diagram, p. 39. Virginia L. Wilkening, formerly worked in FDA CFSAN in charge of nutrition labeling (retired), phone interview, Sept. 24, 2009.

against the HHS when the FDA refused to allow them to use four proposed health claims on their products:

1. Consumption of antioxidant vitamins may reduce the risk of certain kinds of cancers.
2. Consumption of fiber may reduce the risk of colorectal cancer.
3. Consumption of omega-3 fatty acids may reduce the risk of coronary heart disease.
4. .8 mg of folic acid in a dietary supplement is more effective in reducing the risk of neural tube defects than a lower amount in foods in common form.

The FDA denied their request on the basis that these statements were all disease claims for which the agency had not yet established that there was significant scientific agreement. More specifically the FDA had passed a rule that authorized such disease claims or structure/function claims only:

when [the FDA] determines, based on the totality of publicly available scientific evidence (including evidence from well-designed studies conducted in a manner which is consistent with generally recognized scientific procedures and principles), that there is significant scientific agreement among experts qualified by scientific training and experience to evaluate such claims, that the claim is supported by such evidence.<sup>874</sup>

In an argument that the court found very dissatisfying, the FDA noted that rather than a dearth of such evidence, it was the non-consensus and inconclusiveness of existing evidence that led the agency to decide that the supplement marketers should not be able to use these claims. Partly citing the fact that the agency had failed to expand upon the list of ten approved health claims in the 1990 NLEA in the nearly ten intervening years since the Act's passage, the court reasoned that the FDA's restrictive and "unarticulated" standard for "significant scientific agreement" created an unreasonable burden on marketers seeking to incorporate new scientific knowledge into the promotion of their goods.

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<sup>874</sup> 21 C.F.R. § 101.14, as quoted in the case.

More specifically, in *Pearson v. Shalala* the court rejected the FDA's implied model of a consumer:

[the FDA's argument is] that health claims lacking 'significant scientific agreement' are inherently misleading because they have such an awesome impact on consumers as to make it virtually impossible for them to exercise judgment at the point of sale. It would be as if the consumers were asked to buy something while hypnotized, and therefore they are bound to be misled.<sup>875</sup>

In essence, the ruling followed the neoliberal reasoning which had governed the 1970s voluntary nutrition labeling. Consumers were seen to be better judges of how health claims fit into their lifestyles than expert administrative institutions like the FDA. The court argued that the FDA's effort to position itself as a central authority for standardizing nutrition claims and health information ran against first amendment protections of commercial free speech. The court believed that consumers were capable of sorting through and evaluating health claims on their own, and should not have to depend on the agency to do so. In practice, and despite the ruling, the FDA continues to police egregious cases where companies use disease claims to sell food products. But the *Shalala* case creates a legal precedent for a further easing of the boundaries between food and drug and corporate liberty to promote medicalized depictions of food in advertisements.

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<sup>875</sup> *Pearson v. Shalala* 164 f.3d 650 (D.C. cir. 1999). One broader institutional context for the case was that the FTC and FDA at this time had different standards regarding "significant scientific agreement." The FDA did not accept the FTC's "reasonable basis" standard. Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., pp. 275. In 1984, the FTC had published a notice that it would use the "reasonable consumer" standard on most advertisement issues including health claims. In 2002, the FDA also announced it would adopt this standard. Hutt, P.B., Merrill, R.A., and Grossman, L.A. *Food and Drug Law*, 2007, pp. 111.

The court's decision in the *Shalala* case to question the FDA's restrictive interpretation of 'scientific agreement' was also symptomatic of a broader movement in American courts during the 1990s of problematizing the concept of 'significant scientific agreement'. The most widely examined example of this juridical deconstruction of scientific consensus is *Daubert v. Merrell Dow Pharmaceuticals* (1993), where the Supreme Court loosened restrictions on what was legitimate and therefore admissible scientific evidence. The court did so by calling into question the previous standard which required 'general acceptance' by the scientific community. Jasanoff, S. "Beyond epistemology: relativism and engagement in the politics of science." *Social Studies of Science* 26, no. 2 (1996): 393.

Such direct contestations with the FDA are only one way in which nutrition facts have been “drawn apart” when put into use in the marketplace.<sup>876</sup> Another has been the design by industry of novel foods and new food labels to reshape the meaning of nutrition facts and further stretch the FDA’s boundaries between food, dietary supplement, and drug. An article published in a 1994 *Newsweek* article described research on diet and health going “Beyond Vitamins,” describing phytochemicals in foods like broccoli and garlic which scientists believed might be the next generation of prophylactics.<sup>877</sup> Such natural extractions might legally fall under DSHEA as dietary supplements even when their pharmacological action was the same as drugs then regulated by the FDA.

One emergent food market and new category of food which grew out of this cutting-edge diet research were “functional foods” or later also called “nutraceuticals.”<sup>878</sup> The earliest definition for functional foods was in a Japanese Ministry of Health and Welfare classification in 1991, which described “FOSHU” (foods for specific health uses) as “processed foods containing ingredients that aid specific bodily functions in addition to being nutritious.” Functional foods were specifically designed to exist at the “food-drug interface,” but were being touted as having benefits well beyond drug markets and for a general diet-conscious population.<sup>879</sup> The novel foods also ran afoul of the FDA’s restrictions on implied health claims and so-called “structure/function” claims, statements which link a specific nutrient with some explicit or implied claim for physiological effect (e.g. “calcium builds strong bones” or “fiber maintains

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<sup>876</sup> On what I mean to imply by “drawing apart,” see Kaiser, D. *Drawing theories apart: the dispersion of Feynman diagrams in postwar physics*. University of Chicago Press, 2005, p. 7.

<sup>877</sup> Sharon Begley, “Beyond Vitamins,” *Newsweek* (April 25, 1994), pp. 45-49.

<sup>878</sup> “Line Between Foods and Drugs Being Blurred by DSHEA, Panel Says,” *Food Labeling & Nutrition News* (May 16, 1996), pp. 9-10. Peter Mansell, “Battling over the boundaries,” *Scrip Magazine* (October 2000), pp. 71-75. Nick Hawker, “Food: the ultimate delivery system?,” *Scrip Magazine* (April 2002), pp. 14-17.

<sup>879</sup> Clare M. Hasler, Richard L. Huston, & Eve M. Caudill, “The Impact of the Nutrition Labeling and Education Act on Functional Foods,” Shapiro, R. *Nutrition Labeling Handbook*. CRC Press, 1995, p. 471-493. For a thorough, if albeit quite political partial assessment of “function foods” and US, Japanese, and UK policies, see CSPI online working paper on “functional foods”: [http://www.cspinet.org/reports/functional\\_foods/usa\\_regltry.html](http://www.cspinet.org/reports/functional_foods/usa_regltry.html).

bowel regularity”). Such claims were seen to game the nutrition labeling system by not mentioning a specific disease but suggesting health-promoting properties of clear relevance to specific disease concerns. All of these new kinds of foods, some targeted to the sick, others to the broader public, prompted the FDA to clarify a new category “medical foods.” The classification of medical foods was in some sense the FDA’s effort to recapture the regulatory concept of “foods for special dietary purposes” before the 1970s, foods prescribed to a patient under strict medical care and not intended for wider use.<sup>880</sup>

New labeling design strategies were also decentering the message of the FDA Nutrition Facts panel. Starting in the 1990s, and accelerating in the last five years, food companies and supermarkets have experimented with new front-of-package or shelf labeling schemes intended to highlight nutrition profiles for foods, augment specific information on the nutrition label, or guide the consumer’s overall assessment of food products in the supermarket. As early as 1992 a study showed that the use of shelf-tags, tags placed on the shelves in supermarkets to draw consumers’ attention to a particular product, increased the market shares of nutrition tagged foods significantly.<sup>881</sup> There was similar potential for third-party labeling. In 1995 the American Heart Association decided to once again implement a labeling program to encourage consumers to eat risk-reducing diets. It developed the “Heart Check” program, by which foods that fit a particular nutritional profile, this time based on FDA’s nutrition labeling criteria, could place the AHA label on the front of the package. Beginning in 2002 a large sector of the food industry began to develop their own front-of-package labeling schemes intended to highlight value-added

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<sup>880</sup> “FDA Plans Separate Document on Medical Foods,” *Food Chemical News* (Dec. 9, 1991), pp. 15-16. The phrase “medical foods” was an administrative category used starting in the 1980s, but without statutory authority until it was defined in the 1988 Orphan Drug Act Amendments.

<sup>881</sup> Schucker, R. E., A. S. Levy, J. E. Tenney, and O. Mathews. “Nutrition Shelf-labeling and Consumer Purchase Behavior.” *Journal of Nutrition Education* 24, no. 2 (1992): 75–80.



nutrients in their products. In 2002, Wegmans Supermarket introduced the “Wellness Keys.” In 2004, General Mills introduced “Goodness Corners.”

The year 2006 marked a turning point in this front-of-package labeling horse race when Hanniford Supermarkets attracted a lot of media attention with its “Guiding Stars” shelf-tagging system. The FDA began soliciting public comments on whether it ought to move to restrict these labeling schemes, which sometimes selectively drew upon the “facts” of the Nutrition Facts panel threatening to undermine its authority. Despite the uncertainty in the U.S., in 2007 the UK Food Safety Agency implemented the “Traffic Light” system and Kellogg’s introduced its “Nutrition-at-a-Glance.”<sup>882</sup> Proponents of these front package and shelf labeling schemes argue that they help draw in readers to the nutrition label thereby reinforcing its utility. Critics argue that they are a further example of how the industry might distort the label’s fundamental message—to eat less—into a way to sell more.

## Conclusions

Given the substantial federal resources invested into the development and promotion of the new label, and the intense political battles fought over who could define what was a legitimate health claim or health food product, it was natural to ask: do people even read the label? Answering this question has itself been a site of much scholarly and political dispute. On the one hand, the sheer scale and popular momentum of nutrition labeling suggested it had been a total success. By 1997 more than 300 billion food product containers carried the label,

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<sup>882</sup> Wartella, Ellen A., Alice H. Lichtenstein, and Caitlin S. Boon, Editors; Committee on Examination of Front-of-Package Nutrition Ratings Systems and Symbols; Institute of Medicine. *Examination of Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report*. Washington, D.C.: The National Academies Press, 2010.

representing around 90 percent of all food products sold in the United States.<sup>883</sup> The popularity of the food label even led to the design and adoption of a similar “Drug Facts” label for all over-the-counter U.S. drugs.<sup>884</sup> The label also appeared to, at least for the time being, help counter the proliferation of sensational health claims that had been a regulatory concern for the FDA at the end of the eighties. An FTC Bureau of Economics study of health claims made in advertisements from 1977 to 1997 showed that fat-based claims peaked in 1991 and then dropped with the introduction of the label.<sup>885</sup> The USDA’s Diet and Health Knowledge Survey, 1994-96, suggested that 65% of adults used the label, and a 1999 Food Marketing Institute survey reported that 59% of consumers changed purchases because of information on the product label.<sup>886</sup>

However, less optimistic evaluations of the label were also voiced. One senior counsel of Kraft Foods, Inc. in 1996 speculated that the label had probably brought few conversions to a healthy diet. Instead, he imagined that those health-conscious consumers who might yet convert were still balancing other interests such as tastes and traditions against strictly dietary concerns.<sup>887</sup> Preliminary results of one of the FDA’s own studies, “Food Label Use and Nutrition Education Survey” (FLAPS) released in 1995 noted that “Food labels have limited potential as

<sup>883</sup> FDA Talk Paper, “FDA Food Label Wins Presidential Design Achievement Award,” at <http://www.cfsan.fda.gov/~lrd/tpaward.html>. Last visited May 23, 2006.

<sup>884</sup> The “Drug Facts” label was also designed by Greenfield/Belser Ltd, and introduced on the market in 1999. <http://www.gbld.com/index.php>. Last visited May 23, 2006.

<sup>885</sup> Ippolito, P. M, J. K Pappalardo, and United States. Federal Trade Commission. Bureau of Economics. *Advertising nutrition & health: Evidence from food advertising, 1977-1997*. Bureau of Economics, Federal Trade Commission, 2002.

<sup>886</sup> One study analyzed supermarket purchase behavior pre- and post-NLEA for salad dressings, and noted a decline in the sale of high-fat dressings. Mathios, A. D. “The impact of mandatory disclosure laws on product choices: An analysis of the salad dressing market.” *Journal of Law and Economics* 43, no. 2 (2000): 651–677. Another study provided mixed results, suggesting that nutrition labeling had raised general awareness and comprehension of foods’ nutrition profiles, but it had “widened consumer differences in terms of how much nutrition information was actually acquired—more motivated consumers and less skeptical consumers acquired more information.” Moorman, C. “A quasi experiment to assess the consumer and informational determinants of nutrition information processing activities: the case of the Nutrition Labeling and Education Act.” *Journal of Public Policy & Marketing* 15, no. 1 (1996): 28–44. On the USDA and FMI surveys, see Elise Golan, Fred Kuchler, and Lorraine Mitchell with contributions from Cathy Greene and Amber Jessup. *Economics of Food Labeling*. Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 793.

<sup>887</sup> Paul J. Petrucci, “Consumer and Marketing Implications of Information Provision: The Case of the Nutrition Labeling and Education Act of 1990,” *Journal of Public Policy & Marketing* Vol. 15 (Spring 1996): 150-153.

vehicles for nutrition education or dietary advice,” though it defended them as “ideally suited to be tools that enable consumers to implement dietary beliefs they already hold.”<sup>888</sup> Many studies suggested that, even though consumers were reading the labels, they were not reading them well.<sup>889</sup> One USDA study of the label after ten years on the market even suggested that with time nutrition label readership was declining.<sup>890</sup> This could be explained by the fact that the Nutrition Facts panel was initially released as part of a much broader education campaign, situating the label at the centre of a whole host of tools intended to both personalise nutrition advice and to ensure that consumers could adequately and correctly interpret nutrition information. Over time, as the FDA’s attention has shifted away from nutrition and towards food safety and, especially, drug approvals, funds and attention to this public campaign has ebbed.<sup>891</sup>

Despite these doubts about readership, the label’s true impact might have manifested in the role it played, once again, in dramatically altering America’s food supply and choices at the supermarket. Before introducing the nutrition labels on their food products, companies wanted to make sure their customers wouldn’t be startled by ominous figures of undesirable nutritional components of their favorite, familiar foods. Thus, from late 1990 to 1993, American food

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<sup>888</sup> The study noticed an education gap in usage. College graduates were more likely to use food labels than people with less education. “Food labels limited as education vehicles, FDA study finds,” *Food Labeling News* (March 23, 1995), pp. 36-38.

<sup>889</sup> One consumer experiment study suggested that health claims fundamentally and detrimentally alter consumers’ abilities to interpret the nutrition label. Ford, G. T., M. Hastak, A. Mitra, and D. J. Ringold. “Can consumers interpret nutrition information in the presence of a health claim? A laboratory investigation.” *Journal of Public Policy & Marketing* 15, no. 1 (1996): 16–27. Another described the tendency of consumers to “generalize” from health claims, interpret “low cholesterol” specific claims as indicators of a general claim “healthy,” suggesting such claims could easily lead to distortions of healthfulness. Andrews, J. C., R. G. Netemeyer, and S. Burton. “Consumer generalization of nutrient content claims in advertising.” *The Journal of Marketing* 62, no. 4 (1998): 62–75. Perhaps the most compelling argument against the success of the nutrition label for many was that incidences of obesity have continued to rise in America even after the label’s introduction, though on this topic studies are careful to note that causality would be difficult to argue.

<sup>890</sup> Todd, J. E., and J. N. Variyam. *The decline in consumer use of food nutrition labels, 1995-2006*. Washington, DC.: US Department of Agriculture, 2008.

<sup>891</sup> Taylor, C. L., and V. L. Wilkening. “How the nutrition food label was developed, part 1: The nutrition facts panel.” *Journal of the American Dietetic Association* 108, no. 3 (2008): 437–442. Taylor, C. L., and V. L. Wilkening. “How the nutrition food label was developed, Part 2: The purpose and promise of nutrition claims.” *Journal of the American Dietetic Association* 108, no. 4 (2008): 618–623.

companies worked to reformulate their products to give them a better nutritional profile.<sup>892</sup> In 1994 consumers might have been eating the same products as before, but were now unwittingly eating (slightly) different foods. In other words, whether or not all or most consumers were now reading the nutrition label, everyone was affected by its introduction.<sup>893</sup>

The expansion of the nutrition label in the 1990s was not only a further intervention of the nutrition paradigm into these food production regimes, it was also a further extension of public health education into private sector platforms. If in the 1970s, the FDA attempted to maintain a hands-off informational policy, nutrition disclosures as information, the NLEA gave the FDA a clear mandate for educating, resulting in the development of percent daily nutrition recommendations. The Nutrition Facts panel was designed to sit as an educational device on the packaging, distinct from the promotional advertising. But in practice, from the 1990s forward, efforts by the FDA and others to define a clean line between what is information or education versus advertising have been repeatedly frustrated by new advertising campaigns and strategies, as well as new media platform (foremost among them, the internet). The result has been a blurring of boundaries of public-private sphere in what constitutes legitimate nutrition information and legitimate diet advice.

While the Nutrition Facts panel itself should be seen as an effort by the FDA to centralize nutrition information accounting and exercise some influence over the direction of food manufacturing, the label's success has been qualified by what might be called "parasitic"

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<sup>892</sup> One of the principal reformulation shifts was from the use of tropical oils to partially hydrogenated soybean oil, so as to lower the profile of saturate fats by substituting in (partially hydrogenated) polyunsaturated ones. This shift would eventually incur another nutrition labeling concern in the 2000s with the advent of *trans* fats labeling (discussed in the conclusion).

<sup>893</sup> It is this indirect yet influential feature of informational regulation that is why many policymakers view it as such a useful tool for reshaping the marketplace.

advertising tactics,<sup>894</sup> as well as continued disputes over which experts are to be listened to in debates over diet advice.<sup>895</sup> As the broader public education campaigns around the nutrition label have disappeared, or more correctly been conceded to the substantial marketing resources of the food industry, recurrent problems with nutrition quackery and misleading health claims have re-emerged.

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<sup>894</sup> Serres, Michel. *The Parasite* (Lawrence R. Schehr, transl.). 1st ed. Univ Of Minnesota Press, 2007.

<sup>895</sup> La Berge, A. F. "How the ideology of low fat conquered America." *Journal of the History of Medicine and Allied Sciences* 63, no. 2 (2008): 139. Garrety, "Social worlds, actor-networks and controversy," p. 727. Shapin, S. "Expertise, Common Sense, and the Atkins Diet." In *Public Science in Liberal Democracy*, p. 174. Cf. Hilgartner & Nelkin, "Communication controversies over dietary risks." *Science, Technology, and Human Values*, 12(3) (1987): 41–47. In the conclusion I will describe a few of the more prominent critiques of the diet-heart thesis in recent years.

## **Conclusion**

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**The Right Tool for the Job?:**

**The Informational Turn in Food Markets**

*It seems ironic that a program to control risks through information provision, thereby maximizing individual freedom, entails increased government responsibility in areas ranging from overseeing the quality of laboratory tests to formulating a progressive educational curriculum. One characteristic of the information age will be the increased interdependence of people, each of whom has specialized technical information that others will not be able to assess for themselves.*

— Susan Hadden, *Read the Label*, 1986<sup>896</sup>

*We do not understand at all well why it can be claimed both that people cling tenaciously to familiar old foods, yet readily replace some of them with others.*

— Sidney Mintz, 1995<sup>897</sup>

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<sup>896</sup> Hadden, *Read the Label*, pp. 261-262.

<sup>897</sup> Sidney Mintz, "Food and its relationship to concepts of power." *Food and agrarian orders in the world-economy* (1995): 8.

In 2002, a new food scare hit. *Trans* fats, that is, fatty acids chains with *trans* chemical bonds formed from vegetable oils partially hydrogenated to render them more solid, were suddenly found to be even worse than saturated fats for causing cardiovascular disease and possibly a whole host of other health issues. Scientific concern about the artificial fats had circulated since 1990, when a team of Dutch researchers published a study in the *New England Journal of Medicine* which showed elevated blood-serum cholesterol among subjects administered diets high in *trans* fats. Such early concern generated more scientific reviews and some periodic media coverage of them, which drew attention to the surprisingly wide range of products — Crisco, many packaged baked goods, and most commonly-used margarines— which carried the now suspect ingredient. Certain specialized consumer organizations, in particular the Center for Science in the Public Interest, began in the mid-1990s to advocate for labeling *trans* fats.<sup>898</sup> But it was not until 2002 that the concern went public. In July, the Institute of Medicine issued a report stating, “the only safe intake of trans-fats is zero.” In September, first McDonald’s restaurants and then Frito-Lay snack foods announced that they were removing *trans* fats from their foods. By the end of the year, nutritionists, science writers, public health officials, indeed nearly everyone was advising that *trans* fats should be avoided when possible.<sup>899</sup>

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<sup>898</sup> David Schleifer shows how uncertainty about trans fats had existed long before 1990, and how the soybean oil industry, and its representatives like the Institute of Shortening and Edible Oils, had reputedly sought to shut down any researchers who voiced health concerns about the synthetic fat. Following the 1990 Dutch paper, the study which really launched the investigation into trans fats was Walter Willet’s Nurses’ Health Study, whose results were first published in 1993, and which showed a correlation between trans fatty foods and elevated risk. CSPI’s campaign against trans fats in the 1990s was ironic, since in the 1980s the organization had touted them as preferable to the (then seen-to-be) more dangerous saturated fats. Schleifer, D. Dissertation: *Reforming food: How trans fats entered and exited the American food system*. New York University, 2010, pp. 120-147.

<sup>899</sup> The narratives for the new scare were in no way uniform, and reflect the ways in which science writers frame new diet science with conventional writing narratives. Many if not most writers played on the association of trans fats with industrial food, invoking conspiratorial anxieties about the food industry manipulating our diets to create palatable but unnatural convenience foods, or lamenting the yet-again failure of science to have foreseen this latest diet risk. But other writers drew upon the commonplace suspicion of any new diet scare, characterizing the concern as yet-another case of sudden and excessive risk-aversion in a society overly attentive to the latest, breaking science news. Indeed, some southerners came to the defense of Crisco as a legitimate traditional staple, ascribing the new attacks on trans fats as an example of northeasterners’ health extremism.



The FDA was already on top of the issue. As early as November 1999, the Agency had announced its intention to add *trans* fats content to the Nutrition Facts label. In 2003, the FDA published its final rules requiring the disclosure of *trans* fats in the nutrition panel, which went into effect in January 2006. It would be the first (and last) change to the Nutrition Facts label since its introduction in 1994 up until present. Industry, too, was able to capitalize on the scare. While the food industry was quickly blamed for force-feeding the public this industrial ingredient, by 2002 much of the industry was already reformulating their products to take advantage of the “0 grams *trans* fats” labels they would be able to place on the front panel of the package under the new FDA rules. From 1993 to 2008, the period in which fears over *trans* fat translated into mandatory labeling, both supermarket and restaurant products showed a dramatic decrease in *trans* fats use, suggesting that, whether or not consumers were changing their purchasing patterns to avoid *trans* fat foods, the foods they were eating had changed.<sup>900</sup>

How are we to make sense of sudden diet fads, food scares, and shifts in food habits? In some respects the *trans* fat scare was similar in form to the 1960s cholesterol scare. A scientific study identifies a potential food risk or association, other scientific studies weigh in generating a literature and web of support evidence for the dietary risk, the concern becomes credentialed as scientific organizations and then governmental institutions create policies and issue health guidelines, and these public pronouncements generate further news headlines which in turn generate food purchasing changes in the populace and lead the food industry to reformulate its foods. In other ways it was distinct. Now there was a clear medium, the nutrition label, for the government to turn to and intervene with, and a shared public language for discussing risk

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<sup>900</sup> Mozaffarian, D., M. F Jacobson, and J. S Greenstein. “Food reformulations to reduce *trans* fatty acids.” *New England Journal of Medicine* 362, no. 21 (2010): 2037–2039. The shift to non *trans* fats recipes was no small endeavor, and among other things required a revamping of the soybean market. Starting in 2000, producers began cultivating “low-linolenic” soybeans whose oil was low in linolenic acids to replace the older varieties used to make soybean oil which had required hydrogenation into *trans* fats. Schleifer, Dissertation: *Reforming food*, pp. 212-232.

factors. Whereas *trans* fats were clearly marked as unnatural, advocates of low-fat diets in the 1960s had to contend with the fact that many of the marked-as-bad foods, such as butter and cheese, were traditional staples. (Food was still seen to be food rather than aggregates of nutrients.) Ancel Keys attempted to denaturalize our abundant diets by characterizing heart disease as a “disease of civilization,” while also seeking out alternative traditional diets (i.e. the Mediterranean diet).

With *trans* fats, on the other hand, the synthetic and the taboo converged, and critics could draw upon readily available critiques of the excesses of industrialization, if needed, when narrating a morality tale about its riskiness. Moreover, the morality tale indicted the nutrition establishment, since it appeared that margarines, which had been touted as better than butter in reducing risk of heart disease, were now among the suspect foods carrying the alien ingredient. These differences in many ways explain what has been distinctive about the *trans* fats labeling when compared to the labeling of other macronutrients – readers looking for *trans* fats on the label treat it much like a toxin and try to avoid it.<sup>901</sup> The *trans* fat scare was not the only sudden dietary shift occurring at this time. Other recent food fads, in particular the low-carb Atkins diet fad which peaked around 2002-2003, reveal an American public willing to rapidly shift its food choices and diets, and a food industry willing to oblige them, in the face of new, cutting-edge science and health advice.

The collective responses, through government and industry, to the *trans* fat scare are equally worthy of comment. In addition to adding the *trans* fat disclosure to the “Nutrition Facts” label, local initiatives to require restaurant labeling of *trans* fats also emerged; in 2006 New York City took the unprecedented move to ban the use of *trans* fats in food service and restaurant

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<sup>901</sup> Much as was Susan Hadden’s observation in the 1980s that people tended to read nutrition labels as risk warning labels, rather than as diet guides.

operations.<sup>902</sup> These responses raise the question, when faced with a new health concern for foods, what are the “proper”—be it the most effective, efficient, or ethical—individual and collective forms for remedy and intervention? This dissertation has sought to explore the political transformations that have taken place around food labeling, so as to examine the role of experts and expert institutions in shaping such debates. The latest *trans* fats episode illustrates many features of the new food status quo: the new conventional wisdom that managing diet and “healthy lifestyles” are important to future risk of disease, the “backstage of expertise” which plays an important role in framing public debates about food and nutrition, and the “logic of markets” in reconfiguring these debates and marketizing food, diet and health. Here I look at each of these issues and then conclude by reconsidering them in light of the problem of scale in mass markets and the importance of considering the infrastructures institutions create for framing information available for food.

### **The New Conventional Wisdom**

When Ancel Keys passed away in 2004 the diet-heart thesis had, in some sense, become the new conventional wisdom. As his colleague Henry Blackburn noted in Keys’s obituary in the *New York Times*, “The Seven Countries study demonstrated the preventability of heart attacks. They were not a natural aging phenomenon, or genetically predetermined or acts of God.”<sup>903</sup> Instead, millions of Americans (and millions more abroad) had come to see control of their diets

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<sup>902</sup> Though it should be noted that Denmark had banned it in 2004, being the first country to do so. For more coverage of the story New York City's war on fat, and the issues it raises on the role of the state in implementing public health measures on food and diet, see Mello, M. “New York City’s War on Fat.” *N Engl J Med* 2009, no. 360 (2009): 2015–2020. Mello, M. M., D. M. Studdert, and T. A. Brennan. “Obesity—the new frontier of public health law.” *New England Journal of Medicine* 354, no. 24 (2006): 2601–2610. For an economist’s defense of such measure that employs rational-actor models of consumers, see Votruba, M. E. “Trans Fats, the Rational Consumer, and the Role of Government.” *Virtual Mentor* 12, no. 10 (2010): 804.

<sup>903</sup> Brody, Jane E. “Dr. Ancel Keys, 100, Promoter of Mediterranean Diet, Dies.” *The New York Times*, November 23, 2004, sec. Obituaries.

as central to the reduction of risk for cardiovascular disease. Keys's book, *How to Eat Well and Stay Well the Mediterranean Way*, continued to be popular and to inspire numerous spinoff books by other authors selling the Mediterranean diet as a healthy lifestyle for preventing heart disease. And the proliferation of health claims relating diet to heart disease, all of which had at their root principles forged in the making of the diet-heart thesis, had come to reshape the informational landscape of food markets.<sup>904</sup>

Indeed, many in the field of epidemiology are now going well beyond Keys's claims that environment (in the form of diet) shapes the manifestation of chronic degenerative diseases (or

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<sup>904</sup> The rise of a nutrition paradigm in popular literature can be measured by the appearances of nutrition information and advice in different editions of *The Joy of Cooking*. Rombauer, I. S., M. R. Becker, E. Becker, and L. H. Maestro. *Joy of cooking*. [Editions 1-7] Bobbs-Merrill, 1936, 1943, 1951, 1964, 1975, 1997, 2005. In the 1936 edition, the first one, *The Joy of Cooking* offers only two pages on discussing "Convalescent or Invalid Cookery," which describes recipes over relevance to invalids or people with allergies, and notes, "when a doctor says to [otherwise healthy people], 'I recommend a light diet,' he usually has in mind foods that are easily digested, unspiced and bland." The 1943 edition registered the "New Order (For the Cook)," the wartime concerns with adequate diets, providing a "Health Chart," for "[a] daily diet for balanced and protective meals," and a "Vitamin Chart." It also included sections at the end describing sugarless and sugar-saving recipes, as well as "Meat stretching," "Economical Meat Dishes," and "Wartime Emergency Soups." (One meat substitute it recommended was the use of soybeans, helping to launch the popularity of this crop in the postwar years.) This edition did also offer a "Calorie Chart," describing its purpose to aid vanity dieters (to "[l]et your contours be your guide") but giving the proviso that readers "consult a doctor before you diet." The 1951 edition continued the section with a "Nutrition and Calorie Chart" largely focused on balancing diets to have adequate vitamins. For example, commenting that "Fats act as fuel," "transporting the fat-soluble vitamins," and "[t]herefore, the use of a variety of fats from animal and vegetable sources is recommended." *The Joy of Cooking*, 1951 edition, p. 931.

The 1964 edition registered the excitement over the cholesterol controversy in its section "About Fats," though it took a moderated tone. Noting that, "fats have fallen into disrepute of late," it continued to recommend a variety of fats from animal and vegetable sources. Yet it reminded its readers that "the fat consumption of the United States has climbed in the twenty years," and to therefore investigate whether their percentage of fat is above the national average keeping in mind "there are hidden fats in food." Thus it offered its readers an extended discussion "About fats in cooking" towards the end of the book describing the many surprising foods (olives and avocados among them) which contained fats. *The Joy of Cooking*, 1964 edition, pp. 508-511. The 1975 edition condensed its discussion of the fats concern, but discussed the specific interest in saturated fats versus polyunsaturated vegetable oils, and this time described how the mechanism of concern was cholesterol. (It did not mention the recent turn to nutrition labeling.)

Underscoring the rise of healthism in the 1970s and 1980s, the 1997 edition marked its ascent in a couple of ways. First, it now opened with a section titled "Diet, Lifestyle & Health," to supplant the Nutrition and Calorie Charts section of before. Here it spoke specifically of how diets and modern lifestyles predisposed people to heart disease, cancer, stroke, and diabetes, no longer simply talking about vanity dieters or invalids. Second, this edition featured a new government nutrition education tool, the Food Guide Pyramid, discussing "What Counts as a Serving." Reflecting the sudden health interest in olive oil, the cookbook dedicated half a page to this Mediterranean staple. (This edition also registered the growth of alternative food movements, carrying a section on "The Future of Food" that discussed organic farming.) And (as if to gratify the author of this dissertation) the most recent 2005 edition of *The Joy of Cooking* included a section on "How to Read Food Labels" in its broader chapter on Nutrition, where it displayed a graphic of the Nutrition Facts panel for the reader's reference.

what were previously called diseases of the affluent). The increase of obesity at all ages and in new populations has encouraged the profession to consider new models of obesity as a disease and new understandings of risk and responsibility. One recent study found that obesity clusters along social networks, and in this way appears to be “infectious” and spread among friends.<sup>905</sup> It has become increasingly common for public health officials to talk of the notion of an “obesogenic” or “toxic environment” – environments that promote weight gain. The concept is clearly mobilized to the purpose of reconceiving poor eating habits not so as to reflect poor, individual choices, but rather to reflect infrastructural contexts (driving versus walking constraints, availability of healthy versus unhealthy foods). A recent book, *Mindless Eating*, written by behavioral economist Brian Wansink, builds on this new public health conception of overeating, arguing that many “subtle cues” in the environment can lead us towards better or worse (healthier or less healthy) eating choices.<sup>906</sup> Former FDA Commissioner David Kessler goes further by drawing on brain scans and neurological models to argue that we are hardwired to overeat and that the food industry, through smell and visual cues, deliberately manipulates that hardwiring.<sup>907</sup> Such new models of these diseases form the bases for new intervention measures. Indeed, the current New York City Health Commissioner Dr. Thomas Farley likes to say that,

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<sup>905</sup> Christakis, N. A., and J. H. Fowler. “The spread of obesity in a large social network over 32 years.” *New England Journal of Medicine* 357, no. 4 (2007): 370–379.

<sup>906</sup> One of Wansink’s more ingenious illustrations of this argument is a study where subjects were given a bowl of soup where endless amounts of soup was secretly pumped in to the bottom of the bowl. Subjects were found to consume very large quantities of the soup before feeling satiated, whereas the control group was satisfied when finishing a normal bowl. Wansink, B. *Mindless eating: Why we eat more than we think*. Bantam, 2010.

<sup>907</sup> Kessler, D. A. *The end of overeating: Taking control of the insatiable American appetite*. Rodale books, 2009. Kessler is not alone in this belief, and increasingly local governments are using this neurological model to justify countermeasures in battling childhood obesity. See for example, Moss, Michael. “Philadelphia School Battles Students’ Bad Diets.” *New York Times*, March 27, 2011, sec. U.S. Retrieved from: <http://www.nytimes.com/2011/03/28/us/28food.html>.

“Promoting behavior change [...] is the 21st century’s equivalent of 19th-century advances in sanitation.”<sup>908</sup>

These changing models of disease etiology and public health intervention follow changes in the nature of the epidemics, particularly whom they were affecting, from what they looked like to Ancel Keys in the 1950s to what they appear to be today. Cardiovascular disease is no longer only a common disease of men, but now also for women. One of the surprising findings of the Nurses’ Health Study in 1993 was that large populations of women were also suffering from cardiovascular disease. Similarly, as cases of Type-2 diabetes have increased, it has occurred disproportionately more rapidly in African-Americans than Caucasians. As Steven Epstein discusses in his book, *Inclusion*, these “discoveries” have caused many to question the reliability and inclusiveness of large clinical trials, and to highlight one of the central weaknesses of such studies for minority groups – that you can only discover what you measure, not what you don’t measure.<sup>909</sup> The focus on obesity is also no longer limited to adults, and since the late 1980s “childhood obesity” has proven to be a particularly alarming trend galvanizing public health institutions to rethink the contexts of overeating. Perhaps the most striking change is that obesity is no longer a problem of the rich in affluent societies, but now occurs more frequently among the poor.<sup>910</sup> Indeed, Barry Popkin’s study of the “nutrition transition” worldwide, articulated in his 2007 book *The World is Fat*, further calls into question the widespread assumption that chronic diseases are a problem of developed nations, whereas infectious disease

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<sup>908</sup> Hartocollis, Anemona. “Dr. Thomas A. Farley, New York’s Health Commissioner.” *New York Times* (November 5, 2010), sec. N.Y. / Region. <http://www.nytimes.com/2010/11/07/nyregion/07farley.html>

<sup>909</sup> Epstein, S. *Inclusion: The politics of difference in medical research*. University of Chicago Press, 2007.

<sup>910</sup> Ancel Keys had anticipated this in the 1950s when he noted that even the poor in the affluent society would be at risk for cardiovascular disease.

and undernourishment are the only health problems of developing countries.<sup>911</sup> Today, even in non-affluent societies, chronic degenerative illnesses like heart disease rank among the top killers. Each of these “discoveries” since the 1980s have slowly reshaped many popular assumptions about chronic degenerative disease: they are not only diseases of affluent or middle-class white, elderly males in developed countries.<sup>912</sup>

Yet as the new conventional wisdom, Keys’s diet-heart thesis has also faced a new barrage of criticisms. The most directed and strident criticism of the diet-heart thesis would be Gary Taubes’s journalistic exposé, *Good Calories, Bad Calories*. In the book Taubes describes Keys’s activities in the 1960s, the organizational synthesis, as leading to an informational cascade, where a few early organizational endorsements created a false sense of scientific consensus.<sup>913</sup> Taubes’s critique of the diet-heart thesis is that it is “bad science,” incomplete and biased by the institutionalized momentum caused by the premature endorsement of Keys’s research. Good science for Taubes, definitive knowing, rests on methodological certainty, which he seems to reduce to Randomized Clinical Trials.<sup>914</sup> Taubes’s book is plagued with serious credibility problems of its own, chief among them that it replaces Keys’s diet-heart thesis with an equally or more problematic alternative, low-carb diets, without holding that recommendation to comparable scrutiny.<sup>915</sup> Others have also sought to discredit the diet-heart thesis as unproven science. Science studies and food studies scholars have weighed in by arguing that the

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<sup>911</sup> Popkin, Barry. *The World is Fat: The Fads, Trends, Policies, and Products That Are Fattening the Human Race*. Avery, 2008.

<sup>912</sup> What remains less clear is whether they have reshaped popular notions about personal responsibility for them. Many of the cultural values formed during the early years of these epidemics appear to still frame how people think about them.

<sup>913</sup> Taubes, G. *Good Calories, 2007*.

<sup>914</sup> Taubes, G. “Unhealthy science. Why can’t we trust much of what we hear about diet, health and behavior-related diseases.” *New York Times Magazine* (2007).

<sup>915</sup> Despite these flaws, it has exercised an enormous amount of influence in public debates because of Taubes has published in the *New York Times* and his work has been picked up by other prominent writers, Michael Pollan and *New York Times* columnist John Tierney.

cholesterol controversy was “closed” by institutional politics rather than any final scientific experiment, and that the subsequent dietary guidelines and health claims were more ideology than sound science.<sup>916</sup> These critiques, however, gloss over fundamental challenges with “knowability” in food and diet research. Unlike with prescription drugs and pharmaceuticals, it is very difficult to create carefully controlled clinical trials since monitoring daily diets and compliance is much harder than with drugs, and the scale of trials needed to prove a clinical relationship, given the multifactorial dimension of diets, becomes exorbitantly expensive. For this reason scientific organizations such as the NIH and NAS, whose evaluations are used by institutions like the FDA, often settle for reasonable proof rather than definitive proof.

A broader criticism of the diet-heart thesis and nutrition more generally is that it cultivates scientism and nutrition reductionism. Sociologist George Scrinis has argued that nutrition science has acted as a convenient handmaiden to industry by developing a scientific and industrial language for food and health.<sup>917</sup> Nutrition labelling and “nutritionism” compartmentalises other attributes that arguably commingle with nutrition (health), including economics (price, convenience), taste (flavour), place (environment, community), status (conspicuous consumption), and tradition (familiarity and religious significance). Alternatively,

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<sup>916</sup> La Berge’s account, in particular, is suspect for its gratified tone, as if debunking the scientific status quo was itself a merit in discrediting the diet-heart thesis. La Berge, A. F. “How the ideology of low fat conquered America.” *Journal of the History of Medicine and Allied Sciences* 63, no. 2 (2008): 139. Garrety, “Social worlds, actor-networks and controversy.” p. 727. Garrety’s is much more leveled, but it does not address the power, moneyed interests on both sides of the debate, which are clearly shaping the science. Such interests compel STS scholars to tread carefully when weighing opposing sides in a controversy.

My personal experience now having studied the last fifty years of nutrition and diet advice, and particularly not being a trained nutrition scientist myself, is that it is very difficult at times to determine whether and when there is a “real” controversy, which rests upon empirical evidence and testable claims, and to what extent the controversy is constructed so as to discredit a generally accepted consensus. In light of the recent and continued climate debate, and some similar features to the current fats debates, I have attempted as much as possible to stay clear of assessing such truth claims. For a study of such industry distortions and “smokescreens” in other science areas ranging from climate change to cigarettes, see Oreskes, N., and E. M Conway. *Merchants of doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Pub Plc USA, 2010. Brandt, A. M. *The cigarette century*, 2007.

<sup>917</sup> Scrinis, “On the ideology of nutritionism,” *Gastronomica*, 39–48.



Jessica Mudry critiques nutrition for its impersonal, alien, and disembedding language, which redepicts food as unfamiliar, invisible-to-the-eye chemical components.<sup>918</sup> Indeed, the shift to nutrition labeling and the opening of the floodgates for health claims on foods and nutritional supplements can be seen as a gradual erosion of the FDA historically “foods first approach” to handling diet and nutrition. These critics advocate a return to a more commonsensical, holistic, and natural language for food, but, as I discuss below, do not offer solutions for what we are to understand to be commonsense and natural in the context of our highly unnatural modern lifestyles.

They also brush over the way that nutrition labeling is embedded in a wider institutional context and existing popular modern ways of thinking about diet and risk. Health claims on foods not only reference the label, but they tie into a whole host of expert literatures and practices, which seek to translate % Daily Values and saturated fats into balanced diets, foods that are “good to eat,” and personalized practice. The Nutrition Facts panel also mobilizes a statistical way of thinking, which modern consumers have become accustomed to (even if such thinking is only partial and incomplete). While the Nutrition Facts panel extended the reach of these platforms, it has itself fast become naturalized as a background to our present foodscapes. One of my informants who worked as a representative of the food industry emphasized how really distinctive it was to grow up in a world of nutrition labeling. When talking about the early years of the Nutrition Facts label, when food industry, the FDA, and the media was first publicizing it in 1994 and 1995, she paused in the interview to note:

Here’s a thought for you. Everybody who started college today [...] every one of them has lived in a world where there was only Nutrition Facts. There was no awareness of any

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<sup>918</sup> Mudry, *Measured meals*, 2009.

other form of nutrition labeling. [For the younger generation] This is the way it's been.<sup>919</sup>

For this generation, the circulation of nutrition facts in food markets is as commonplace and mundane today as it would have appeared alien and novel to shoppers fifty years ago.

### **Expertise and its Publics**

A more tractable critique of nutritionism is that, much like healthism, it has grafted scientific languages about risk onto moralistic languages about proper ways of living.<sup>920</sup> This criticism speaks to the growing publics for scientific or expert ways of knowing food, but also to how food, which forms an intimate part of our daily living, is open to wide terrain of arbiters of taste. There has long existed a persistent public counterpoint to food and diet advice. As William Darby laments in the epigraph to the introduction of the dissertation, this is partly due to the fact that, unlike with astrophysics or brain surgery, everyone is a participant in daily food practices and “experienced” in the art of eating. Yet as we have seen, the contexts of food consumption have changed at times dramatically and people's civic epistemologies for diet can be quite fluid and contested. A question that has thus guided this project has been, how do we know what we know about the world, and more specifically how does one know that something is “good to eat”? One way this question plays out in public discourses is around questions of evidence and sources of authority: What are the criteria that we deem relevant to assess truth? How do we decide who is worth listening to? Over the course of the fifty years described in this work there has been a change in food expertise. Here I mean a shift on two levels.

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<sup>919</sup> Regina Hildwine, senior director of food labeling and standards at the Grocery Manufacturers Association, phone interview, Sept. 29, 2009.

<sup>920</sup> This is the heart of Guthman's critique of Pollan and others who use the obesity epidemic in their a moral tale about other political, economic, or social tragedies. Guthman, J. “Can't Stomach It: How Michael Pollan et al. Made Me Want to Eat Cheetos.” *Gastronomica* 7, no. 3 (2007): 75–79.

First, there has been a change in what evidence is acceptable proof to warrant institutional and governmental action: from laboratory science to epidemiology, from the physiology of the individual to the measurement of populations. This is not to say that personal appeals do not continue to dominate the civic epistemology of diet advice. When Ancel Keys passed away, it was widely remarked upon that he had lived to the age of 100. Meanwhile, Robert Atkins, whose death in 2003 was shrouded in controversy due to his having suffered a cardiac arrest the year before, passed away at the comparatively younger age of 72. For many nutrition specialists, this difference in lifespan spoke to the superiority of Keys's Mediterranean diet over Atkins's low-carb diet. This speaks to the continued importance of personal charisma and emulation in shaping our framing of diet advice. Steven Shapin has written on how food and diet advice is unlike other areas of expertise in that sometimes establishing personal rapport is a more successful strategy for building trust than proving scientific credentials.<sup>921</sup>

These commonsense modes of personalized reasoning and rhetoric continue to be important in how many of us reason about our risk by thinking about the experiences of those we know, but they are not how modern, public institutions rationalize health. The FDA builds both its public and expert authority on an epistemology of trust in others (or in numbers), what today is called evidence-based medicine. In 1945, the FDA relied on laboratory, chemical models of risk and then relied on the division between normal subjects (healthy consumers) and special patients (under personal treatment by a physician) to resolve the peculiarities of illness among different kinds of citizens. Until the 1960s drug amendments and the beginning of labeling reforms, the FDA attempted to localize the calculus of risk to these product categorizations. The drug and special dietary food labeling reforms forced the agency to grapple with the problem of

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<sup>921</sup> Steven Shapin, "Expertise, Common Sense, and the Atkins Diet," In *Public Science in Liberal Democracy*, ed. Peter W.B. Phillips. Toronto: University of Toronto Press, 2007, pp. 174–193.

mixed populations. Since the introduction of the “numerical system” in the 19th century, public health had sought to make sense of illness not as an individualized experience, but as an objective quality which arises in populations and patterns around social contours. Even Ancel Keys would have acknowledged that the fact of his long life could not alone be explained by diet. His signature contribution to diet science was his attention to population-level risk, not individualized risk. The FDA has increasingly turned to this population-level form of evidence upon which to build its policies on food and risk. The implementation of the RDAs in the 1970s, with vitamins, and the % Daily Values in the 1990s, marked the ascent of diet epidemiology as an institutionally acceptable science for the FDA and public health diet guidelines.

To some extent these two seemingly contradictory trajectories — the growth of an institutionalized, expert, and utilitarian language for diet and risk, and the persistence of a profoundly individualized, skeptical, and intuitive language of personal health as lifestyle— have found their reconciliation on the label and through the discourse of consumerism. No person has exerted more influence on the popular imagination and public framing of food politics in recent years than food writer Michael Pollan, who has embraced a populist mantle. When writing his book, *In Defense of Food*, for example, Pollan declared, “I speak mainly on the authority of tradition and common sense,” and enjoined his audience to not “eat anything your great grandmother wouldn’t recognize as food.”<sup>922</sup> A problem with these approaches to explanation is that they do not account for differences among individuals and they falsely imagine that what is true for one will be true for another. Indeed, Pollan’s invocation of commonsense is particularly problematic, since it is either reducing his pool of readers to some imagined shared community, ignoring the wide cultural variability in the United States and abroad, or is merely a (snake-oil)

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<sup>922</sup> Pollan, *In Defense of Food*, p. 13, 148.

rhetorical trick of gratifying readers' sense of self-importance by validating their pre-existing intuitions of what is a correct diet. Food studies scholars have rightly taken Pollan to task for the way he reduces the ethics of eating to “something essential and timeless about our omnivorous nature.” Such appeals to commonsense and authentic eating ignore the technological systems in which modern eaters live and make choices about food. More problematic is how Pollan and many other alternative food movement groups engage in food politics largely “through the narrow lens of market-based consumption choice.”<sup>923</sup> By adopting simple, arguably facile explanations of food, risk, and personal responsibility, these popular writers rarely offer any path to political reform beyond consumerism and deploying the “active consumer” towards purchase-driven reform.

This brings us to a second change in food expertise, what I have called an “informational turn” in everyday understandings of food, from eating foods to reading foods. Indeed, one could tell the history of food labeling as a proxy for the history of food packaging, which in turn is a proxy for the history of advances in transport and processing technologies which have extended the distances between production and consumption and played a part in creating the abstract relationships between manufacturers and consumers. A proliferation of information about what goes into food and how it is produced is, in many respects, designed to replace a lack of direct connection between food production and consumption. In this vein, drawing upon Marxist traditions of agrarian critique, cultural critics sometimes refer to a kind of modern alienation occurring with industrial food.<sup>924</sup> Packaging foods alienates consumers from the actual systems of

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<sup>923</sup> Bobrow-Strain, Aaron. “Kills a body twelve ways: bread fear and the politics of ‘what to eat?’” *Gastronomica* 7, no. 3 (2007): 45–52. What Bobrow-Strain describes as “the same old atomized and egocentric vision of *Homo economicus* engaging the world through solitary acts of consumer choice.”

<sup>924</sup> For just a couple examples, of many, see Scrinis, “On the ideology of nutritionism.” *Gastronomica* 8, no. 1 (2008), 39–48. Hightower, J. *Hard tomatoes, hard times: A report of the agribusiness accountability project on the failure of America's land grant college complex*. Schenkman Pub. Co., 1973. These critiques are not limited to

production that create the foods, and labels, which purport to bridge that gap, always end up reflecting the values and biases of the experts (often producers) who design them. This is the paradox that Susan Hadden identifies in the epigraph of this Conclusion, and a deeper paradox identified by Ulrich Beck and Anthony Giddens in their characterizations of high-modernity: even as technologies (and in this case labels) free us to further pursue and indulge our personal tastes and interests, we are ever more dependent on the experts who design, maintain, and propagate them.

In this dissertation I have tried to make visible a central irony of food labeling movements, that they seek to empower individual consumers to make choices for themselves, but they rely heavily upon a backstage of expertise that determines what should go on the label and how they should be framed. But I am not arguing that it is the labels or the language of nutrition that alienates consumers (as is argued by Pollan and others). Instead, I am arguing that the turn to labeling is symptomatic of how changes in the modes of food consumption are changing the way that people think about foods and the markets for food expertise. One change is the increasing reliance on convenience foods and dining out, and the corresponding decline in home preparation and “production” of food.<sup>925</sup> This has led to some telling paradoxes. In a 2009 *New York Times* article titled, “Out of the Kitchen, Onto the Couch,” Pollan describes with irony how there has been a growth in cooking shows even as there is a decrease in home cooking. He reconciled this seeming contradiction with the argument that we have come to see cooking shows as a “spectator sport” rather than a means of conveying useful cooking skills.<sup>926</sup>

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industrial food. Guthman, J. *Agrarian dreams: The paradox of organic farming in California*. Univ of California Pr, 2004.

<sup>925</sup> In 2012, restaurants predict they will grab 50% of US dollars spent on food.

<sup>926</sup> Pollan, M. “Out of the Kitchen, Onto the Couch.” *New York Times*, August 2, 2009, Retrieved from <http://www.nytimes.com/2009/08/02/magazine/02cooking-t.html>.

Another shift has been a change in supermarkets and nature of shopping. One head of a chain of supermarket stores in the 1960s linked the chain's successful turn to a new self-service model to "the increasing importance of the written word amongst an educated population." Information labels cater to this educated consumer, who is interested in "[l]ess talk, more print; [...] who, instead of engaging in conversation with store assistants or her peers, becomes a solitary, silent reader of innumerable printed text on packages offered for her perusal."<sup>927</sup> This informational turn has followed a proliferation of expert information and advice, and nutrition labeling feeds food literacy without necessarily directing it. Television personality Andy Rooney identified a further paradoxical feature of this information-saturated society, which speaks to how Americans are of two minds about food and diet: "The biggest seller [in America] is cookbooks and the second is diet books—how not to eat what you've just learned how to cook." The reconciliation of this contradiction is that we buy *both* kinds of books. In this sense, the "disunity of science" plays out on the label and in food choices as an "explosion of choice," a shopping around for expert diet advice.<sup>928</sup>

At present, particularly in the UK, there is a lot of scholarly interest in "choice editing," reframing marketplaces so as to encourage or discourage certain lines of socially undesirable products.<sup>929</sup> Proponents of choice-editing or choice architecture have tended to favor liberal social projects, describing choice-framing interventions as a correction to the recent and problematic "explosion of choice" or "Just Maximize Choice mantra." One problem, however, is

<sup>927</sup> Bowlby, R. *Carried away: The invention of modern shopping*. Columbia Univ Pr, 2002, p. 194.

<sup>928</sup> Galison, P., and D. J Stump. *The disunity of science: Boundaries, contexts, and power*. Stanford Univ Pr, 1996. Sigman, Aric, "Explosion of Choice: Tyranny or Freedom." *The London Daily Mirror* (June 2004).

<sup>929</sup> To the best of my knowledge, this term was first used in the 2004 to 2006 UK Sustainable Consumption Roundtable, and has been taken up, enthusiastically, by food policy scholars and industry interested in cultivating ethical consumption through labeling programs. "Choice-editing" has a lot in common with "choice architecture" models for policy-making put forward recently by American social scientists Thaler and Cass Sunstein, which has had an enormous success in United States policy circles. Thaler, R. H, and C. R Sunstein. *Nudge: Improving decisions about health, wealth, and happiness*. Yale Univ Pr, 2008. Thaler and Sunstein advocate a "libertarian paternalism" where policymakers "nudge" people's everyday decisions towards social goals.

that they struggle to establish what would be an appropriate degree of intervention. Some proponents of “choice-editing,” for example, have taken to distinguishing editing from “choice-influencing,” the former being the direct restriction of consumer choice, such as through the removal of a less desirable food products from the marketplace, the latter taking the form of information labels that encourage or discourage consumers towards a certain decision without making it for them. Such awkward distinctions only highlight how the rhetorics of choice-editing and choice architecture attempt (but ultimately fail) to gloss over fundamental governance concerns about the proper place of expertise in representative democracies.<sup>930</sup> Calling upon experts to frame or actively engineer everyday decision-making still raises the classic governance question: *Quis custodiet ipsos custodes?* Who will watch the watchers?

A second problem, particularly relevant here in the case of the Nutrition Facts panel is the arguably undemocratic manner in which the tastes of a minority population of consumers — avid dieters and label readers— determine food production practices which impact all Americans. This is a question about whether it is democratic to use the marketplace and consumer purchase power to structure social concerns such as public health. The FDA's decision in 1973 to move away from standards and towards informative labeling, and the more recent trend of easing up on the use of health claims on foods, has further placed nutrition information within market logics of value and consumer choice. Here I turn to this marketization of diet and health.

### Science for Consumption

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<sup>930</sup> Nudge-ology also glosses over the question of whether the intended subject-object of choice architecture is the end consumers or the producers. I have voiced repeatedly through the dissertation that, because it is producers who have to actually implement nutrition labeling and redesign their product lines around them, they exercise an enormous amount of influence on reframing their consequences in the marketplace.



Running through the public debates over how to label and regulate diet foods is the problem of how to make sense of the role of choice (and therefore responsibility) in matters of food consumption and personal and collective health. One part of this is the confusion over what is being “treated.” As Tim Hammonds of the Food Marketing Institute noted in the 1970s, “Nutrition tends to be a catchall phrase which the public uses as a blanket for a wide variety of issues centering in broad terms around weight, health, and fitness.”<sup>931</sup> These popular classifications are shaded by assumptions about class and the nature of choice in markets for food, diet, and health. A good example is the problem of distinguishing the nutritional value of a “candy bar” versus “power bars” or Gatorade versus a soft drink. A New York Times op-ed discussing the construction of candy as a guilty indulgence noted: “When moneyed classes indulge in sugar, it’s part of an acceptable leisure activity. But when poor people do the same thing, it’s considered pathological.”<sup>932</sup> The discovery that obesity and other chronic degenerative diseases are not unique to the affluent, those who presumably have a choice in their lifestyles, has called into question the reliance on educational and promotional tools which focus on and advocate for “healthy lifestyle” and ignore more fundamental economic contexts for disease.<sup>933</sup>

Another issue is the “productive power” of epidemic talk: in naming a behavior as a problem, it intensifies anxiety around that problem.<sup>934</sup> As discussed in the introduction Annemarie Mol identifies two contradictory logics which are blended into the expectations for this new kind of consumer, the “active” or citizen-consumer: responsibility to the state (to be healthy and for self-care) and the liberty to consume (and to enjoy food at will). By unleashing

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<sup>931</sup> Tim Hammonds, “What the Public thinks: An outline,” as found in Esther Peterson personal papers in Schlesinger Library.

<sup>932</sup> Moskin, Julia. “Studying Candy as a Guilty Indulgence.” *New York Times*, October 26, 2010, sec. Dining & Wine. <http://www.nytimes.com/2010/10/27/dining/27candy.html>.

<sup>933</sup> Fitchen, J. M. “Hunger, malnutrition, and poverty in the contemporary United States: some observations on their social and cultural context.” *Food and Foodways* 2, no. 1 (1987): 309–333.

<sup>934</sup> Guthman paraphrasing Foucault. Guthman, J. “Can’t Stomach It: How Michael Pollan et al. Made Me Want to Eat Cheetos.” *Gastronomica* 7, no. 3 (2007): 75–79.

nutrition facts through product labeling, the FDA further opened food up to this movement of healthism and individualizing choices about food, nutrition information, and responsibility for health. While personal responsibility for health is not in itself alarming, Crawford's concern was that such healthism “may in the process [...] serve the illusion that we can *as individuals* control our own existence” when health risk is in many (if not most) respects collective in nature.<sup>935</sup> In many ways, this was the core of the for the FDA when it struggled in the 1960s over deciding whether to allow fatty acids labeling, or whether to ban it as a form of nutrition quackery. The diet-heart thesis and the preventive turn in diet redefined what was meant by a health necessity and personal choice, destabilizing other understandings of food and diet as culturally expressive and pleasurable. This tension has shaped the way people characterize diet advice’s publics: are diet advice and nutrition labeling intended to be used to prevent disease (obesity; CVD), or are they tools for personal vanity (weight loss, looking good)?

The turn to nutrition information calls for study into how label design reconstitutes the consumer’s understanding of risk and responsibility, particularly with regard to his or her relationship to public health institutions. The FDA’s adoption of nutrition labeling parallels a more general cultural transformation: from a society of consumers who see themselves as healthy, to one of consumers that imagine themselves on a continuum of healthfulness, where everyone has some degree of disease risk.<sup>936</sup> In this dissertation that transformation was staged through the shifts from the “ordinary consumer,” to the “informed consumer,” and finally the

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<sup>935</sup> Crawford, R. “Healthism and the medicalization of everyday life.” Mol, A. “Good Taste.” *Journal of Cultural Economy* 2, no. 3 (2009): 269–283. Elsewhere, Mol has drawn a related distinction between the “logic of care” in medicine and the “logic of choice” that operates in consumption. Mol, A. *The logic of care: Health and the problem of patient choice*. Psychology Press, 2008. In Mol’s words, care calls for attuning treatment to ones body, whereas the logic of choice calls for calculating: “In the logic of choice a good decision depends on properly balancing the advantages and disadvantages of various courses of action. The model of ‘balance’ mobilized here comes from accounting” (p. 53). Similarly, market logics place the focus on products rather than processes or services, because, “a market requires that the product that changes hands in a transaction be clearly defined” (p. 20).

<sup>936</sup> Dumit, J. “Drugs for life.” *Molecular Interventions* 2, no. 3 (2002): 124.

“commensurated consumer.” Many scholars who have written of this emergent “healthism”<sup>937</sup> or “nutritionism”<sup>938</sup> have generally focused on its social consequences, critiquing the health movement and platforms such as nutrition labeling as reductionist, medicalizations of food, implying they subjugate healthy individuals to medically determined practices.

Here I have argued the story is more complicated. Nutrition labeling does seem to further the Hippocratic injunction, “Let food be thy medicine,” recasting food as a vector of health benefits and risks. However, the history around the FDA’s recourse to nutrition labeling suggests that this is not a story of medicalization in the sense of medical institutionalization, but rather of marketization. Labeling has recast the governance of public health as a problem of the marketplace, transforming matters of governing citizens into matters of citizens-as-consumers governing themselves. This alternative take on Hippocrates’s dictum, cultivating a healthy distrust of medical institutions and taking medicine into one’s own hands warrants closer consideration when studying market-based tools like food labels. The recent turn to direct-to-consumer advertising in pharmaceutical further illustrates how the marketization of expert knowledge can undermine the authority of physicians and the “sacrosanct” doctor-patient relationship, even as it expands a corporate model of risk, health, and treatment. It is therefore important to situate nutrition labeling in this broader movement towards the blending of public and private platforms of health.

The turn to informative labeling in the 1970s was in many ways predicated on the questionable belief that our capacities as consumers are equitable and the marketplace democratic. While it may be the case, as Kennedy declared in 1962, that, “we are all consumers,” it is also true that not all consumers are created equal. The turn to nutrition labeling was

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<sup>937</sup> Crawford, “Healthism and the medicalization of everyday life,” p. 368.

<sup>938</sup> Scrinis, “On the ideology of nutritionism.” *Gastronomica* 8, no. 1 (2008), 39–48.

predicated on a literate consumer, with sufficient time, interest, and affluence to read up on diet science and make a choice informed by scientific information as opposed to penny pinching or other cultural notions of good taste. As described at the beginning of Chapter 5, a burgeoning field of risk studies has since called into question those assumptions.<sup>939</sup> Moreover, food advocates have given renewed voice to critiques of the “let the market decide” rationale with the evocative phrase “food deserts,” urban areas where there are no supermarkets or grocers and access to food and fresh produce is limited to 7-Elevens or convenience shops.<sup>940</sup> In such places academic discussions about consumer choice crumble apart. This is a problem with the continual focus on consumer mobilization and common sense, the capacity for the first is not universally equitable, and the second not universally shared. The nutrition label, itself dependent on the dynamics of “purchase power” also falls prey to this public policy weakness. In so far as “risk communication [becomes] a ‘shield for inaction’,”<sup>941</sup> nutrition labeling and read the label movements run the social risk of giving policymakers a false sense of security that they have acted in the public interest and adequately equipped the public to handle personal risk.

Periodically scholars, ranging from Ancel Keys and Kenneth Galbraith in the 1950s, to economist and Nobel Laureate Amartya Sen and epidemiologist Michael Marmot today have tried to reframe our understanding of affluence so as to make sense of these socially maldistributive dynamics of markets. More recently, epidemiologists have begun to broach this subject in trying to forge new understanding of what are health necessities. Marmot, for example, quoted the following passage from Adam Smith’s *Wealth of Nations* to argue that disparities in power directly shape the social distribution of illness in a society:

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<sup>939</sup> Hadden, *Read the Label*, pp. 225-226.

<sup>940</sup> For a brief, but thoughtful contrast between the “paradises” of supermarkets and the problem of food deserts, see Deutsch, *Building a Housewife's Paradise*, pp. 221.

<sup>941</sup> Noah, L. “The Imperative to Warn: Disentangling the Right to Know from the Need to Know about Consumer Product Hazards,” *Yale J. on Reg.* (1994), p. 397.

By necessities I understand not only the commodities which are indispensably necessary for the support of life, but what ever the customs of the country renders it indecent for creditable people in the lowest order to be without. [...] Custom [...] has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them.<sup>942</sup>

Marmot uses this passage to illustrate how “relative deprivation in one space translates into absolute deprivation in another,” and goes on to argue that public health remedies had to address underlying social and economic inequalities. Marmot makes this point to argue for new public health tools which go beyond individualized solutions and recognize the social component of disease and social responsibilities of treatments.<sup>943</sup> Here Marmot, like Galbraith, envisions the modern health economy as fundamentally different from an earlier economy of scarcity. Keys, Marmot, and many public health officials today are seeking to correct for this trend, seeking to reconstruct social needs in the face of productive systems which distribute wealth and risk inequitably. The nutrition label was one tool of many intended encourage people to consume less. While critics perhaps complain correctly that nutrition has been distorted by agribusiness and advertising, they often miss their mark by blaming nutritionists and nutrition education.<sup>944</sup> To be an effective mode of intervention, labels depend, for better or worse, on a consumer as purchaser and active decision-maker.

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<sup>942</sup> Marmot, M. G. “Understanding social inequalities in health.” *Perspectives in Biology and Medicine* 46, no. 3 (2003): S9–S23.

<sup>943</sup> It is an argument for how the poor and impoverished *within* affluent societies can be particularly vulnerable to chronic degenerative diseases.

<sup>944</sup> Scrinis recognizes and is critical of this needs-creation feature of nutritionism: “It [...] contributes to the creation of new needs and to the idea that people are ‘in need’ of nutritional information, dietary assessment, and advice, and of nutritionally engineered and functionally marketed foods.” Scrinis, G. “On the ideology of nutritionism.” *Gastronomica* 8, no. 1 (2008): 46. While the brunt of his criticism targets agribusiness, he and others regulate lump in scientists, public health officials, and the state. This criticism is unfair for two reasons. First, it ignores how scientists like Ancel Keys (with *Eat Well, Stay Well*) or Mark Hegsted (with the *Dietary Guidelines*) have repeatedly tried to frame their advice in terms of whole foods, even as they push the “eat less” message. Second, it overstates the effectiveness of public health platforms in actually sending the intended message. Nutritionists often see their work as correctives on market practices, with limited effects when outgunned by industry marketing. The FDA’s nutrition labeling is slightly different, because of the power the agency has (but often does not use) enforcing the line between what are acceptable and illegitimate healthist depictions of food.

Indeed, in the area of food policy more than others, it has long been recognized that food and eating are a site for collective decision-making, where commensality and family or community meal planning regularly put collectives and groups before the self and individual, and where social hierarchies are reproduced.<sup>945</sup> Some have therefore tried to develop new policy tools in light of these new models of post-nutrition transition epidemics, tools that, unlike information labeling, are constructed in a way that directly addresses the collective and social nature of food and the maldistributive nature of markets. Such policies have ranged from a “sin tax” or “fat tax” on unhealthy foods and the consideration of class-action lawsuits on fast-food (drawing on analogies to cigarettes). Unlike nutrition labeling or diet advice books, these tools neither rely upon individual self-help nor corporate responsibility, but emphasize collective, public responsibility for managing illness and reducing risk.

### **Accounting for Change**

Finally, this dissertation has attempted to grapple with what I believe to be a central challenge and opportunity of studying food in modernity – the significance of scale in mass markets and food’s materiality in shaping the meaning-making which goes on around it. In a colorful passage in the opening of *More Work for Mother*, Ruth Schwartz Cowan nicely illustrates how scale transforms our understanding of seemingly mundane, everyday technologies. Drawing on the analogy of Goethe’s (or Walt Disney’s) fable of the sorcerer’s apprentice, Cowan argues that transformations in technologies of everyday life, in their aggregation, have dramatic and frequently unpredictable new characteristics beyond the control

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<sup>945</sup> Thus, Annemarie Mol describes how an individual might use regular butter for taste on her own food, but uses special low-saturated fat butters when cooking for her husband. Mol, *Logic of Care*, p. 61. Cf. Douglas, M. “Deciphering a meal.” *Daedalus* 101, no. 1 (1972): 61–81. Indeed, Sherry Turkle even describes the interruption of the family meal as a signature example of how cell phones have come to disrupt children’s social growth. Turkle, Sherry. *Alone Together: Why We Expect More from Technology and Less from Each Other*. Basic Books, 2011.

of individual owners. When the broom morphs into a multitude of brooms, its unruly behavior is beyond the control of the apprentice and takes on a life of its own.<sup>946</sup> This is because domestic practices, and I would argue food practices, are embedded in “technological systems” that extend well outside the home or spaces of consumption, such that any change alters a whole chain of practices. By embedding food consumption in larger economic, productive, and knowledge chains, one quickly sees that food consumption is not just a cumulative result of individual consumers' free and independent choices, but fits within a larger sociological context where populations literally matter and production and regulation practices concretize and endure in ways that structure food purchasing and eating. It is one thing to prepare and cook a burger in a restaurant, it is quite another to provision five billion burgers worldwide.<sup>947</sup> The change in scale, the material concerns raised when provisioning national (now global), mass markets, literally reformulates the food. This requires a change in how scholars narrate stories of food in modernity.<sup>948</sup>

Scale is important to understanding the turn to nutrition labeling as a public health management tool. Food labels appear on products in every household. It is therefore an extraordinary platform for public messaging. If one wishes to make sense of the audiences for these mass food markets or even the statistical nature of population risk, one quickly runs up against the “social fact” of populations.<sup>949</sup> The sheer growth in populations transforms much of the discourse around diet, health, and responsibility. First, one cannot understand the FDA's

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<sup>946</sup> Cowan, R. S. *More work for mother: The ironies of household technology from the open hearth to the microwave*. Basic Books, 1983, p. 10.

<sup>947</sup> This is the number of burgers one blogger estimates McDonald's to have sold in 1993, the year the Nutrition Facts label was introduced. Source: <http://overhowmanybillionserved.blogspot.com/2010/04/how-i-calculated-number.html>

<sup>948</sup> For an exemplary study on the role of scale in global foodways, see Freidberg, S. *French beans and food scares*. Oxford Univ. Press, 2004.

<sup>949</sup> Here I am echoing an argument made in some environmental histories, attempting to account for what is unique about environmental politics and global histories in the 20th century. McNeill, J. R. *Something new under the sun: an environmental history of the twentieth-century world*. WW Norton & Company, 2001.

actions as a regulatory institution without paying attention to the problem of scale and the bureaucratic interest in expediency. Diet epidemiology offers an expedient and impersonal language for managing food, risk, and populations with which to govern at distance objectively. It compresses collectivized models of risk (with embedded assumptions about responsibility and action) into objective numbers, useful for their utility in providing mechanical kinds of diet advice. Second, understanding how bureaucratic institutions like the FDA think and act on new expert knowledge, or adjudicate disputes, is important as much because of the scale of their influence as it is because of their political responsibility to the public.<sup>950</sup> Consumer studies which narrow in on the individual consumer to explore how they read the label and make food-purchasing decisions belie the label's broader iconic power. To use, again, Burkey Belser's words, "something that you see over and over and over and over again, across all media or all packaging and the like, gradually [...] seeps itself into the mind so that you start to [...] understand it and absorb it in ways that supersede reading."<sup>951</sup> Whether one believes in or cares about the science of nutrition as it is represented on the Nutrition Facts panel, its presence there forces everyone to be aware of its existence.<sup>952</sup>

The importance of scale in modern foodscapes is also why scholars need to move past individualistic modes of analysis and study the dynamics of mass markets and intermediary institutions like the FDA. This is not a call to ignore the situatedness of individual agency in local contexts. Sometimes the local rules govern change more than the *long durée*. Rather it is a

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<sup>950</sup> One could make this argument even more so for many of the large food corporations whose food purchasing decisions dramatically impact the choices of the ordinary, individual purchaser.

<sup>951</sup> Belser, Burkey, president of design firm Greenfeld-Belser Ltd., phone interview, Oct. 14, 2009.

<sup>952</sup> I do not want to overstate the Nutrition Facts panel's role in this, but I would argue that the label in coordination with the ample advertising resources of food industry have played a central part in making health consciousness, in Crawford's words, "increasingly unavoidable." Crawford, Robert. "Health as a meaningful social practice," p. 415.



call for historical analyses which account for shifts in scale from local action to global consequences.<sup>953</sup>

One clear example of this balance between the pull of local and individual idiosyncrasies and longer trends and institutional momentums can be seen in the figure of Peter Barton Hutt and the moment when the FDA introduced the first nutrition label. On the one hand, it is not hard to see the introduction of nutrition labeling as the consequence of Hutt's individual agency. Hutt was particularly experienced in the debate over health claims and filled-milk and product labeling, both from his personal experience growing up on a dairy farming family, and his professional experience at Covington & Burling. Hutt's authoritative presence, his ability to command attention and rapidly marshal a relevant legal rule, was critical to the defense of nutrition label in 1972 and 1973 when it was introduced. And the FDA's smaller size and more intimate working structure gave individuals like Hutt more direct influence over broad policy.<sup>954</sup> Hutt was also well suited to radical thinking as he was unencumbered by the institutional experiences and biases of the FDA in the 1960s:

The chief failing of the FDA people, like other bureaucracies, is lack of imagination. They have no idea of being able to start from first principles and say, 'how can we regulate this or that substance in a rational, sensible way?'<sup>955</sup>

Hutt used nutrition science as a platform to facilitate this new, more rational form of governance. His reputation in industry also freed him to push more dramatic change in the FDA's regulation of business, because the regulated industries trusted he would not abuse that change.<sup>956</sup>

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<sup>953</sup> More specifically, for Peter Galison's mesoscopic history. On accounting for collective blame, see Galison, P. "An accident of history." In *Atmospheric flight in the twentieth century*, 3–44. Dordrecht, NL: Kluwer, 2000. See Galison on "mesoscopic history," Galison, Peter Louis. *Image and Logic: A Material Culture of Microphysics*. 1st ed. University Of Chicago Press, 1997, pp. 61. Jasanoff and Martello. *Earthly politics*, 2004. Ong, *Global assemblages*, 2005.

<sup>954</sup> See Hutt, Merrill, and Grossman. *Food and Drug Law*. 3rd ed., p. 20, chart on pp. 26-27.

<sup>955</sup> Wade, "FDA General Counsel Hutt," *Science* 177 (1972): p. 501.

On the other hand, one could say that the writing was already on the wall, and by the 1970s labeling's time had come regardless of whether Hutt had joined the agency when he did. There was a widespread push for change following 1969 Conference, and scores of people in both industry and consumer groups who were looking to the label to reform food-related social issues. Indeed, the new diet and health foods of the 1960s illustrate the ways that companies were already implementing a private nutrition labeling program through health claims and fatty acids disclosure. The FDA's introduction of nutrition labeling could be narrated as a coda to that earlier story. Furthermore, as one of my informants noted in an interview when I mentioned Hutt to her, something as massive as nutrition labeling cannot be attributed to just one person, since its implementation entailed the diverse labor and dialogues between consumer activists, regulators, journalists, and especially the food companies who would have to incorporate the labels on their product packages. Hutt, in this account, merely gave form to older, deeper market forces transforming food from the thing-in-itself to something we read about. Again, the particulars to his individual articulation of these longer trends — the construction of nutrition information as an objective legal disclosure, the use of nutrition to qualify 'imitation' and displace standards, and the turn to rule-making as a means for the FDA to streamline regulation— were neither trivial, nor inconsequential for the subsequent unfolding of food labeling.

The FDA's decision in the 1970s was transformative for how it realigned consumers, the food industry, and food markets (particularly supermarkets) towards a new informational approach to selling diet and health. Within less than a decade, even those groups seeming to lose

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<sup>956</sup> This is also the less sexy side of the revolving door thesis about expertise and industry influence in regulatory bodies. Former administrative staff, such as Hutt, can become visibly invested in the FDA and its authority, and its importance to the profession. Since leaving the FDA, Hutt has been a regular advocate of equipping the FDA with adequate resources for enforcement, despite his criticisms of some of the Agency's subsequent political leaders.

from the new diet-heart paradigm—meat, egg, and dairy industries—had developed marketing strategies to capitalize off it, with “lean,” low-fat or “good” fat products, or off of the inevitable counter-markets generated by diet advice, with “natural” and “wholesome” ad campaigns. And there were also surprising winners. Fast food chains like McDonald’s and supermarkets drew upon the new “healthism” as a way to appear responsive to changing customer tastes and connect with socially responsible consumers. The technological momentum of these commercial commitments is worth highlighting. Advertisement is not a flat cultural realm, merely a rhetoric, but rather fits into an ecology of information shaped by the material practices of institutional constraints and technological innovations. Nutrition labeling brought with it a realignment of value in the food chain. There is profit to be made in newly discovered “good” fatty acids like omega-3 or the cholesterol-reducing phenols like resveratrol, in the natural foods such as fish and wines respectively which contain them, and in the new processes which allow manufacturers to more readily reformulate other foods to carry them. Nutrition investigation has become an additional appendage of the advertising landscape surrounding food today, and sits at a technology-regulation interface where new health claims and margins of profit are produced.

The turn in recent decades to informational labeling has thus created new “vested interests,” such as new designer foods or functional foods, and a new regulatory status quo, consumer choice and consumerism. These have given nutrition labeling its own kind of momentum, as made visible in the recent push for menu nutrition labeling at restaurants in the 2010 healthcare reform legislation,<sup>957</sup> or the consideration of extending regulatory control of front-panel labeling. Yet, with the turn to food labeling, we have traded one set of food policy problems (lack of flexibility in product innovation) for another (the proliferation of products or

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<sup>957</sup> On April 1, 2011, the FDA promulgated for comment rules requiring menu-labeling at all restaurants with 20 or more establishments. See the FDA’s web notice, last visited April 22, 2011: <http://www.fda.gov/food/labelingnutrition/ucm217762.htm>.

product claims of dubious value to the consumer), unloading both the liberation and burden of choice onto the individual purchaser. It has yet to be seen whether, in the face of a still growing burden of disease caused by overeating, the nutrition label was in fact the right tool for the job.



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