THE PROBLEM OF IDENTITY IN ORGANIZATIONAL
BEHAVIOR AND HUMAN DECISION PROCESSES

by

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ABSTRACT

This dissertation explores different understandings of individual and collective identity, which I draw on to address substantive problems in the organizational, behavioral, and decision sciences.

In the introductory chapter, I review theories of identity and develop a taxonomy based on source and consistency. Dominant theories suggest that identities are relatively fixed, integrated, and internally generated. Research from both sub- and supra-human human levels of analysis suggests, however, that identity is variable, non-integrated, and socially derived: they are molded by social and political context.

In Chapter II, I develop a construct of organizational attention that I use to analyze organizational change and adaptation. In particular, I asked what were American auto industry executives paying attention to in the 1960s, 70s, and 80s – a time of great technological and political change for the industry. One finding was a tremendous concern of these companies with social issues. Another was that they tended to address very public issues such as the need for smaller cars, but ignored developments that were quietly transforming their industry – the revolutionary new production system developed by the Japanese – until that too became a public issue. Attention patterns are more consistent with the demands of maintaining a social identity than with maximizing profit.

In Chapter III, I analyze the overall response of the American auto industry to Japanese developments. Even once American firms began to attend to the developments that provided advantage to the Japanese, they did not simply accept and adapt. Rather, the response seems remarkably similar to that of individuals experiencing loss. In particular, the famous Kübler-Ross (1969) five-stage model offers a useful analogy: denial, anger, bargaining, depression, and acceptance. I argue that both organizations and individuals that suffer sharp breaks with the past tend to go through these stages. A common identity imperative drives the process at all social levels through all phases. Loss, I propose, is a chasm between two forms of identity – structural and cognitive – that a viable entity must hold in some reasonable congruence.

In the final chapter, I explore the micro-foundations for findings in chapters II and III. A wide variety of research suggests that people tend to follow cultural guidelines of appropriateness rather than act self-interestedly. I ask why do people and firms seem to behave in accord with social expectations rather than more vigorously pursue selfish interests. Analysis of evolutionary process suggests selective advantage in ethical and/or culturally prescribed behavior.
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I doubt that there exists any place anywhere with greater commitment and support for such inquiry. I have never been channeled into a narrow academic niche here, nor asked to pursue a subinterest of an advisor, but rather have been encouraged to develop and pursue my own interests and to formulate all phases of major intellectual projects. To equip us for these tasks, we have had the benefit of a wide range of perspectives represented at Sloan. Rather than learning one approach, I have learned many.

John Carroll has been an extraordinary advisor in the best tradition of this institution. Faculty often use doctoral students much like pieces in a private chess game, to extend their own work and influence, but he has worked with me to develop my thoughts on what to pursue and how to pursue it. Even when offering advice, he would add that I'm free to follow it, follow someone else’s, or not follow anybody’s. He has been steady and supportive in critiquing papers, helpful in clarifying ideas, willing to both entertain big questions and attend to minute details. His broad range of interests and knowledge makes him an excellent scholar to consult on almost any research problem.

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Professors Carroll and Bailyn are model scholars and citizens as well as teachers and advisors: they show up every day, attend the department seminars and make valuable contributions. They are ethical both with respect to research – keeping an open mind and making sure others do too – and people - giving everyone their say and respecting all opinions. Beyond that, they are helpful and
down to earth. I have often felt that they are inadequately compensated for what they do as advisors, so I'm glad at least to have this opportunity to publicly acknowledge how much I have appreciated them.

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Charlie Fine provided extremely generous financial support and encouragement. He took a chance on funding my research and I am grateful for it. I was quite concerned before my first presentation to the International Motor Vehicle Researchers Conference. It was on "loss" (Chapter III), and I thought that they might be upset that this was how I was using their money and cancel my funding on the spot. The concern increased when the opening address stressed the importance of producing the kind of research that the industry sponsors wanted. Although my talk went well, Charlie reduced my anxiety by extending my funding before I presented, and, just for good
measure, sharply addressed the opening speaker in his presentation, saying that sponsor interests should not and would not determine the kind of research that we would do.

Peter Senge and Tom Malone also provided me with funding and interesting work experiences. Both also serve me as models of soft spoken intelligence and careful listening. One might not imagine listening to be a highly distinguishable skill, but both of them impressed me as no one ever has before or since with a hard-to-describe dedication to the conversation, all the more remarkable for how busy they are and how potentially distractible with myriad competing demands. Finally, I want to acknowledge my appreciation to the American Association of Collegiate Schools of Business for providing the generous scholarship that funded my first year.

I suppose that doctoral studies are never easy, but the downside of MIT’s lack of structure and direction is that it can make life very frustrating, uncertain, and difficult. So I want to thank my classmates and friends – Sandy Rothenberg, Pek Hooi Soh, John Hammond, Maw Der Foo, Annabelle Gawer, Luis Lopez, Guk Hyun Cho, Jean Jacques DeGroof, and Jeffrey Furman – for having made the experience tolerable, and even a bit fun.

* * * * * *

It is customary to mention loved ones in these pages, which strikes me as odd way to show appreciation – like a dog sharing a well-chewed bone with a beloved owner. The dog values the bone as I do this manuscript, but surely no normal person sees these “gifts” in the same light the giver does. Nevertheless, I gladly accede to convention to take this opportunity to express my heartfelt appreciation to:

- My pre-MIT friends, teachers, and long dead authors who instilled in me a love of learning, ideas, and inquiry, and whom I have largely ignored, but not forgotten these past five years.

- My children for looking up to me. That’s mostly because they’re little and I’m tall, but because they do, it makes me want to be worth looking up to.

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CHAPTER I. THE PROBLEM OF "IDENTITY":
A REVIEW AND TAXONOMY OF PERSPECTIVES ON IDENTITY

In this introductory chapter, I explore different understandings of individual and collective\(^1\) identity. Dominant theories suggest that identities are relatively fixed, integrated, and internally-generated. Research from both sub- and supra-human human levels of analysis suggests, however, that identity is variable, non-integrated, and socially-derived. I draw on these alternate understandings of identity to explain a variety of otherwise anomalous findings in the organizational, behavioral, and decision sciences.

\(^1\) Throughout this chapter, I will use the terms "collective" and "collectives" to apply to a variety of entities including organizations (firms, governmental units, quasi-governmental bureaucracies, and other not-for-profit organizations), institutions, and nations.
Science and the Search for Subject Identity.

Science can be understood as the search for subject identity, by which we normally mean the essential features of an entity. Knowledge of such essential features allows the scientist to predict behavior under known conditions. Science understands quite well these essential features of simple inanimate objects such as elements or compounds, and reasonably well essential features of even complex systems such as automobiles, assembly lines, lower animals, and human organs. I propose that science understands human beings and organizations poorly because of complications in the nature of a human or organizational “identity.”

Interest in identity has increased sharply and steadily over the past thirty five years. One out of every 10,000 books published in 1961 included the word “identity” in its title; sixteen out of every 10,000 books published in 1996 did. Relative usage has approximately tripled each decade. The increase and absolute usage is even greater among articles listed in Social Science Abstracts. 16 out of every 10,000 articles published in 1986 included the word “identity” in the title; 56 out of every 10,000 articles published in 1996 did (see Appendix for detail). But most current interest, like most contemporary understanding of human behavior, presumes relatively uncomplicated models of a more-or-less enduring identity that can predict social behavior and can be predicted by background attributes.

Various Perspectives on Identity and Their Uses

What scholars mean by identity is often unclear. Identity is a broad concept; scholarly use of the term entails everything from how one sees oneself to how others see one to a nexus of relationships. Scholars using a given perspective often have no interchange with those using another. To help clarify the term and its uses, I provide in this introductory chapter a broad taxonomy of perspectives on identity. Throughout the dissertation, I focus especially on perspectives that are not widely known which challenge the literal assumption of identity (etymologically the term means “sameness”, hence the quotes around the term in the title). Most such perspectives view “identity” as situated rather than essential, and more socially-derived than internally-generated.
In the rest of the dissertation, I draw on these different understandings to address substantive problems in the organizational, behavioral, and decision sciences. I argue that these social perspectives on identity can help explain a variety of otherwise anomalous findings of organizational behavior and human decision processes.

It is not my primary intent to provide a new theory of identity, but rather to apply existing ones in a way that helps (1) explain these phenomena, and (2) identify which theories are useful in what contexts. In Chapter III, I present a meta-theory, proposing that we constantly strive to keep these different elements of our identity in congruence. For now, I simply observe that all of these perspectives on identity have both theoretical logic and empirical support. All have elements of truth that are salient for different practical and scientific purposes.

In the remainder of this introduction I lay out the problem – the shortcomings of behavioral theory absent explicit considerarions of identity issues. I then review eight general perspectives on identity, and consider how they have been used to understand, first, individual human beings and, second, organizations. I conclude the chapter with an introduction to the rest of the thesis, a brief summary of the phenomena I have studied and what these different perspectives on self and identity can contribute toward explanation.

Standard Behavioral Theory: Goods, Goals, and Choice

Behavioral theory usually emanates from the perspective of individual human beings (c.f., Ross 1991). Human activity is most commonly understood as the attempt to obtain a variety of goods, some universal and some unique to the individual (based on our identity). The effectiveness with which we pursue and attain them is the source of extensive debate (rationality, i.e., Becker 1976, versus limited rationality, i.e, Simon 1983) as is the source of the valuations (nature versus nurture – see below), but the fact that we are goal driven for some such goods is almost beyond question. It

2 This is an explicit assumption of economics, and all of its derivative fields such as Decision Science and Management Science. It is the basis for much of the theory of the other social sciences such as Coleman (1990) in Sociology and Downs (1957) in Political Science. Most psychological theories also presume we are seeking goods, but that these goods are somewhat more idiosyncratic than economic models would suggest and that we pursue them with far less efficacy (for example, Lawler's, 1971, expectancy theory model has long been prominent).
seems almost tautological: goods are, by definition, what we seek.

Theories of behavior based on such strivings are usually made operable through constructs of utility (i.e., Von Neumann & Morgenstern 1944), which either advise that choices reflect values associated with expected outcomes or presume that they do. Such choice behavior is how adherents define "rationality." Economics and derivative sciences postulate content-free "utility" which entities—usually people, but sometimes organizations or other collectives such as nations—seek to more- or-less maximize. Some goods such as pleasure are goods-in-themselves; others such as money are instrumental goods that can be used to obtain goods-in-themselves.

Institutional and organizational behavior are most commonly understood as the aggregate consequences of individual behavior (i.e., Coleman 1991), created and changed by people acting individually or collectively as a means to pursue their individual or collective interests. Organizations, as such, are assumed to maximize instrumental goods. One version of standard behavioral theory (i.e., Friedman 1962) argues that organizations strive for but one instrumental good—profit—which can be used by their individual owners to obtain goods-in-themselves. Other versions from stakeholder theory (Freeman 1985) to agency theory (Jensen & Meckling 1976) observe that the interests of the owners may be at odds with managers, workers, customers, regulatory bodies, and other parties, each of which tends to pursue their own interests.

Identity and Standard Behavioral Theory

My work in this dissertation partly complements these perspectives and partly delimits them through questions about identity. To the degree that utility perspectives are useful, they still say little substantive about particular goals, values, or interests. Theories that could help us understand these particulars would be the comparatively more useful complement. To the degree that utility curves lack constancy, however, utility perspectives are of little use at all. As far as goals, values,

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3 Recent trends toward greater use of cross-level research (c.f., Rousseau 1985) have, I believe, hastened this trend. Although cross-level organization theory research often show the constraints given individuals face, the individual remains the actor. In economics, a simplified picture of organization as rational actor was once common, but contemporary analysis looks at individual human agents often at odds with other agents (or 'principals') of the organization (Jensen & Meckling 1976, Milgrom & Roberts 1992).
and interests are malleable, manipulable, or generally subject to social forces, it is more fruitful to strive to understand these social forces and how they act. ... It boils down to identity. Who am I? What are we? Where do my/our goals and values come from? Can they be adequately characterized? Are they malleable? If so, how and why do they change?

**EIGHT PERSPECTIVES ON (INDIVIDUAL) IDENTITY**

In conducting this thesis work, I have drawn upon many disparate theories of identity, and in this section I provide an exploratory map of this vast and growing domain. Two ways in which theories at both the individual and collective level differ most fundamentally are with respect to how they answer the questions: *What is the source of identity?* and *How does it vary over time?* Eight different sets of responses provide for the basic taxonomy of perspectives presented in Table 1 (individual identity) and Table 4 (organizational identity).

<table>
<thead>
<tr>
<th>Source of Identity</th>
<th>Relatively firm, fixed Identity based on:</th>
<th>Variable, non-identity based on:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined (by environment)</td>
<td>4. Behavioral economics Situational incentives (Becker)</td>
<td>5. Structural relations Network theory (White), Role theory</td>
</tr>
<tr>
<td>Determined (by nurture)</td>
<td>3. Childhood experience Family dynamics (Freud, Bowlby, Sullivan), Culture (Geertz, Durkheim)</td>
<td>6. Social Identity Categorization by others (Turner, Tajfel, Hogg)</td>
</tr>
<tr>
<td>Determined (by nature)</td>
<td>2. Genetic program Ethology, Sociobiology (Wilson), Evolutionary psychology (Buss, Pinker)</td>
<td>7. Confederation of independent states Modular mind (Damasio, Gazzaniga), Conflicting interests (Ester, Ansell)</td>
</tr>
<tr>
<td>Created (by interaction)</td>
<td>1. Adolescent formation Developmental psychology (Erikson)</td>
<td>8. Symbolic Interaction with others and self (Mead, Goffman, Blumer)</td>
</tr>
</tbody>
</table>

The numbering in Table 1 represents a rough progression from most to least familiar. The left hand column represents more familiar understandings of individual identity as relatively firm and fixed. I begin with Erikson’s (1968, 1980) psychoanalytic understanding of identity formation as a creative process that occurs in adolescence. This view can be contrasted with three more deterministic perspectives: identity as a function of genetic makeup or “nature” (psychobiology),
childhood experience or "nurture" (traditional psychology), and situational incentives or "environment" (economics).

The right hand column presents theories that question the literal assumption of self as identity. Structuralist accounts (e.g., White 1992) define identity strictly in terms of relationships and roles; a given person may have one, several, or no such identities. Social identity theorists (Taifel 1982, Turner 1982) note the variety of groups we belong to and how different group identities become salient under different social settings. Similarly, some psychological (Elster 1985) and neurological accounts (Damasio 1994) conceive of multiple identity within an individual emanating from different biological drives and brain areas. Finally, symbolic interactionist theory (e.g., Mead 1934, Goffman 1959, Blumer 1969) suggests an onion view of self, persona without a core, but rather a creative process where people learn to put on different faces for each nuance of a situation.

**Fixed Identity Perspectives**

**Adolescent Identity Formation (Erikson 1968)**

Identity first gained currency as a topic of widespread popular interest with the work of psychoanalyst Erik Erikson, who argued that an individual requires an identity to mediate between internal aspirations and the demands of society. In *Identity: Youth and Crisis* (1968), Erikson explained identity formation as the critical task – the crisis – of youth. The pivotal fifth step in Erikson’s scheme of development, identity formation is the point at which adolescents actively attempt to synthesize their experiences in order to formulate a stable sense of personal identity. This is a difficult task, and its difficulty can be seen by how hard adolescence is: once the body matures, it takes a long time before young people can find or create a sustaining niche.\(^4\) Whereas identity had

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\(^4\) Positive resolutions of prior "crises" – of trust, autonomy, initiative, and industry – facilitate identity formation whereas failure in these earlier developmental steps tends to lead to identity confusion. (1968:130)

\(^5\) Some anthropologists critique this observation as a peculiarly modern, Western phenomenon. Adolescence, they say, occurs only in some societies, those marked by delayed adulthood, leisure, and "prolonged" dependence. Such an argument suggests that this Eriksonian identity is a cultural product superimposed on a more natural, less fully conscious pattern of behavior, and that its relative importance is a function of societal complexity and rate of change. The more different people one must relate to, the more succinctly one must be identifiable in their minds, the more important some sort of tag by which one can be identified. Additionally, the more rapidly change takes place, the less reliable are past identities, and the more important that one creates an identity apropos to current conditions.
previously been seen as in large part given, Erikson emphasizes the role of self-knowledge and choice. Individuals who successfully negotiate this crisis come to view themselves as products of their previous experiences; a continuity of experience is sensed.

One can see the value in identity by comparing successful identity formation with the alternatives: *Identity diffusion* (1950) leads to infidelity – an inability to maintain commitments due to contradictory values systems. An example Erikson provides is the character Biff from Miller's *Death of a Salesman.* "I just can't take hold, Mom, I can't take hold of some kind of life." (1968:131). An alternative problem is *Identity foreclosure,* the status of a person who is firmly committed without having considered alternatives. If there has never been a crisis, the identity choice is the parents' rather than the child's, and is usually inappropriate for the new, changed world the child faces.

**Identities as Determined**

Erikson’s work addresses a traditional debate in the social and behavioral sciences on the relative importance of nature versus nurture in character formation. On one side, a large and growing number of scholars mostly in biology (e.g., Dawkins 1989; Hrdy 1981) and evolutionary psychology (e.g., Buss 1994, 1995; Pinker 1997) emphasize the fundamental importance of "human nature" in explaining not only individual behavior, but also social structure (Wilson 1975; Barkow, et. al. 1992). On the other side, scholars have emphasized a wide variety of early life experiences from either key relationships (e.g., Freud and psychoanalysts) or culture (e.g., Durkheim 1912; Geertz 1973) in the instillation of character. In both views, identity is implicitly simpler and more readily subjected to scientific study – especially quantified dependent and outcome variable studies – than Erikson’s creative, idiosyncratic process, understanding of which requires psychoanalytic insight.

**Nurture**

For most of the past half-century, the “nurture” view has held sway. In this view, people are

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6 In later works, Erikson (1968) called this "identity confusion." I prefer the original term because it suggests the economic man trying to pursue goals directly without identity mediating.
born as “tabula rasa” and conditioned by early training and experiences. Behavioral psychologists prominent at mid-century such as Watson (1925) and Skinner (1938) had seen people as having certain pain and pleasure reactions that make them almost infinitely conditionable (by society). “Give me the seven year old,” wrote Watson (1925) “and I’ll give you the man.” At its broadest this is also the traditional vision of sociology of man as the product of the society that creates him. Durkheim (1895), for example, wrote that “Social facts are things’ that have a ‘coercive’ relation to the individual” (Alexander & Giesen 1989:7). Beyond that, we see this as an understanding of ancient philosophy, implicit in Socrates’ proposal for child-rearing compatible with the harmonious state in The Republic (Bloom 1568 [c. 376 BC]).

Few contemporary thinkers make such universal claims, but most behavioral scientists, educators, and clinicians presume that education, parenting, and other early experiences collectively play the central role in shaping character, which in turn shapes subsequent behavior. Researchers search for measurable outcomes from specific experiences. Bowlby (1973, 1980, 1982) has documented the importance of the child’s relationship with her mother. Countless scientists from Freud (1910) to Toman (1976) and L’Abate (1997) show the influence of family dynamics on personality. Sulloway (1996) documents with remarkable thoroughness the influence of birth order on personality.

Nature

The traditional opposing view is that individuals have preferences which are largely genetically programmed. The importance of genes is supported by recent studies showing the remarkable similarity of identical twins (c.f. Plomin, et al. 1994). They are far more alike than fraternal twins who share similar developmental experiences but only half the genetic blueprints (Bouchard 1994). Most strikingly, they are almost as alike when reared apart as when reared together (Bouchard, et al. 1990). Not only are personality test results remarkably similar, but the twins display an eerie duplicity of traits such as entering water backwards, flushing toilets before using them, becoming
captain of their volunteer fire departments, and ‘sneezing playfully’ on elevators.\(^7\)

**Determined by environmental exigency**

There is a large class of behavior – economics – from which the effects of identity have traditionally been excluded. This is because economic action is assumed – or defined – as behavior to be aimed at the acquisition of instrumental goods.

Increasingly over the past generation, behavioral economists have extended the scope of economic analysis. Whom we marry and how many children we have (Becker 1981), how long we sleep (Biddle & Hamermesh 1990), and whether we commit a crime (Alper & Hellman 1988) turn out to be, at least in part, instrumental acts made on the basis of rational choice. Yet, even in the economic realm, the reality of identity is inescapable. Individuals and firms facing similar cost-benefit equations act very differently. Particular executives or firms earn reputations for being mavericks, accommodating, etc..... Findings from the American auto industry presented in Chapter II illustrates how firms tend to act in accord with internal understandings even when this may not be in their economic interests.

Indeed, the question often arises among economists of why we are not *more* instrumental in our behavior: Why do fireman and soldiers risk their lives? Why do politicians sometimes sacrifice their career for ideals (Kennedy 1956, Kalt & Zupan 1984)? Why do tenured faculty continue to publish? In short, why aren’t people *more* strategic in pursuing their interests? Decision making theorists trying to reconcile the understanding of man as a goods-seeking, more-or-less rational actor with the observation of identity-driven reasoning processes have speculated that identities function as packages (March 1994). These are necessary because limits to rationality (incomplete awareness of choices, future preferences, and consequences of potential choices) are sufficiently severe that people do better by adopting time-tested “identities” which circumscribe their cognitive

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\(^7\) Showing how the mind can be driven by innate structure suggests a great deal of general innate structure. Behavior, from this perspective, can be understood more generally as a function of evolutionary processes. A wide variety of findings showing the similarity of emotions (Lazarus 1991) and underlying language structure (Pinker 1994) across cultures support this genetic program theory. These genetic proclivities are, of course, conditioned by social processes, but even that ability to be conditioned is a genetic algorithm, as is the kind of social process and structure that the individual will strive to create (Barkow, et al. 1992, Pinker 1997).
demands and thereby improve their expected level of overall success.

Summary: The Fixed Identity

Table 2 summarizes these dominant perspectives on human identity: the presumed source of identity, fields of study and principal theorists, methods by which understanding is pursued, and how they explain individual differences:

<table>
<thead>
<tr>
<th>Source of Identity</th>
<th>Field of Study</th>
<th>Means for Understanding</th>
<th>Individual Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined (by environment)</td>
<td>Behavioral economics (Becker)</td>
<td>Economic analysis, market choices</td>
<td>Situational</td>
</tr>
<tr>
<td>Determined (by nurture)</td>
<td>Anthropology, Family Dynamics (Freud, Bowlby, Sulloway)</td>
<td>Cross-cultural studies, comparative family dynamics</td>
<td>Culture, upbringing, childhood experiences, birth order</td>
</tr>
<tr>
<td>Determined (by nature)</td>
<td>Evolutionary psychology (Buss), Ethology, Sociobiology (Wilson)</td>
<td>Twin studies, biology, evolutionary simulations</td>
<td>Genetic</td>
</tr>
<tr>
<td>Created (by interaction)</td>
<td>Developmental psychology (Erikson)</td>
<td>Psychoanalysis</td>
<td>Creative solutions to the crises of youth</td>
</tr>
</tbody>
</table>

Dominance of Individual Level Explanations

Most contemporary interest in identity is part of a general trend toward primary interest in individual rather than social fields of study. Degrees awarded at all levels in the social sciences have declined sharply from peaks in the late 1960s and early 70s, while the study of the individual has steadily increased. In 1974 there were 2.5 social science degrees for each awarded in psychology. By 1994, there were substantially more awarded in psychology than all the social science fields combined. Within the social sciences, economics has been ascendant while sociology and anthropology are in decline (NCES 1998). And within economics, the shift has been sharp from Keynesian macro-economics to Chicago-style behavioral economics. Until recently, new students would typically take one semester each of micro- and macro-economics using introductory textbooks that covered both in roughly equal proportion (e.g., Samuelson 1948-1998); today students study economic theory (e.g., Nicholson 1997), which is micro-economics, and "macro" is but one of many applied fields based on micro-economics. Even within the strictly social sciences
of sociology and political science there is increasing use of individual level micro-economic foundations. For example, Green (1994) found that the percentage of articles using a rational choice perspective in the leading journal of political science steadily increased from 0% in 1957 to 38% in 1992.

Fixed identity perspectives represent a familiar contemporary range of understanding on who we are and why we behave as we do, but individual human beings may be far less consistent, coordinated, and persistent than these dominant visions suggest. These theories leave unexplained or poorly explained a wide variety of phenomena such as ambivalence (Ainslie 1992), suicide (Durkheim 1897), rationalization (Staw 1976), attention (to be discussed in Chapter II), resistance to change and depression (to be discussed in Chapter III), general failure to optimize and a wide variety of deviations from economic rationality (to be discussed in Chapter IV). Table 1 indicates that for each of these fixed identity perspectives, there is also a corresponding vision of variable “non-identity.” In the next section, I outline these less familiar perspectives.

Variable Selves

White (1992) and other network theorists present a structural view of identity which is similar to economic theory in that behavior largely emerges as a response to environmental conditions, but whereas economists look at people or firms that happen to be in a certain social niche, structuralists look at the social niches that happen to be filled by a given entity. As in economic theories, behavior and identity are environmentally determined, but by the structure of relationships in which people and institutions are embedded rather than by incentives. White’s vision turns conventional understanding on its head: people with given identities do not create social structure; rather, social structure creates people to fill available slots. Identities need not correspond to selves; rather, positions define the people. This correspondence between positions and people is not a 1-to-1 mapping. Sometimes selves span identities, sometimes they lack one.

Both positions and selves periodically disappear, yet positions tend to remain after selves move
on. In 1812, for example, the British government appointed a civil servant to stand on the white cliffs of Dover and watch for Napoleon’s invading fleet; the position was continuously filled until 1945 (Filley & House 1969). While the mix of job positions and titles change with time, companies and economies tend to be structured in terms of specific jobs and types that precede individuals, both temporally and logically.8

Structural identity theories emphasize the importance of roles in understanding and predicting behavior. As a person changes position, so too his attributes and “personality” changes. This is a traditional story line surprise of literature, as in Mark Twain’s (1881/1997) *Prince and the Pauper*, and popular movies such as *Trading Places* (Harris & Weingrod 1983) and *Working Girl.* (Wade 1988).

One reason roles are so important is their relation to network positioning. For example, Burke (1997) shows how assumptions of identity theory can explain outcomes from exchange experiments in a wide variety of network structures. In an historical example, Padgett & Ansell (1993) show how the unique Medici identity was a function of its unique centrality in the social networks of 15th century Florence.

In most theories of identity as well as in common parlance, identity resides in the head of a given person; for network theorists, it is a property of relationships. This distinction proves useful in explaining *loss* in Chapter III. I propose that these two “identities” are usually more-or-less consistent, but that loss provides a sudden chasm which must somehow be bridged before an entity can move on.

**Social Identity Theory**

One of the shortcomings of standard behavioral theory is its inability to explain ambivalence and internal conflict. If one has reasonably clear, consistent preferences, then choice is simply a matter of searching out alternatives and assessing expected outcomes. If the expected outcome of any

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8 Anne Miner’s work (1987, 1990, 1991) shows that idiosyncratic jobs are created, and that variation in job title retention and selection rates are a mechanism of organizational “evolution.” Yet even this work indicates that for the most part positions are filled, rather than created.
alternative is preferable then the choice should be clear and easy. Even if neither alternative is
clearly preferable, then choice should be a matter of *indifference*. But most of us at least
occasionally palpably feel internal conflict. Sometimes even when a choice seems clear, for
example, that we should go on a business trip, there is still pain and hesitation at missing the child's
performance. Occasionally, we feel such ambivalence that we cannot choose at all.

The basic idea of social identity theory (e.g., Tajfel 1982, Turner 1982) is that people have
category memberships which provide self-definition and prescribe group attributes which serve as a
normative guide to behavior. The theory has been used to explain inter-group processes such as
prejudice and discrimination, as well as subjective identity and behavior.

Two sociocognitive processes underlie the theory and account for social identity phenomena:
categorization and self enhancement. *Categorization* is a basic process that arises from cognitive
limits. Social classifications are assigned by other people so that they can cognitively segment and
order their social environment (Ashforth & Mael 1989). But categorization tends to accentuate
differences, and because people have a basic need to see themselves in a positive light, *self-
enhancement* guides the social categorization process so as to favor the in-group.

The self in social identity theory is dynamically responsive to immediate context. In one
situation, nationality may be of paramount importance, in another sex or race. Turner (1982:19)
argues that the self-concept is composed of these social identities,

structurally and functionally (the self-concept's) parts are highly differentiated. They
are able to operate relative independently of each other. Thus in any given situation a
different part or combination of parts of the self-concept could be at work with the
subjective consequence that different self-images are produced.

Both structural identity theory and social identity theory posit a self structured into discreet
identities each of which may value choices differently and be in varying degrees of conflict. But
whereas structuralists emphasize the different *roles* an individual plays, social identity theorists
emphasize the various social *groups* to which we belong, and with which we are identified (Hogg,
Both of these conceptions of multiple identities are familiar to everyday experience: in certain situations, we are foremost men or women, in others an ethnic minority. We are at turns, parent, child, spouse, colleague, friend... At times our occupation defines us; at other times, perhaps a religious affiliation. Turner argues that these parts are primarily our various group memberships. He proposes that the self-concept consists of two subsystems:

Firstly there are terms that denote one's membership in various formal and informal social groups, i.e. social categories such as sex, nationality, political affiliation, religion, and so on... Secondly, there are terms that are more personal in nature and that usually denote specific attributes of the individual. (Turner 1982:18)

He adds that due to the prevalence of our group associations, “social identity may ... function nearly to the exclusion of personal identity.”

Multiple Identity

Starting from a similar set of observations as those made by structural and social identity theorists – that we are ambivalent, inconsistent, etc.... – other thinkers have looked within the person and mind, and have produced an entirely different set of explanations. Philosophers and other writers have long conceptualized individual human beings as actually composed of multiple parts or interests. Elster (1985) presents ten such understandings of multiple identity ranging from lack of overall integration and coordination to an infinitely divisible self. At a minimum, findings of behavioral decision research show that people are inconsistent in their choices, and generally subject to “framing effects,” (i.e., Tversky & Kahneman 1986) implying that there are conflicting

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9 Many developed theories of identity actually are hybrids of these idealized types:

White (1992) begins with the idea of networked roles but goes beyond to include central ideas of Social Identity theory: identity is a function of three types of network ties: "interfaces" of production relationships; "councils," the groups or assemblies with which they identify and are identified; and "arenas," the competitive markets or other competitions which hierarchically segment them.

The Identity Theory of Stryker (1987) and Burke (1997) are, in practice, quite similar to other structural perspectives, but both have roots in Symbolic Interactionism. Stryker (1980, 1987) and Stryker & Serpe (1982) have sought explicitly to translate tents of Symbolic Interactionism into an empirically testable set of propositions. In doing so, however, Identity Theory has focused strictly on roles to the exclusion of other, less easily testable, aspects of Symbolic Interactionism.

10 Based on literal meaning of identity, the whole notion of multiple identity is an oxymoron.
I. The problem of "identity"

desires; choices and other behavioral outcomes can be manipulated depending on which desires are made salient. An extreme interpretation is exemplified by Buddhist understanding of the self as an illusion, the recognition of which is the key to overcoming frustration (Kolm 1985).

This conception of multiple selves is likewise familiar to everyday experience: one self wants to eat cake, another wants to stay thin. One self wants to go on a ski trip; another wants to do nothing. One self wants to work; another seeks out any possible diversion.

Brain research now provides solid, even striking support for a literal interpretation of multiple identity. Gazzaniga (1985) reports of split brain patients in whom the language module is cut off from knowledge. One interesting phenomena is the Wada-test, which temporarily puts one hemisphere of the brain to sleep:

... the left brain no longer understands language and the right hand is paralyzed.... The left hand is mobile and sentient because the right brain is awake. I place a spoon in the sentient hand ... and remove it after 30 seconds... [After the drug wears off], I say, "I placed something in your left hand while you were asleep. Can you tell me what it was?" The patent looks puzzled and ... denies anything had been presented to his left hand. This is the left brain's language system trying to access information that exists in the brain but is tucked away. ...

I then show the patient a group of objects, one of which was the spoon. With decisive speed the patient points to the correct object and then adds, "Oh yes, it was the spoon." (1985:83-84)

Not only do his experiments suggest that the brain is modular, but also that the rational-analytical-language portion is generally more interpretive than directive. This exchange followed a Cornell Health and Safety film "counseling employees not to throw fellow employees into fires," shown only to the left eye/right brain of a patient:

MG: What did you see?
P: I don't really know... I think just a white flash.

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11 These were studies performed on people who needed to have the left and right hemispheres of their brains separated to prevent violent, life-threatening epileptic seizures. Under most natural conditions, this procedure seems not to have major adverse consequences.
MG: Were there people in it?
P: I don’t think so. Maybe just some trees ...
MG: Did it make you feel any emotion?
P: I don’t really know why, but I’m kind of scared. I feel jumpy. I think maybe I don’t like this room, or maybe you. You’re getting me nervous.” (1985:76-77)

Gazzaniga argues that this special instance gives a general insight into normal brain organization. He argues that the normal brain is organized into hundreds of modules that can express themselves only through action, not communication. Most of these systems, like those in animals, can remember events, store affective reactions, and respond to stimuli. The language portion interprets (Gazzaniga 1985:77).

A final experiment illustrates how different parts of the brain can be in conflict: Gazzaniga asks W.’s right brain/left hand to match building blocks to a pattern, which it does easily. He then asks W.’s left brain/right hand, and it fails. He then tells W. to use either hand:

I saw how the two mental systems could get into a struggle of major proportions. The left hand would make progress at solving the task and then the right would come in and undo the left’s ... accomplishments. It was as if they were in a duel (1985:51)

The rational choice theory upon which most social science, especially economics is based, is itself based on an assumption of the brain as a kind of unitary thinking machine, but this vision has been abandoned by brain researchers. Most psychobiologists and neuropsychologists now understand the human brain as organized into a host of different modules, each with its own capacity to process information and motivate behavior (Pinker 1997).

Additional support for this thesis comes from attempts to create artificial intelligence. Pinker (1997) explains the inability of engineers to produce robots able to carry out the simplest of comprehension and thinking tasks we ask of a four-year-old by the failure of “a unitary wonder principal.” Intelligent machines work as simple ones do – by solving specific problems. Complex systems such as the brain must deal with lots of specific problems. Calculation is processed through the rational, analytical part of the brain. Threats are processed elsewhere. For example,
memories of nausea seem to be processed by the enteric nervous system located in the gut (Blakeslee 1996).

These modules have the effect of creating a parliament within. Ainslee (1994) described the individual as a population of bargaining interests whose first order of business is resolution of conflict and has developed models of “internal economics” or “picoeconomics.” Noting that economics originally meant “household management,” Schelling (1984:63) proposed a comparable art or science of “egonomics” or self-management.

**Symbolic Interactionism: Self as Social Object**

I complete this taxonomic rectangle with a discussion of symbolic interactionism. According to its originator, George Herbert Mead (1934), human behavior is only indirectly understood by all the factors I have already presented – identity, personality, genes, upbringing, role, social category, or component parts, or even the situation itself. The prime determinant of human action are one’s interpretations and definitions of a situation.

Humans, like all other creatures, must fit into their world to survive. We must find food, love, and security. We must, literally and figuratively, avoid walking into walls and traps. But we live in a constantly changing world that, for the most part, we do not sense directly. We learn about it from social interaction and experience, which we process through self-reflection. As I observe in Chapter IV, human success in survival and reproduction is based on an ability to work together and fit into an inter-generational continuum. To do so, it is perhaps even more important to come to a shared understanding than a “correct” one.

We engage in social interaction and self-reflection continually\(^{12}\), which leads to continual changes in our interpretations of our situations and ourselves, understandings which correspond only indirectly, at best, with “real world” changes.

Interaction is not only what happens between people, but also within the person. We are actors

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\(^{12}\) Humans are widely recognized to be among the most social of animals (Wilson 1978). Collins (1998) points out that almost all people are in almost continual interaction with other people. Even those of us in solitary professions such as academics are continually interacting with other people indirectly through books and articles.
who have a self which we constantly talk to. This self has developed as an amalgam from all the people we have cared about and all the roles we have played. This self is what makes us human, and distinguishes us from animals and everything else. Mead’s foremost student, Herbert Blumer, wrote that,

> with the mechanism of self-interaction the human being ceases to be a responding organism whose behavior is a product of what plays upon him from the outside, the inside, or both. Instead he acts toward his world, interpreting what confronts him and organizing his action on the basis of the interpretation. (Blumer 1969:536)

Identity in this theory, as with structuralism, is distinct from the self. Our identity is the name we call ourselves, or a consolidated image we present. Much of the work on identity from this perspective comes from Erving Goffman (especially 1959, 1961), who describes the myriad of conscious, semi-conscious, and unconscious ways we tell others who we want to be or who we are, as well as who we see them to be. Goffman (1959) characterized social life as dramatic artifice, noting that the word “person” derives from the Latin “personae,” a theatrical term used for “mask”:

> ... in the presence of others, the individual typically infuses his activity with signs which dramatically highlight and portray confirmatory facts ... he must mobilize his activity so that it will express during the interaction what he wishes to convey. In fact, the performer may be required not only to express his claimed capacities during the interaction, but also to do so during a split second in the interaction. Thus if a baseball umpire is to give the impression that he is sure of his judgment, he must forgo the moment of thought which might make him sure of this judgment; he must give an instantaneous decision so that the audience will be sure that he is sure of his judgment. (Goffman 1959:30-31)

The past is important in this perspective, not because it has shaped our personality, but rather because (1) both the identity upon which our social life is dependent and the self with which we

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13 This characterization seems a bit dated now, at least for major league umpires who regularly take time and are praised by media analysts for conferring close calls. But it was different in 1959. The mere fact of Goffman taking us "backstage" to reveal this impression management changes the nature of the show. The performances played to a modern television audience, who start with different assumptions and see a different show than 1950s ballpark attendees must accordingly be revised. Part of the new performance includes, no doubt, some of these umpire "conferences."
continually confer are amalgams resulting from past social interaction; and (2) the past provides the experiences which we use to evaluate the present and predict the future.

In some ways, the symbolic interactionist perspective is more similar to the Eriksonian view than any other. Unlike roles, social classifications, or genetic impulses which are passively assigned or programmed; the personae of Mead and Goffman like Eriksonian identities require creation. Goffman saw people as inventive social actors choosing a role from an "identity kit."

In contrast to Erikson's thesis about the integration of self, however, a symbolic interactionist perspective postulates that there is no core typification of self; rather behavior and self are situationally defined. Goffman (1959, 1963, 1967) describes the "staging operations" and "impression management" involved in the presentation of self in everyday life and speaks of the various masks we learn to put on as we learn the appropriate rules of situation. Our common understanding of people leads us to imagine that under a mask lies a "true self," but is there?

Van Maanen (1979) speculates that,

... intimacy may force people to discard a particular mask, but there is little guarantee that the mask that replaces it is any more the authentic one than the one removed. (p 101)

. when all the masks are stripped away there may be nothing left except a thoroughly empty, discredited, and terrified being (p. 57).

In this view, the situated identity is enacted in interactions with other human beings, and in the absence of stable institutional arrangement, there can be no stable identity. In contrast to Erikson's view, Van Maanen (1979:92-93) writes that "humankind is social to the core not just the skin."

**Summary of Non-Identity Perspectives**

Table 3 summarizes these less-well-know perspectives on variable selves where identity is a tenuous construct, a continually shifting compromise of often conflicting roles, identification, desires or interactions. Included in the columns are sources of self, the fields of study in which they are investigated and some principal investigators, the mechanisms by which self is manifested, the
means for better understanding the self, and the explanations provided for individual differences.

**Table 3. Perspectives of non-identity**

<table>
<thead>
<tr>
<th>Source of self (Identity)</th>
<th>Field of study</th>
<th>Mechanism</th>
<th>Means for understanding</th>
<th>Individual differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined (by environment)</td>
<td>Structural sociology, Network theory (White), role theory</td>
<td>People adopt various roles</td>
<td>Network analysis</td>
<td>Position in networks, roles adopted</td>
</tr>
<tr>
<td>Determined (by nurture)</td>
<td>Social psychology (Turner, Tajfel, Hogg)</td>
<td>People are identified as part of particular groups</td>
<td>Questionnaire, Interviews</td>
<td>Social group memberships &amp; Identification</td>
</tr>
<tr>
<td>Determined (by nature)</td>
<td>Philosophy (Elster, Davidson) Egonomics (Schelling)</td>
<td>Various modules of the brain assert themselves</td>
<td>Neurology, Lab &amp; thought experiments</td>
<td>Brain structure (genes), incentives</td>
</tr>
<tr>
<td>Created (by interaction)</td>
<td>Symbolic Interactionism (Mead, Goffman, Van Maanen, Weick)</td>
<td>People define choices based on interactions with others</td>
<td>Ethnography</td>
<td>Creative solutions based on problem as defined from social interactions</td>
</tr>
</tbody>
</table>

**Creative versus deterministic explanations**

Most of the dissertation emphasizes the distinction between “fixed identity” and “variable selves” perspectives, but a brief discussion of the other axis can illuminate important epistemological considerations.

The distinction between creative (or voluntaristic or choice) and deterministic (or constraining) theories is common in review articles (Astley & Ven 1983, Hrebinik & Joyce 1985, Van de Ven & Poole 1995), but on first consideration this seems an artificial, even illogical distinction. What can one mean by creative or voluntaristic, as opposed to deterministic, explanations? All actions and behavior have causes. It’s one thing to say that as scientists we are limited in our ability to understand all the causes or to fully process the human algorithm or calculate the 17th order differential equation that results. It’s quite another thing to say that they are, in principal, incomprehensible, non-processable, or incalculable.

The implication of the latter by the terms “creative” or “voluntaristic” is at odds with a reasoned understanding of a physical universe. Nevertheless I think now that the distinction makes sense. The reason is that we are but people studying other people who do not always want to be understood. They are willing to be understood to the degree that we can be helpful to them; they are
unwilling to be understood to the degree that our knowledge gives us the upper hand. Truth be told, most science is better understood as knowledge that gives the scientist and those that control the science the upper hand: better weapons, better defenses, “value-creating” knowledge, .... The scientist as such is, at least in part, a player in the world, a person with house payments to make, kids to raise, and who wants to gain the respect of his neighbors. His principal means for attaining goods and status is to earn them through what advantage knowledge can provide, just as the politician or the businessman is, at least in part, a player out to gain advantage through authority or control of resources. If we as scientists can understand someone then we have the potential to use that knowledge for our relative advantage.

From a perspective of a supremely intelligent god all human behavior would perhaps be explicable in terms of nature, nurture, and environmental causes. From the perspective of an all-too-mortal scientist with more-or-less equivalent abilities to his subjects, these subjects are necessarily going to remain somewhat inscrutable: we have been evolutionarily selected to prevent being understandable in a way that would allow others to gain knowledge that could be used to our relative disadvantage. Such knowledge especially includes ability to predict future behavior.

Social scientists implicitly recognize this fact, and adopt methods and ethics accordingly. Scientists looking for deterministic explanations (the upper six boxes of table 1) emulate physical scientists, but emphasize unobtrusive methods and an ethic of dispassion. This emphasis seeks to make deterministic explanation possible by avoiding giving subjects reason to conceal or otherwise dissimulate.

Researchers working in the bottom two boxes of Table 1, trying to understand “creative” processes, act like humanists. It’s not enough for them to say to subjects that “nothing you say will be used against you.” Rather, they emphasize what the subject has to gain by allowing themselves to be understood. The ethic here is on helping and sharing of experience. Psychoanalysts help patients who are already striving for self-understanding to achieve it. Symbolic interactionists use ethnographic methods; at least temporarily, the researcher becomes the subject. Indeed, one of the
primary threats to ethnographic understanding is the possibility that the researcher "goes native" (Davis 1973).

Deterministic researchers cannot easily research the processes of evasion and dissimulation. In a sense, the strategy of deterministic research is to avoid triggering human responses that cause us to behave differently than physical objects. Both psychoanalyst and symbolic interactionist would protest, however, that these differences are the most important human behaviors. The dissimulation strategies most problematic for deterministic research are especially prominent features of the human behavioral repertoire and the human psyche. Frank (1988) and Pinker (1997) speculate that the reason why so many mental processes are "unconscious" is to help hide doubt, allowing the conscious actor thereby helping him to maintain self confidence and convincingly believe his own displays of fidelity, commitment, and worth. We are creatures that have evolved, in part, to be able to trick others, and because others are on guard against being tricked, the most effective way to dissimulate is to be able to trick ourselves.

**ORGANIZATIONAL IDENTITY**

This taxonomy can be used to map theories of organizational identity as well as those developed to understand individuals. White’s (1992) theory is explicitly multi-level. He proposes as a "first principle,"

the self-similarity of social organization, according to which the same dynamic processes apply over and over again across different sizes and scopes (1992:5).\(^{14}\)

Other perspectives are not explicit on this point, yet in each case there is a reasonably clear analog identified in Table 4.

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\(^{14}\) However, he argues that social forces and institutions are paramount. ("People come late historically" p.8)
Table 4: Eight views of (organizational) Identity

<table>
<thead>
<tr>
<th>Source of Identity</th>
<th>Relatively firm, fixed identity based on:</th>
<th>Variable, non-identity based on:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined (by environment)</td>
<td>4. Industrial economics Situational incentives (Scherer &amp; Ross)</td>
<td>5. Structural relations Network theory (White, Burt).</td>
</tr>
<tr>
<td>Determined (by nature)</td>
<td>2. Founding Conditions Organizational ecology (Stinchcombe, Hannan &amp; Freeman)</td>
<td>7. Multiple Interests Agency theory (Jensen &amp; Meckling) Political coalitions (March, Ocasio)</td>
</tr>
<tr>
<td>Created (by interaction)</td>
<td>1. Organizational Culture Shared experiences, assumptions (Schein)</td>
<td>8. Differentiation &amp; Integration Structural contingency theory (Lawrence &amp; Lorsch, Thompson)</td>
</tr>
</tbody>
</table>

Fixed Identity Perspectives

Common Wisdom on People and Organizations

Both standard behavioral theory and common wisdom view people as actors with interests and the organization as a collective of sometimes shared, but often conflicting, interests. Even Karl Weick (1979), one the most conceptually avant garde thinkers in the field of Organizational Behavior says that its name is a misnomer because, “Organizations don’t behave, people do.”

I have argued, however, that this conventional wisdom is a perceptual bias which arises due to the fact that we are, ourselves, people. Some human phenomena are more comprehensible when we see people less as unitary wholes than as loose amalgams of roles, group affiliations, or drives. Conversely some organizational phenomena are better understood by seeing the organization as a coherent whole. Coordination and integration are importance for both the organism and the organization, and both have a variety of mechanisms for attaining them. Two mechanisms used by organizations include socialization routines and selection processes. I pointed out earlier that the etymology of the word “person” suggests a variety of potential selves. Conversely the word, “corporation” derives from the Latin corpor or corpus, meaning “body” and suggesting a unified whole.
Organizational Culture (Schein 1992)

Much as individuals face an adaptation and integration problem, so do organizations. The culture which Schein (1992) claims is the stable solution to this problem, is the analog of Erikson’s identity on the individual level. Schein provides examples of how strong and pervasive this culture can be; and claims that in multinational firms, organizational culture can, or at least modify override local and national cultural differences (Schein 1985:ix).

Analogous to Erikson’s vision of human identity, organizational culture is rooted in unconscious, underlying, shared assumptions – usually created in some shared crisis. These shared assumptions can make certain kinds of change impossible – at least not unless and until they are unearthed and reconsidered.

Organizational Identities as Fixed, Firm, and Determined

Most prominent organizational theories view organizational identities as fixed, firm, and determined, albeit with quite different fixed natures. Three basic perspectives see organizations as fixed by initial conditions, held in place by a web of relationships, or understood simply, as entities with a particular combination of assets and liabilities striving to maximize profit.

Unchanging Organizations Imprinted by Founding Conditions

Organizational ecologists (e.g., Hannan & Freeman 1977, 1984, 1989), argue that, much as genetic codes direct an organism’s development, initial attributes direct organizational development (and lack thereof). Entrepreneurial activity generates new firms, but after a brief founding period of entrepreneurial innovation, fundamental change becomes prohibitive because of insurmountable socioeconomic constraints: fixed investments in plant, equipment and specialized personnel; political constraints supportive of vested interests; legal and economic barriers to entry into new areas of activity; legitimacy considerations; and the problem of general equilibrium. The organization thus calcifies on the basis of founding characteristics, a process Stinchcombe (1972) called imprinting.
Change-Resistant Institutional Fields

Institutional theory (Powell & DiMaggio 1991) also holds that organizations are change resistant, but it holds that an organization's identity is best understand by its institutional *environment*. Organizations, like individuals, must conform to the demands of institutional fields which provide legitimacy, standards, resources, and labor (DiMaggio & Powell 1983). In a series of research projects, Zucker shows first that institutionalized processes can make people extremely change resistant (1977), but also that,

in institutionalized elements become embedded in networks, with change in any one element resisted because of the changes it would entail for all the interrelated network elements. (Zucker 1991:105)

This leads to what she calls, "a contagion of legitimacy," wherein the institutional fields are themselves extremely change-resistant. These processes that lead to conformity in which all fields and institutions are relatively stable and unchanging (Zucker 1987).

**Industrial Organization: the Firm as Profit-Maximizer**

Even the economic theories of the adaptive firm with which inertial theories are contrasted (e.g., Holmstrom & Tirole 1991, Scherer & Ross 1990), also presume a fixed, firm identity -- that of a profit-maximizing rational actor. This is a different kind of identity to be sure, but it's enduring nonetheless. Economists generally predict efficient adaptation to change through diffusion of adaptive practices enforced by competitive market mechanisms (the firm must adapt to survive).

As the behavioral economist assumes that labor is the pursuit of instrumental goods, the industrial economist assumes that the firm is an entity created and designed for the acquisition of instrumental goods, and since the firm is the property of its shareholders, *the* instrumental good it pursues is profit.

**Variable Identity Perspectives**

**Structural identity**

Structural identity theory barely differentiates between organizations and people. Both fill social
niches. Different kinds of entities, of course, tend to fill different kinds of niches. In some cases powerful institutions such as churches and governments create the social landscape by continually replacing (White, 1992, would say "creating") the people that populate them, as well as the smaller, less-enduring organizations that service them.

Change is not the direct result of individual endeavor so much as changing social forces, which create "structural holes." Burt (1992) identifies these structural holes as the source of entrepreneurial opportunities.

An Organization’s Social Identities

Albert & Whetten's (1985) article, "Organizational Identity," is frequently cited as a theoretical development of the concept of organizational identity, but it is primarily a conceptualization of the University’s "dual identity" – part business, part church. This work highlights dual identities in much the same way as Turner (1982) defines multiple social identities: different categories defined by the environment, which influence internal behavior.

Multiple Identity – Component Conflict.

Similar in concept to individual "modular mind" or "multiple identity" perspectives, a variety of theories specify competing factions or interests within the organization. March (1962) models the firm as a political coalition. Using a model of political dynamics, Ocasio (1994) explains CEO turnover based on internal contests for control and opposition. Contrary to conventional views, he finds that more inside board members increase CEO succession. Agency theory (e.g., Jensen & Meckling 1976) takes a more fully reductionist approach – developing models based on each individual within the firm pursuing his and her own interest.

Symbolic Interactionist Organizations?

Symbolic interactionism differs from other perspectives on individual identity or self in that defining characteristics are neither fixed nor determinable, but rather change in response to social interaction. I believe that this is the best way to understand my data from Chapters II that suggests greater American automaker preoccupation with social developments of the 1960s and 70s than
Japanese advances in design production. Established theories of organization, however, do not provide for such a characterization.

There is a symbolic interactionist tradition in the study of organizations (Silverman 1970), but for the most part this tradition rejects analysis of organizations as entities as a primitive form of anthropomorphizing or reification. Van Maanen & Barley (1984:288), for example, stress the relative importance of an “occupational rather than organizational lens.” If one were to view organizations as actors, however, the structural contingency theories of Thompson (1967) and Lawrence & Lorsch (1967) provide the best analog. These authors model organizations as adapting to environment change at the fringes, using a variety of mechanisms of boundary spanning. This process is analogous to Goffman’s description of people putting on various masks to meet the various demands they face in different spheres such as home and work. According to structural contingency scholars, meeting environment depends on two often conflicting tasks: one is the problem of differentiation,

the segmentation into subsystems, each of which tends to develop particular attributes in relation to the requirements posed by its relevant external environment (Lawrence & Lorsch 1967a:3).

The other problem is integration,

the process of achieving unity of effort among the various subsystems in the accomplishment of the organization’s task (Lawrence & Lorsch 1967a:4).

Just as Lawrence & Lorsch emphasize differentiation and integration of a firm’s divisions, Goffman (1959) and Van Maanen (1979) emphasize these dimensions of the individual’s socialization into the group. Group members must share common values and understandings, but they must also fill certain differentiated roles and make a unique contribution. Although the purpose, style, and emphasis of these two schools have little in common, they both focus on these same key dimensions of effort for individuals, groups, and organizations: (1) the need to constantly adapt to meet environmental contingencies, and (2) the need to then coordinate and maintain an overall integrity, which of necessity is constantly being redefined. Both processes suggest a great
deal more continual social influence then the more prevalent perspectives on firm, fixed identities.

**APPLYING IDENTITY PERSPECTIVES**

These conceptions of changing, multiple, socially constructed identities can explain a variety of otherwise anomalous findings in the organizational, behavioral, and decision sciences. In the rest of the dissertation, I draw on these different perspectives to illuminate three diverse puzzles of organizational and individual behavior: (1) what do people and firms pay attention to (specifically why did it take so long for auto companies to take Japanese advances seriously); (2) why does it take so long for both individuals and firms to respond to change; and (3) why do results from behavioral decision-making research diverge so sharply from the normative expectations of decision analysis.

**Organizational Attention to Competitive Threats**

I began my study of organizational attention to help document how and if firms adapt to changing conditions and the role of leadership in fostering adaptation. I looked at the American auto industry to find out why it took so long to respond effectively to Japanese advances in design and manufacturing. Was the problem (1) the difficulty and time it takes to turn a massive company around, or (2) that no one was steering? To try to answer this question, I studied what executive management paid attention to from 1963-1987.

Findings from this analysis suggest that no one was steering – at least not towards profitability. Attention patterns were inconsistent with a view of the firm as a profit-maximizing entity. It took three decades for American auto-makers to pay corporate level attention to advances developed in post-war Japan. The firms attended to highly public issues, even those that had little to do directly with profitability; they failed to attend to more economically important, but less-publicized threats and opportunities.

Attention focused especially on mass media criticism. US automakers were attentive to some environmental changes – the trend toward small cars, the importance of fuel efficiency, the
importance of global markets, and global production – but were conspicuously inattentive to others – notably declining world market share and the emergence of a superior system of automobile design and production. The firms attended to threats that were publicly announced and omnipresent on the media (e.g., the VW Beetle); they ignored those that were quietly transforming their industry (the work processes of the Japanese). GM did not begin to attend to production issues until 1982, after facing public embarrassment from sharply critical television documentaries and best-selling books. Chrysler’s patterns changed three years earlier under conditions of impending bankruptcy, but even this response may be more attributable to the public stigma of bankruptcy than suboptimal financial performance. By most measures, Chrysler’s financial performance had been suboptimal for decades.

The data suggest that threats and attention are identity-specific: although the changes in the industrial environment of the period effected both firms’ costs and revenues similarly, attention patterns were strikingly different for the industry leader and the also-ran. For example, GM paid an enormous amount of attention to social and political issues. Over the sixteen years from 1965 through 1980, 56% of the lines in the GM Letters to Shareholders had nothing to do with issues that could improve firm performance. From 1971 through 1980, only 7% of the lines about PRODUCT & PRODUCTION, a broad domain of items directly related to firm performance and the areas in which the Japanese had surpassed them. Throughout this period, Chrysler focused attention on market share relative to GM and Ford more than any other matter.

Several sociological theories of organizational identity help explain these findings. Structural identity theory suggests that firms are not out to make money so much as to fill a structural hole: Executive management of General Motors seemed to view their corporation not merely or even primarily as an auto manufacturer, but as an American institution, perhaps THE American institution with responsibilities far beyond the shareholder. These included providing economic benefits and being a good world citizen, but also protecting capitalism, opportunity, and freedom in the face of what they saw as anti-business zealotry. Chrysler’s identity, by contrast – at least before Lee
Iacocca’s tenure and their recovery from near demise – was ‘(weak) third member of the big three.’ Whereas a need to maintain or salvage a reputation appears to have driven GM attention, Chrysler attention seems to have been driven by a need to prove they belong in the automaking big leagues.

Shifts in response to media criticism suggest a symbolic interactionist interpretation. Firms, like people, must fit into their world to survive. To do so, it is perhaps even more important to come to a shared understanding than a “correct” one. Like people, firms engage in continual social interaction. This social, symbolic interaction leads to changes in executive interpretations of their situation and their firm, which lead to changes in behavior, which in turn lead to a new identity in the public mind.

Most studies demonstrating social or institutional effects distinct from economic factors involve governmental agencies (e.g., Selznick’s, 1949, study of the Tennessee Valley Authority) or other non-profit institutions (e.g., DiMaggio’s, 1991, study of art museums or Brint & Karabel’s, 1991, study of community colleges). Chapters II and III, however, suggest far greater generalizability for these theories in that they explain behavior of the world’s preeminent industrial corporation and even in response to a major competitive threat.

A Multilevel Analysis of Loss

In the third chapter, I analyze the overall response of the American auto industry to Japanese developments. Even once American firms began to attend to the developments that provided advantage to the Japanese, they did not simply accept and adapt. Rather, the response seems remarkably similar to that of individuals experiencing loss. In particular, the famous Kübler-Ross (1969) five-stage model offers a useful analogy: denial, anger, bargaining, depression, and acceptance. I document in the auto industry an initial period of non-response, followed by an outburst of collective anger replete with car-bashings and murder. Next was a period of attempting to mitigate the effects of the change through negotiation, followed by a long period of internal conflict and change. Only after this long sequence (decades in the case of GM), did the firms accept and adapt to changing conditions. Moreover, in other examples in organizational literature and
experience, one finds this sequence repeatedly in response to sharp changes in relationships, value of competencies, and status.

This sequence is a challenge not only to academic organization theory but to academic psychology as well. Although clinical therapists worldwide have long found the five-stage model of loss extremely useful in talking about, understanding, and treating those who experience a wide variety of losses, the model remains empirically controversial, and without a theoretical explanation supporting the logic of a stage theory. Anyway one looks at it, the loss phenomenon is baffling and anomalous from any standard behavioral theory perspective.

I argue that loss can be understood as identity incongruence. Loss changes structural relationships (identity as defined by White, 1992) such that they are far less likely to correspond to cognitive understandings of roles and responsibilities (identity as defined by Erikson, 1967, and Schein, 1985), creating a sudden chasm that must be spanned before an entity can proceed. What happens when a woman who thinks of herself as a wife no longer has a husband? Or when a firm presumed to be at the pinnacle of the industrial world is bypassed by an upstart from a lesser nation? The apparent response among entities at all social levels seems to be the pattern similar to that described by Kübler-Ross.

Loss illustrates well both the necessity and artifice of goals. When goals have lost their meaning we stumble and stagnate, and we must construct new ones prior to moving toward them, or moving at all. The study suggests that indifference curves are neither fundamental nor enduring, thus raising questions about their suitability as basic building blocks of behavioral theory.

**Good Decisions**

Chapters II and III are hardly the only studies that cast doubt on the empirical validity of the economic perspective. The whole tradition of sociological organization theory suggests that firms are not particularly rational actors (c.f. Scott, 1992, or Perrow, 1986, for general accounts; Fligstein, 1985, provides the example of the trend toward diversification). Likewise, a remarkable
body of experiments from behavioral decision research summarized in Chapter IV illustrate persuasively that people are not particularly rational actors either. Ethical tradition, sensibilities, and argument cast additional doubt. Tradition, intuition, and scholarship in ethics regularly counsel charity, moderation, compassion, abstinence, and selflessness. Deontological ethicists emphasize the importance of duty, obligation, and principle such as "do no harm."

Yet economic perspectives remain dominant with an apparent a. e-in-the-hole: In a competitive situation, if you intelligently maximize your expected outcomes and I do not, you will prevail! And either through learning, mimicry, or selection processes, your values will prevail and your style or rule of goal-maximizing will prevail. Economic theory rests on an evolutionary imperative: In a competitive world, behavior in accord with the model will aid, if not determine, survival. This evolutionary imperative underlies almost the entire curricula of management science, policy, and strategy.

So how can it be that people and institutions don't follow the utility-maximizing model? The standard answer is that either our studies or our subjects are defective, that we are insufficiently endowed with both reason and will, but that evolutionary pressure ultimately must force both individuals and institutions – especially economic institutions – into accord with economic normative models of behavior.

In Chapter IV, I propose that the goal-oriented view of evolutionary process upon which economic logic rests is seriously incomplete. More thorough analysis of human evolutionary process suggests the value of behavior in accord with the theories of flexible, multiple identity presented here. In accord with structuralist theories (Table 1, perspective #5), we need to adopt roles, and fit into a social structure and intergenerational continuum. Consistent with the demands of social identity theories (perspective #6), we need to be flexible in our adoption of goals that accord with our social groups. Theories of the modular brain and multiple identity (perspective #7) suggest that analytic rationality is but one of several important functions of the mind, and probably not the most important. And consistent with the logic of symbolic interactionism (perspective #8),
the extensive social interaction, empathy, sympathy, and self-reflection characteristic of humans, appear remarkable adaptations that make us far more fit for survival and reproduction than any enhanced optimization abilities ever could.

Chapter I summary

My primary goal in this introductory chapter has been to present and categorize perspectives on individual and organizational identity. Identity is a central issue in behavioral and policy science. A great deal has been done to develop perspectives, but little to integrate, consolidate, or even cross-inform scholars of key concepts. This task is important because the common wisdom and predominant theories of fixed, firm identities ignore central characteristics of the person and the organization. Identities are not as fixed and consistent as is often assumed: rather we are in continual flux, changing with new roles, group identification, conflicting impulses, and social influence. Neither are identities as amenable to scientific prediction as is often assumed: rather we are creative by necessity, employing free-will and self-reflection to be understandable or enigmatic as the situation demands.

REFERENCES


R. Schalensee and R. Willig, Amsterdam: North Holland.


Press.


Appendix: Increasing Interest in Identity

Use of "identity" in book titles listed in the WorldCat library database
(Source: OCLC, Online Computer Library Center, Inc., Dublin, Ohio as of May 29, 1998)

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Use of "identity" in article titles listed in Social Science Abstracts
(Source: The H. H. Wilson Company as of May 29, 1998)

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Note: Most journals listed in Social Science Abstracts only came on-line in the mid 80s.
CHAPTER II. EFFECTS OF ENVIRONMENTAL CHANGE AND ORGANIZATIONAL IDENTITY ON ORGANIZATIONAL ATTENTION: ANALYSIS OF AUTO INDUSTRY LETTERS TO SHAREHOLDERS 1963-1987

* This research was sponsored by the International Motor Vehicle Project. I am grateful to Willie Ocasio for providing the idea for this paper, encouraging me to take up the project, and for providing many hours of patient introduction to the topic; to Charlie Fine for generous financial support and encouragement; to Lotte Bailyn, John Carroll, Deborah Ancona, Maureen Scully, and Sandra Rothenberg for comments on drafts of this paper; and to Sandra Chan and, especially, Don Lacey for intelligent and conscientious research assistance.
Project Introduction and Motivation

Much debate in management theory concerns the degree to which organizations can adapt to environmental change and the role of leadership in facilitating such change. Many firms today face the situation American auto makers faced in the 1970s: an unexpectedly strong challenge from an unexpected corner of the globe – Japanese preeminence in design and manufacturing – and socio-political changes that threaten their viability – the Arab oil embargoes, which quadrupled the price of gasoline. In the wake of globalization and unstable interdependencies, past competencies can quickly become obsolete and a firm’s position in the market and society can abruptly deteriorate. In the aftermath of these events in the late 1970s and early 80s, the continued viability of American automaking was in doubt, and the industry came under a barrage of criticism from all corners – politicians left (Brown 1980, Commoner 1980) and right (Clark 1980, Stockman 1986), academics (Ackoff 1978), public interest groups (Nader 1965, 1970, 1973), financial analysts (Keller 1989), journalists (Halberstam 1985, Yates 1983) – and even from within (Wright 1979) for a failure to foresee and respond effectively to these events. But did they fail? And, if so, why?

A study of organizational attention can illuminate the first step – or lack thereof – in organizational adaptation, but also complicates the notion of adaptation implicit in the debate. In this project, I develop a construct of organizational attention to analyze change in the auto industry over three decades, including periods of relative environmental calm and upheaval. Two principal findings emerge:

1. A long lag between the central event of the period – the emergence of Japanese pre-eminence in design and manufacturing – and organizational attention.

2. A pattern of organizational attention that is incompatible with profit maximization. Rather, firms attend primarily to public criticisms and concerns, driven apparently by executive motivation to maintain or enhance their firms’ organizational identity.

1. Theory

Dominant Theoretical Perspectives – Intended Rationality

Dominant schools of organization theory – economic, managerial, and sociological – predict widely divergent responses to important environmental change, but despite these divergent predictions they tend to assume similar managerial reasoning process. Economic theories (e.g., Holmstrom &
Tirole 1991, Milgrom & Roberts 1992) treat attention as relatively unproblematic: Rational actors pursue interests through behavioral change in response to change in conditions. Agents scan their environment for opportunities and threats, and change practices as necessary to optimize utility functions according to new parameters. Efficient diffusion of adaptive practices ensue through either learning or selection processes. Within economics, the principal problem is seen as misalignment of interests – that executive interest often differs from that of owners (Jensen & Meckling 1976) or of the organization as a whole (Edwards 1979, Goldberg 1980).

Popular management writers (e.g., Ackoff 1981, Covey 1987, Senge 1991, Handy 1994) tend to relax assumptions of self-interest and focus on particular difficulties in the perception and pursuit of the greater good, but are otherwise similar. In these works, the executive is at the cognitive and spiritual center of the organization. A reasonably competent manager knows his environment. The presumed challenge is of vision and implementation – how to prepare for the future and how to overcome organizational inertia.

Even sociological critics of these perspectives tend to accept that resistance to economic adaptation lies in the body of the firm and its environment rather than at its head. Marxists such as Edwards (1979), Goldberg (1980), and Stone (1974) decry executives’ propensity to change (and lay off workers or expropriate their rents). Organizational ecologists (Hannan & Freeman 1977, 1984, 1989) argue that organizations are characterized by resistance to change, but they claim this is due to socioeconomic constraints: fixed investments in plant, equipment and specialized personnel; political constraints supportive of vested interests; legal and economic barriers to entry into new areas of activity; legitimacy considerations; and the problem of general equilibrium.

**Bounded Rationality**

Simon’s theory of bounded rationality (1947, 1960, 1976; elaborated in March 1994: ch. 1) is perhaps the most influential perspective on organizational and managerial attention: Executives are “intendedly” rational in that they would like to maximize the attainment of valued goods, but optimization is impossible because of cognitive limits on attention, memory, comprehension, and communication. Constraints on attention are particularly severe, leading to a pattern of satisficing rather than optimization: we attend primarily to those situations where minimal satisfaction levels are unmet or threatened.
Alternative Drivers of Attention – Identity and Appropriateness

But while the satisficing thesis has been influential in the abstract, little concrete empirical research has been conducted on what specific aspirations and dissatisfactions actually drive attention. A variety of theories may inform a search. In this study of the American auto industry, I began by considering the economic, managerial, and sociological theories already introduced, but the data suggest another possibility – that the firms’ identities helped direct executive attention.

Critiques of the dominant perspectives question whether individuals or organizations are even “intendedly rational” in an economic sense. Sociological theories traditionally view people more as norm-based followers than rational optimizers (Parsons 1951) and humanistic perspectives generally view normative-affective factors as far more influential than logical-empirical factors (Etzioni 1988). In this chapter, I elaborate a perspective developed by March & Olsen (1989) and March (1994: ch. 2), which argues that the reasoning which drives attention and choice is less characterizable as a logic of consequence than as a logic of appropriateness. In contrast to the familiar logic of consequence – reasoning based on preferences, alternatives, and expectations – logic of appropriateness requires reasoning based on identity, recognition, and rules. Decision makers implicitly or explicitly must answer three questions for themselves and their firm:

* Who am I? What kind of organization is this?

* What is my situation? What is the situation of this organization?

* What does a person such as myself / an organization such as ours do in a situation like this?

Research Questions and Chapter Organization

I began this project by attempting to understand the American auto industry’s apparent lack of response to emerging Japanese preeminence. Dominant theories implicitly assume that executives will at least attend to and pursue their interests; per economic theory what they pursue and attend to are by definition their interests. A theory of bounded rationality, however, suggests that decision-makers must use rough heuristics to determine which issues will most affect outcomes and where attention can provide the most leverage; this approximating model leaves open the possibility of an attention pattern that diverges somewhat from interest. A logic of appropriateness goes further in proposing that pursuit of interest per se is not even the driving factor in attention; rather, attention is a function of identity, socially validated rules of behavior, and circumstance. In this case, the dominant theories suggest that
auto executives would have at least been paying attention to the Japanese (despite differing predictions on the efficacy of outcomes). The latter theories suggest that other issues less relevant to profit or interest per se may have taken precedence and that executives may have simply, unwittingly ignored these developments.

In Section 2, I present the basic constructs and methods of environmental change and executive attention and proceed to analyze the adaptability of executive attention to such change in Section 3. In Section 4, I seek to develop more general understanding for what these firms paid attention to and why and conclude with a discussion of implications in Section 5.

2. BASIC CONSTRUCTS AND METHODS

Environmental Change

A Point of Change?

The auto industry is affected in important ways by many external events – recessions, inflation, an emerging consumer movement – and no day passes without some event that in some way affects the industry. However, three developments of the early 1970s – the formation of the OPEC oil cartel with the power to quadruple the price of gasoline, globalization of the industry, and Japanese advances in design and manufacturing – are as dramatically important as we are likely to find for the strategic interests of a major industry, and thus a good point of reference for study of the effects of environmental change.

Oil Embargo

The oil embargo shattered a taken-for-granted reliance on cheap, available oil. It had long been argued that American manufacturers should have anticipated such a development. Environmentalists had predicted eventual shortages (i.e., Hardin 1972; Meadows & Club of Rome 1972) and the Middle East had always been politically unstable. In a series of Harvard Business Review articles, a planner (Wack 1985a, 1985b) tells how Shell accurately forecast and prepared for the coming embargo as a result of “strategic contingency planning” and simple deductive reasoning (although no other major oil company did). Halberstam (1985) begins his book, The Reckoning, with two chapters on the exploits of an oil consultant who spent three years unsuccessfully trying to warn Detroit to prepare for such an event.

These criticisms ring somewhat hollow after nearly two decades of stable and even declining oil
prices, but whether Detroit executives might have been prescient or not, as of October 1973, two important threats appear (at least in retrospect) transparent:

- Oil supply instability was a reality; moreover, oil shortages and/or price increases would result in a devastating shift in auto consumer purchase preferences toward smaller, fuel-efficient cars;
- Fuel efficiency was not the only advantageous feature of Japanese cars: perhaps it was what sent buyers into a Toyota showroom, but once there they found more reliable, better built vehicles that generally better met their needs.

For the first time, imports could not be written off as inferior vehicles whose single advantage was price. Whereas in 1964 the average price of imports was barely half that of American-made cars, in 1974 the average price of imports was slightly more than that of American-made cars (US International Trade Commission 1982:2-3).

Globalization

In 1960, 51% of the world's new automobiles were both made and purchased in the U.S. and Canada. Two decades later, less than a quarter of the world's new automobiles were made or bought here. Every region in the world had faster growth in both production and sales than North America, and most had indigenous auto industries. Most of these companies were producing substandard copies of those made in Detroit in plants that were substandard copies of Ford's mass production system. But there was also wide variety in production systems, several of which held important advantages over mass production. The most important of these proved to be those developed by Toyota.

Lean Production

Japanese advances in automotive production and design go back to post-war Japan and the development of a new production system which has come to be called "lean production" (Althuscher, et. al. 1984; Krafick 1988). In an authoritative book, Womack, Jones & Roos (1989) argue that this system – characterized by low inventories, production flexibility, minimal rework, statistical quality control, and a skilled, dedicated work force – is a revolutionary production logic. Their claim that it is the third major paradigm of industrial organization, succeeding mass production, which itself replaced "craft production," has been widely accepted in auto manufacturing and American manufacturing in general. Eventual adoption of these lean production practices by American automakers in the 1980s

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1 This production system also had been documented by Cusumano (1984) and MacDuffie (1991) using the terms "Toyota production system," and "flexible."
and early 1990s rapidly led to competitive parity.

Had American manufacturers been prescient, they might have picked up on these developments well before 1973. Figure 1 illustrates long, sustained increase in world market share of the Japanese auto industry beginning in the late 1950s, climbing from 0% in 1950 to 5% in 1961 and 17% in 1970.

**Figure 1:** Auto production by US and Japanese firms 1960-1990. Source: Wards.

At least one important management scholar (Drucker 1968, 1971)² was singing the praises of Japanese management well before then and American auto company divisions had been experimenting with component programs such as quality circles in the late 1960s. October 1973, however, is a key point in time because one of the advantageous features of Japanese products and process – far superior fuel efficiency – was made much more desirable as a result of the embargo.

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² A 1971 MIT thesis, however, provides a more common contemporary account of Japanese success: effective government actions ("Japan Inc."), low wages, and favorable exchange rates. He concludes, that: "The U.S. will continue to have the vigor to successfully compete against the Japanese," but adds that U.S. overall capability to compete has been "denigrated" by labor and consumer groups, and lack of "a forward looking trade policy." (Fites, 1971:2)

Womack, et al. (1989) argue that Japanese methods succeeded despite government action – for example, fierce competition between Japanese firms undermined perpetual attempts by the government to consolidate the industry and force specialization.
Organizational Attention

People tend to be circumspect about the concept of organizational attention for two reasons that I believe are contemporary biases of individualism and quantitative empiricism.

Organizational constructs go against the tenor of times in which we tend to accept only other people as actors. While the ideas of institutional constraints are widely accepted, institutional "action" is challenged as anthropomorphizing and questionable analogy, but I believe that this reflects an overly individualistic assessment of reality, a manifestation of the fundamental attribution error in which people attribute group actions to individual (Allison & Messick 1985). In Chapter 1 (p. 22-23), I argued that it is reasonable that both sociological thinkers and people in their common parlance speak of organizations as actors, and with respect to a wide variety of phenomena, often the most important actors. Organizational attention, for example, is central to March and Simon’s (1958) seminal work in Organization theory. It is also a central concept in important works such as Barnard (1938) and Weick (1979). Ocasio (1997:2) argues that “explaining how firms behave amounts to explaining the allocation and structuring of attention.” Informally, consumers and workers sometimes want to ‘send a message’ to an organization or ‘get their attention’; suppliers, investors, lenders, and social scientists, among others want to know what an organization ‘is thinking’ (i.e., attending to).

The second bias is an Anglo-American empirical tradition that tends to reject cognitive constructs in favor of “external” data that can be easily counted. Sugrue (1997) points out that this is a fundamental difference with continental European scholarship, which emphasizes the relative importance of internal process. Epistemologically, Americans have been most influenced by positivistic interest on concrete data about the outside world (e.g., Ayer 1936), rather than the cognitive, phenomenological process (e.g., Husserl 1922), which European social scientists have generally found more interesting (e.g., Bordieu 1995).

These biases explain why despite the theoretical importance of attention in cognition and organization theory, there are few attempts to compile comprehensive records, and none at the organizational level. Those works that have used the term, “managerial attention,” (Mintzberg 1973; Sproul 1977, 1984; Chilingerian 1987) have been more about “activity” than “attention.” The focus is on what individuals do, and there is no distinction made between what they do versus what they are thinking about.
Annual Letter to Stockholders as a Record of Organizational Attention

Of course, to compile a comprehensive record of attention – organizational or individual (even one’s own) is no simple, straightforward task. I use the CEO’s Letter to Stockholders because here, in the space of a few pages, top management attempts to touch on those issues which they feel are most important to discuss with owners, those with the legal power to change the organization, if necessary through change in management. The message to stockholders also has a long, continuous tradition in business history, so that it can be used as a comparative source document for the more than 30 years of this study both within and between firms. Most important, this construct is free from the retrospective bias that would be inescapable in interviews or surveys conducted today.

The construct admittedly raises important red flags. First, the document may be little more than impression management by the chairman to convey a favorable picture of the enterprise and his administration. Second, even if he wanted to convey priorities honestly, he would be unable to do so because of strategic considerations. Third, even if we accept this as a representation of the attention of the chairman, we have little reason to believe it represents executive management generally, and less yet that it means anything for the organization as a whole. Finally, even if we brush aside all these concerns, there is the difficulty of interpreting the text and coding it as data.

I will discuss these concerns presently, but first I note that Letters to Shareholders have been widely used in organizational research, including studies of executive causal attributions (Bettman & Weitz 1983, Staw et al. 1983, Salancik & Meindal 1984); motives (Abrahamson 1994); tendencies to focus inwardly (D’Aveni & MacMillan 1990); and propensity toward risky behavior (Bowman, 1982). I first thought to use these data based on personal experience: I have written letters to shareholders for two firms – in one case as a consultant, in another as the corporate office manager. In both cases my job, as I understood it, was to communicate important information relevant to company performance and to present management’s perspective on important events, issues, and priorities. In both cases, the chairman reviewed the text carefully, circulated it among other key officers, and asked for revisions. This experience is consistent with findings of usage: most corporate officers see annual reports as the primary communication channel to shareholders (Goodman 1980). The letter is the most widely read part of the document (Courtis 1982) and 77% of respondents report reading the president’s letter at least "somewhat thoroughly" (SEC survey cited in Abrahamson, 1994:1311).
Impression management

One reason scholars may be circumspect of Letters to Shareholders is that organizational researchers have found evidence of attributional bias in these letters (Bettman & Weitz 1983, Staw et al. 1983, Salancik & Meindal 1984, Abrahamson 1994). But, ironically, this circumspection arises precisely because they are a good data source that allowed these researchers to observe impression management phenomena clearly. Staw, et al. (1983) note this explicitly and generalize these attribution and impression management findings to all organizational communication. Goffman (1959) and a wide variety of work since (summarized in Leary & Kowalski 1990) show impression management to be a pervasive phenomenon implicit in most if not all public interactions and private attributions as well. The implication for research is that all communications, even questionnaire or interview data, are influenced by impression management – if only on the part of the respondent to him or herself. 3

If there is greater motivation to manage impressions in the annual report than in some other communications, there are also greater checks. The Securities and Exchange Act of 1934 makes deceit illegal (even failure to disclose pertinent information is subject to severe penalty); compliance is ensured by highly skilled Security and Exchange Commission investigators and a large, knowledgeable, readership whose money is on the line. Dissimulation short of lawbreaking could have damaging effects on reputation; conversely, executives can earn respect with their publics by candor. To guard against faulty recollection, highly paid staff are responsible for checking and ensuring accuracy, and the documents are circulated widely to further assure accuracy as well as concurrence.

For purposes of demonstrating the lack-of-attention hypothesis, even if the document does not accurately reflect official policy, the chairman and president are likely to overstate their attention to problems and the vigor of their response. So long as they appear attentive to problems, they are less vulnerable to criticism than if they appear oblivious. This means that impression management is more likely to result in lack of findings than false findings.

Secrecy

Another potential critique is that much of what executives attend to and intend to do are corporate secrets that officers are not going to divulge in a public document. This is an important consideration,

3 An interesting example of the limitations in overcoming such bias through interview and questionnaire is the two-women-for-every-man phenomenon in sexual partner history studies. This "robust" finding across a score of such studies, each trying some new tack to elicit true histories, is that males have had, on average, twice as many opposite-sex sexual partners in their lives as females have (Brown & Sinclair 1997).
but it is subject to empirical test. Subsequent studies might compare the initiatives discussed in these letters with those reported in other company documents, investigative journals, and/or retrospective interviews. I expect, however that strategic considerations will not greatly skew the results. First, the document reports material without detail. Thus, only in cases where there is a major strategic secret – a Manhattan project – is there need for omission. Second, there are important reasons why openness might generally be favored over secrecy in discussing corporate attention and new initiatives. It's usually important to accurately communicate intentions to suppliers, customers, and others with whom the firm interacts (including competitors). Most important, however, the timing is not precise. Each letter covers a whole year and most secrets can be reported after the fact. If the lack-of-attention findings were on the order of one year or less, strategic considerations could present a credible alternative hypothesis, but findings indicate lack-of-attention of a much longer order.

Executive Management as a Single Entity

Is it a reasonable simplification to speak of executive management as a single entity? Riesman (1950) and Whyte (1956) have conducted now classic analyses showing how executive management teams tend to adopt a party line which guides action: they dress similarly (Molloy 1976), share norms and experiences (Schein 1992), rarely speak out against one another, and generally try to present a unified face both to the rest of the company and the outside world. Jackall (1988:50-56) claims that an essential requirement of the corporate manager is to be a team player: Managers must be interchangeable, maintain a flexibility of perspective, … and, in managers’ own words, “align oneself with the dominant ideology of the moment” or “bow to whatever god holds sway.” The Letter to Stockholders is signed by only the Chairman and the President, but generally the views, attention, and priorities expressed will be collectively shared. A dominant leader is able to appoint subordinates who hold similar views or are willing to subordinate their own dissimilar views; a leader dependent on the support of others will, by necessity, incorporate these other views and concerns in an important, public document (March 1962).

Executive Attention and Organizational Attention

By virtue of the executive’s central position of authority and power, the objects of his attention receive substantial attention throughout the organization (Hambrick 1994). These documents are a suitable organizational construct because they represent the organization as a whole and are produced
as a large committee project (Staw, et al. 1983:585).

**Coding the data**

The final concern is one which any qualitative study must address – potential subjectivity and bias in interpreting the data. My approach was to *quantify* the data through structured methods in accord with Miles & Huberman (1994). I have attempted to create an organizational “attention database” which can be used to estimate answers to the relevant questions: How *much* attention was paid to the changing nature of (oil) supply and demand, to globalization, to components of the lean production paradigm, and to other matters? Did *shifts* in attention occur? If so, *when*? Do attention patterns allow us to infer what events – external or internal – precipitate shifts? The answers are not precise, nor without ambiguity, but there are answers.

To aid in the systematic analysis and quantification of the data, I optically scanned the documents, standardized line length, and entered each document into Nud*ist 4.0 (Richards, 1997), a software program designed for the coding, retrieval, and analysis of qualitative data. With the exception of a designation differentiating international versus domestic topics, I coded each text line to one and only one category. This allowed for a quantitative assumption that all the executive attention for the year and each line represents \( \frac{1}{\text{Total Lines}} \) of the annual attention. This is an admittedly rough approximation, and for this reason I use the numbers as broad guides rather than precise measures and discuss only broad findings.

Shortly after beginning, I decided to work with the paragraph as the basic unit of meaning. By attempting to understand why the authors had included the paragraph in the text, I was usually able to assign the text to a single category, but I retained the line as the basic unit of analysis so that long paragraphs would count for proportionally more than short ones.

The coding tree which evolved (Appendix A) has two or sometimes three levels of generality. The first level is a functional breakdown based on core subject areas at the Wharton and Sloan Schools of Management: Operations, Finance, Marketing, Strategy, etc.... the second and third level adds additional detail, associated with the environmental changes discussed or other topics I thought might

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4 I believe that this proves particularly useful in avoiding the “Availability” bias, Tversky & Kahneman’s (1973) finding that we erroneously tend to base probability on the ease with which instances can be brought to mind.

5 Coding each line to one and only one category also allowed a mathematical check to ensure that no lines were skipped and improved intercoder reliability dramatically (see Appendix C for detailed methodological information).
prove interesting. Early on, it became apparent that a large percentage of paragraphs were outside this taxonomy and I included other primary categories such as SOCIAL AND POLITICAL ISSUES and CONDITIONS. A sample from the first round of coding is included in Appendix C.

I worked on the coding with an undergraduate who also coded the text – sometimes independently, sometimes with me. This provided tests for intercoder reliability, the beneficial requirement of having to explain my intentions and assumptions, and an independent set of thoughts on the codes and project. The final resultant categories are illustrated with examples in Table 1. A full description of the categories and subcategories is in Appendix A. A general discussion of methods adopted and abandoned is included as Appendix C, and sample documents with coding stripes are included as Appendix D.

### Table 1: Categories, Subcategories, and examples (all taken from General Motors 1975)

<table>
<thead>
<tr>
<th>Category</th>
<th>Typical Statement (all from General Motors 1975)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product development</strong></td>
<td>In October, Chevrolet successfully brought to market the Chevette, a car smaller and with better gas mileage than any other built in the United States and directly competitive with the best-selling imported cars. (86-88)</td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>... material costs increased, however, as inflation, while moderating, continued at historically high levels. By the time of the 1976-model introduction, these economic costs on a base car were about $375 above those of a year earlier. (72-75)</td>
</tr>
<tr>
<td><strong>Sales/Marketing</strong></td>
<td>... the percentage of foreign-car sales in the United States, which had averaged more than 20% for the first nine months of the year, declined to 13% in the fourth quarter – the lowest level for any quarter since 1971. (93-96)</td>
</tr>
<tr>
<td><strong>Financial</strong></td>
<td>To maintain a strong financial position in the face of such low earnings and high capital requirements, the Corporation reduced its first-quarter dividend to $0.60 per share (compared with $0.85 paid a year earlier) and by early April completed a $600 million borrowing-the largest ever by a single industrial firm. (48-52)</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td>... we must achieve greater understanding and cooperation with our labor representatives as we approach the negotiations of 1976. American auto workers are among the best compensated of those in any large industry in any country (209-12)</td>
</tr>
<tr>
<td><strong>Strategy &amp; Structure</strong></td>
<td>... cooperation ... will be the key. A more cooperative relationship must be achieved with the unions with which we will be negotiating in 1975. We also will need a cooperative attitude with government whose laws and regulations will materially alter the design, the performance, and the cost of our future products. (150-54)</td>
</tr>
<tr>
<td><strong>Macroeconomic</strong></td>
<td>Turbulent 1974, which had opened with a crippling worldwide oil embargo, had ended on a dismal note of deepening recession. In the year's final two months, the annual rate of car sales in the United States—the pulse of the industry—had faltered to about 7.0 million (11-14)</td>
</tr>
<tr>
<td><strong>Non Auto enterprises</strong></td>
<td>U.S. dollar sales of GM's Power and Appliance Group also were at a record $2.4 billion, 8% over 1974, with three divisions, Detroit Diesel Allison, Electro-Motive, and TEREX, establishing new highs.(114-16)</td>
</tr>
<tr>
<td><strong>Social &amp; Political Issues</strong></td>
<td>Federal law now establishes standards for gasoline mileage as well as exhaust emissions for future model years. To meet requirements, all but a small fraction of our post-1984 cars could be no heavier than today's Chevrolet Vega. This massive disruption of free market choice would be caused by the Energy Policy and Conservation Act of 1975, and we are seeking its amendment before its impact begins to be felt, which would be as early as the 1978 model year. (168-75)</td>
</tr>
</tbody>
</table>
Looking back, GM results in 1975 represent a triumph of confidence - a consistent confidence in the people and the products of General Motors and in the underlying strengths of the American economy and the automobile industry. (137-40)

Reliability

Intertemporal reliability was exceptionally good. In the three years elapsed between prototype coding and the full project, my coding choices were virtually the same, except for when the categories themselves had changed substantively. Intercoder reliability was also good: we had category consensus in 81% of text lines (195 out of 240 – see Appendix C for a discussion about how we got to this level).

Companies Studied: GM and Chrysler

I had originally intended to analyze the three surviving American auto companies and possibly American Motors, but it turned out that doing two was a monumental effort (although subsequent ones may be far easier). I studied GM and Chrysler primarily to obtain the greatest variance. GM was the industry leader and Chrysler was the smallest and most vulnerable of the three. Ford has traditionally had a far more international presence than the others, and I was studying the American phenomenon first and foremost.

Years Studied

I began by examining documents for evidence of executive attention to Japanese advances in the years prior to and following 1973, and continued backwards and forwards with General Motors and Chrysler Corporation documents until I felt I had found something resembling “normalcy,” or absence of an important external event that seemed to be driving behavior. In GM’s case, I had to go back quite far because in the aftermath of Nader’s Unsafe at Any Speed (1965), a sharp change in the attention structure was immediately apparent (I discuss this in the findings section). In both cases, I had to come forward from 1973 many years because these events seemed to affect the attention structure for a long time.

Other Data Sources

Annual reports present, at best, a partial view and a distinct perspective. To help put the reports in perspective, and confirm or disconfirm interpretations of ambiguous data, I have complemented these data with a limited number of other accounts of the industry, interviews, and other data; but this is not

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6 Other data sources are Ward’s annual report on the industry, annual financial data from Compustat and monthly stock prices from CRSP, production data collected but not used by the International Motor Vehicle Project, Predicast news reports, Wall Street Journal and New York Times abstracts and articles, and books listed in reference section B. I conducted three informal interviews with people in the auto industry: a pair of European
a history. I limited preliminary data collection to try to avoid influence on coding and analysis.

**Basic Data**

The average letter to shareholders for each of these companies over the years coded has 168 standardized 72-character lines of text. Altogether, the Chrysler letters from 1967-1986 and General Motors letters from 1962-1986 provide 7500 lines of data. However because I used the paragraph as the basic coding unit, these 7500 lines represent approximately 1250 independent data points.

**Average Functional Attention by Company**

Table 2 presents the average percentage of lines devoted to the basic attention categories for the two companies over the same 20 year period.

<table>
<thead>
<tr>
<th>Basic Category</th>
<th>GM</th>
<th>Chrysler</th>
<th>Magnitude difference</th>
<th>$^a$ Statistical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product development</td>
<td>5.8%</td>
<td>8.2%</td>
<td>1: 1.4</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Operations</td>
<td>9.3%</td>
<td>6.6%</td>
<td>1: 1.4</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Financial</td>
<td>7.8%</td>
<td>4.0%</td>
<td>1: 2.6</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Labor</td>
<td>9.5%</td>
<td>2.5%</td>
<td>1: 2.0</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Strategy &amp; Structure</td>
<td>8.4%</td>
<td>2.5%</td>
<td>3: 3.1</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Macroeconomic conditions</td>
<td>9.0%</td>
<td>10.0%</td>
<td>1: 1.1</td>
<td></td>
</tr>
<tr>
<td>Non Auto</td>
<td>1.5%</td>
<td>7.9%</td>
<td>1: 5.3</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Gratitude</td>
<td>7.7%</td>
<td>7.1%</td>
<td>1: 1.1</td>
<td></td>
</tr>
</tbody>
</table>

The most surprising number in Table 2 is the amount of attention GM devoted to SOCIAL ISSUES – over the entire quarter century, nearly *three lines out of every 10 are devoted to social and political issues*. For example, from the 1965 letter:

*An important challenge ... is the need for greater safety... As in the past, GM will continue, with all the energy and determination that it has, to design and build cars offering the greatest measure of safety possible ...*

*The reduction of automobile exhaust emissions is another problem on which GM has been hard at work for many years...*

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$^a$ See Appendix E for explanation of statistical calculations
The second largest chunk of the GM letters is taken up by discussion of MACROECONOMIC CONDITIONS. Observations such as,

The business expansion in the United States, which started early in 1961, continued to advance during 1963, and shows continued strength as we enter 1964. (1963:21-24)

were a part of almost every GM letter. During times of change and problems, these observations took on greater number and import.

Neither category, especially SOCIAL ISSUES, is nearly so prominent for Chrysler, where the focus over the 20 years, especially earlier in the period, has been much greater on numerical detail in SALES/MARKETING and FINANCE. One feature that contrasts with GM is the large amount of concrete data about where they stand within the big three,

Retail sales of the company's passenger cars in the United States in 1972 were a record 1,565,555 units, 8.4% above the 1971 total of 1,444,133 units. This represented 16.7% of all retail sales of domestic car lines, compared with 16.5% in 1971. The company's share of the domestic small car market increased to 24.8% in 1972, compared with 24.4% last year. (1972)

The preponderance of financial reporting is mostly due to the tenuousness of the firm's existence throughout the central part of the study and financial restructuring in the aftermath of their comeback.

Changing Attention Structure over Time

Attention figures by category varied widely in different years and different periods. The annual percentages of lines devoted to each basic category are reported in Tables 3 and 4.

The numbers in Table 3 are GM's history in capsulated form. Some of the higher-than-category-

| Table 3: Annual percentages of lines GM devoted to each basic category 1962-86 |
| Category/Yr      | 62| 63| 64| 65| 66| 67| 68| 69| 70| 71| 72| 73| 74| 75| 76| 77| 78| 79| 80| 81| 82| 83| 84| 85| 86| |
| ProdDev          | 20| 7 | 0 | 0 | 25| 0 | 13| 6 | 9 | 0 | 0 | 5 | 3 | 6 | 8 | 11| 6 | 5 | 10| 5 | 6 | 0 | 15| 0 | 7 | |
| Ops              | 11| 14| 14| 8 | 5 | 5 | 16| 9 | 22| 16| 8 | 17| 12| 2 | 8 | 5 | 14| 4 | 3 | 5 | 3 | 0 | 4 | 7 | 9 | 4 | 3 |
| SalesMktg        | 13| 31| 10| 6 | 15| 13| 3 | 11| 8 | 7 | 2 | 3 | 10| 18| 11| 5 | 4 | 1 | 10| 19| 3 | 5 | 2 | 8 | 11| 3 | 8 |
| Fin              | 8 | 6 | 5 | 5 | 18 | 5 | 5 | 5 | 3 | 2 | 3 | 4 | 8 | 10| 7 | 7 | 7 | 10 | 6 | 12 | 5 | 8 | 4 | 7 | 5 | 12 | 4 |
| Labor            | 3 | 8 | 0 | 5 | 5 | 0 | 10| 11| 0 | 9 | 14| 5 | 8 | 4 | 1 | 7 | 6 | 5 | 13| 11 | 13 | 4 | 2 | 5 | 4 | 5 | 4 |
| S&S              | 21| 4 | 12| 0 | 0 | 5 | 0 | 0 | 0 | 7 | 4 | 4 | 4 | 5 | 10| 9 | 6 | 13| 5 | 0 | 15| 7 | 2 | 5 | 0 | 3 |
| Conditions       | 11| 16| 0 | 5 | 8 | 5 | 14| 11| 14| 9 | 21| 16| 15| 21| 16 | 6 | 29| 32| 18| 0 | 15| 0 | 5 | 0 | |
| Non Auto         | 6 | 4 | 0 | 6 | 0 | 5 | 8 | 11| 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SocPol           | 2 | 0 | 17 | 56 | 15 | 46 | 2 | 15 | 2 | 2 | 2 | 24 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Gratuties        | 6 | 11| 14| 6 | 3 | 6 | 5 | 4 | 6 | 13| 11| 7 | 0 | 7 | 3 | 5 | 4 | 4 | 4 | 8 | 7 | 9 | 10 | 7 | 9 | 4 |

* Much of the material that might have gone here was put instead in a special six page section to "discuss the substantial progress [made] in meeting our responsibilities in a number of areas of public concern." This seems an (unsuccessful) attempt to remove these issue from direct executive attention.
average numbers include: a three-year cycle of concern with union negotiations (1964, 67, 70, 73, 81, 84); and the long stretch of attention to social and political issues from 1965-78, complemented by a consummation with macroeconomic issues in the high-inflation years concluding the Carter administration. 1982 is the first of four years with a great deal of lineage devoted to financial matters, which appear to be an attempt to reassure stockholders after two years of poor performance (in 1980 the company sustained an annual net loss for the first time since 1921). 1982 is also the first of two years filled with exceptionally bland gratuities seemingly designed to offend no one, and “usher in an era of harmony.” With Reagan in the White house and a pro-business swing in public attitudes, attention to social issues and conditions is replaced by attention to STRATEGY & STRUCTURE (especially acquisitions and alliances) in the mid-80s. The 1986 letter also devotes three times the average amount of text to operations as Roger Smith’s strategy of spending on robots, advanced technologies, and greenfields takes shape.

Table 4 captures Chrysler’s substitution of attention to sales-numbers with financial performance and machinations as its situation worsened in the mid-70s. The company’s divestment of non-auto

| Table 4: Annual percentages of lines Chrysler devoted to each basic category 1967-86 |
|----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Category / Year | 67  | 68  | 69  | 70  | 71  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  |
| ProdDev         | 6   | 0   | 6   | 0   | 0   | 4   | 13  | 2   | 17  | 8   | 23  | 8   | 5   | 7   |
| Ops             | 14  | 12  | 9   | 3   | 4   | 9   | 8   | 1   | 4   | 8   | 13  | 0   | 7   | 5   |
| SalesMktg       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Fin             | 15  | 16  | 9   | 28  | 8   | 11  | 17  | 13  | 14  | 20  | 13  | 22  | 26  | 7   |
| Labor           | 4   | 0   | 5   | 0   | 0   | 4   | 0   | 0   | 6   | 3   | 0   | 0   | 6   | 5   |
| S&S             | 4   | 3   | 6   | 9   | 12  | 3   | 5   | 13  | 3   | 13  | 3   | 25  | 5   | 18  |
| Conditions      | 5   | 5   | 20  | 23  | 23  | 9   | 20  | 22  | 20  | 4   | 9   | 3   | 5   | 13  |
| Non Auto        |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| SocPol          | 0   | 0   | 0   | 0   | 0   | 15  | 7   | 2   | 0   | 16  | 17  | 3   | 15  | 14  |
| Gratuities      | 3   | 6   | 0   | 3   | 6   | 10  | 2   | 2   | 3   | 4   | 1   | 1   | 7   | 6   |

attention in the 70s was soon followed by actual divestment. Under Iacocca’s leadership, the company becomes a political player in 1980 – campaigning for government loans and policy changes. In the aftermath of their resounding recovery, Iacocca uses the letter annually beginning in 1982 to vigorously argue for reduction of the national deficit, seemingly taking over the baton on discussion of national policy issues from GM as the firms’ relative influence changes. The letter also becomes more gracefully written. Rather than present stark numbers, Iacocca begins each letter with a theme that he develops throughout the document,
1982 stands out as a pivotal year in Chrysler’s resurgence.

Chrysler won its long battle for independence in 1983.

We expected 1984 to be a good year for the American economy, and an especially good year for the automobile industry. It was—and we were ready for it with products customers wanted.

In 1985 we reaped the harvest of our past efforts and charted a new course for the years ahead.

and takes a few lines to offer thanks:

we took an unprecedented action with some of our profits. We said "thanks" to the people who did the most to ensure our survival: our employees, who sacrificed to keep us in business; and our customers, who expressed their confidence in us by buying our products. (1984: )

As with GM, discussions of strategy and structure become prominent in the mid 80s. Reasonably enough, new products are often offered as the solution to problems. For example, in response to declining profits and domestic market share in 1975, Chrysler announces it

is moving ahead with a major product program that will enable it to renew and resize its entire product line by the end of the 1970s, and increase its share of the markets out ahead.

General Motors also tends to offer new products as solutions to problems, but their problems throughout this period were less financial than public relations. In response to their public gaffes in 1965, they emphasize in 1966 both the safety and “increasing value built into our products.”

3. ATTENTION TO MAJOR ENVIRONMENTAL CHANGE?

In this section, I develop attention category constructs for each of three major environmental changes – oil supply instability, globalization, and Japanese advances in design and production – that had such profound impacts for the American auto industry and examine the data for evidence of executive attention throughout this period.

Coding Constructs: Lag Variables

Fuel Efficiency / Small Car Production

Most criticism of the big three in the late 70s and early 80s concerned lack of fuel efficiency and small car production. To evaluate this charge, I track attention to these concerns, especially within the NEW PRODUCTS category.

Worldwide Orientation

Critics also contend that domestic auto-manufacturers didn’t understand the globalization of the industry – the increasing importance of emerging markets, producers, and suppliers. To evaluate this charge, I compare each of the basic constructs for attention to international considerations, and
measure the quantity of text relative to domestic matters. In particular, I look at the SALES/MARKETING construct to determine the relative attention devoted to overseas sales.

Lean- and Mass-Production

Probably the most important long-term event of the period, however, for industry competitiveness and profitability, was Japanese advances in design and production. Today these advances are widely accepted as the "lean production" revolution in manufacturing. Whether or not the American firms had been able to adopt these practices, one might expect the firms to be cognizant of them and trying to compete. To test whether this is the case, I code for attention to the key differences that distinguish the mass- and lean-production systems as detailed by Womack, Jones & Roos (1989: ch. 3). Table 5 summarizes these differences and the coding categories I use to capture them.

<table>
<thead>
<tr>
<th>Table 5: Key differences between lean and mass production.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mass Production (Fordism)</strong></td>
</tr>
<tr>
<td>Work force</td>
</tr>
<tr>
<td>Assembly Plant</td>
</tr>
<tr>
<td>Product Development/Engineering</td>
</tr>
<tr>
<td>Approach to marketing/customer relations</td>
</tr>
<tr>
<td># Supply chain</td>
</tr>
</tbody>
</table>

Overview of Event-Attention Time Lag Findings

Casual reading of the annual reports might lead one to abandon a hypothesis of attention- and even response-time lags. The reports indicate early and sustained attention to the importance of small cars. They also indicate attention to globalization trends, although the implications of globalization are

* I did not use this distinction in the compilation and analysis because of the lack of direct statements about suppliers or supplier chains and the weakness of the Mergers & Acquisitions vs. Alliances construct, but nevertheless even this weak construct did show a similar pattern to the others. "Mass" talk about supply costs, Mergers & consolidations through 1978 for Chrysler and 1981 for GM; sort-of "lean" talk about alliances and "relationships" thereafter.
complex, and in retrospect it would appear that these firms did not understand them well. But the reports indicate no attention at all to lean production advances until decades after Japanese success.

**Attention to Small Cars and Fuel-Efficiency**

Both companies discussed early and often the trend to small cars: In the first year I coded, 1962, GM devoted 22% of the text (29 out of 134 lines) to new model cars. Nearly all of lines concern smaller cars:

... capacity and efficiency are not all that are required to meet the challenge of today's competition. Equally important is the ability to anticipate and adapt to rapidly changing consumer demands. An example is provided by GM's smaller cars, whose sales last year were almost 63% above 1961. These smaller cars would not have been acceptable to the car-buying public ten years ago, but in 1961 accounted for 23% of GM's sales of domestic-produced passenger cars. In 1962, they represented over 28% of such sales.

GM also mentions a new lower-priced car, the Kadett, produced by Opel, their German subsidiary, and a "redesigned four-cylinder Victor series introduced by Vauxhall," their British subsidiary. The 1963 GM letter noted development of a new 1-liter cars. Subsequent letters indicated concern with "foreign" [small-car] competition:

To meet these competitive lines, we introduced the new Chevrolet Vega 2300 and expanded our Opel line. The new American-built Vega will be a formidable competitor. (1970)

Chrysler seemed on top of this trend as well. In the 1970 letter they write, "The trend to small cars continued strongly." In 1973's letter they report that they were not caught off guard:

The trend to small cars has been evident for some time. Accordingly, the company ... is now devoting more than 50% of total capacity to small car production. By May, more than 60% ....

Table 6 reveals that 26 of the 45 letters (58%) emphasize either new small-size or fuel efficient vehicles – 76% of the 34 that mention new models. Even among the letters from the 1960s, 71% of those that mention new models mention new small models. Rather than ignoring the trend toward small car purchases, both companies persevered in their attention to small cars despite market failures and

<table>
<thead>
<tr>
<th></th>
<th>Total # letters coded</th>
<th>Letters mentioning new models</th>
<th>Letters mentioning new small or fuel-efficient models</th>
<th>% of letters mentioning new models</th>
<th>% of total letters coded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960s</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>71%</td>
<td>45%</td>
</tr>
<tr>
<td>1970s</td>
<td>20</td>
<td>15</td>
<td>13</td>
<td>87%</td>
<td>65%</td>
</tr>
<tr>
<td>Tot 60s-70s</td>
<td>31</td>
<td>22</td>
<td>18</td>
<td>82%</td>
<td>58%</td>
</tr>
<tr>
<td>1980s</td>
<td>14</td>
<td>12</td>
<td>8</td>
<td>67%</td>
<td>57%</td>
</tr>
<tr>
<td>Tot 60s-80s</td>
<td>45</td>
<td>34</td>
<td>26</td>
<td>76%</td>
<td>58%</td>
</tr>
</tbody>
</table>
majority preferences for large cars. Likewise, both companies maintained attention to fuel-efficiency despite limited and fickle consumer interest.

Attention to International Developments and Opportunities

The letters also indicate a great deal of attention to international developments and opportunities, but the issues here are more complex; there are important differences between the ways North American and overseas markets are discussed which forebode poorly for the firms.

Substantial Discussion

The substantial discussion is surprising in light of criticism and our knowledge of outcomes. Every letter, especially those from the 1960s, indicated a great deal of attention to worldwide developments. For example, in 1968 GM writes:

... Worldwide, there is a growing need for transportation as the economic and social progress of people everywhere requires more flexible and more individual transportation such as only the motor vehicle can supply. The utility and convenience of the private motor car are unique in this respect. At the same time, the need for more trucks - in all size ranges - is also apparent.

GM is participating in this growth. We have well-established manufacturing operations in the US, Canada, United Kingdom, Germany, Australia, Brazil, Argentina, Mexico and South Africa. GM vehicle assembly facilities are in operation in nine other countries and our products are marketed in every other country throughout the Free World.

International considerations are omnipresent in discussions of strategy, conditions, and operations. For example, of 11 discussions of facilities prior to 1980 (Appendix F), nine involve non-North American expansions. (One more is about eliminating operations in Argentina and the 11th is a general statement of modernization.)

Opportunities? A failure to learn and gain competencies

Likewise, discussions of opportunities always emphasize overseas markets. Both firms entered into joint ventures early and often. As soon as such relations were permitted by Japan in 1969, GM entered into the first of several reasonably successful agreements with Toyota. Chrysler signed an incredibly favorable agreement with Mitsubishi providing Chrysler with full long term US marketing rights for Mitsubishi products in the US under Chrysler marques.

The firms' preferred strategy, however, was acquisition and control of national subsidiaries in each country, rather than export or becoming an integrated, international corporation. Such a strategy seemed sensible because they assumed that the challenge of entry into other countries was political
rather than economic or technological. For Chrysler, this strategy was a disaster. GM had the best available subsidiary in every market. Chrysler threw its limited supply of good money after bad in acquiring one marginal national entry after another. But the strategy did not prove particularly successful for GM either. Neither firm learned from local markets, rather they applied their own production systems, and, in doing so, failed to gain dominant market shares.

Ignoring Market Share

Strangely, this lack of success did not seem to create a sense of alarm. Ocasio (1995) offers the explanation that “adversity is not determined by ‘objective’ measures, but rather through application of schemas which determine what measures are important and which levels of performance or external events constitute a threat” (Ocasio 1995: 8-9).

In this case, the apparently important measures were gross sales, earnings, and domestic market share. Both firms reported every year gross sales and earnings (or losses) in the first few paragraphs. Chrysler also reported every year market share in the U.S. and Canada; GM, with U.S. market share at about 50%, spoke more generally about market acceptance – probably to avoid fanning the flames of anti-trust sentiment. Every year, based on these measures, performance is evaluated in the introductory paragraph. And for the most part, performance measured as such was good for Chrysler until the mid 1970s and very good for GM until 1980.

Why ignore world market share? One reason is that the data were not readily available. In contrast to US markets where such data were quite good, most overseas markets had sketchy, unreliable data. Even today, we can only infer such figures from production, presuming that cars produced translate within a short time into cars sold.

The deeper reason is that, as Ocasio (1995) points out, performance is far less objective than we usually presume. Today, world market share seems an obviously important measure, but that’s true only since 1980, when total sales of Japanese automakers first superceded those of American firms (by a wide margin). Until then, it was perhaps no more obviously important than the local grocery’s county market share. Economic principles of fundamental value depend on profitability and growth. Market share is a constructed concept – which precise market is important is a matter of definition and construction.

Accounting and information systems are necessarily narrow slices of the broad construct of
performance. Ocasio (1995) notes that managerial accounting systems often fail to provide relevant information and are rarely useful in anticipating environmental threats because they are designed to measure historically relevant indicators. For Chrysler in the 1970s, these had been—in addition to profits and sales—various comparisons with GM and Ford, especially domestic market share, that indicated its viability as a player in the market. For GM in the 1970s, as we shall see, these had been—in addition to profits and sales—cost containment (especially important in an era when inflation was perpetually running high and automakers saw themselves as the vanguard in the fight against inflation), and government relations (important as regulators pressed vigorously on a variety of fronts such as safety, pollution, labor relations, and price controls).

These socially constructed measures, of course, produce concrete results. Kaplan & Johnson (1987), among others, have observed that “one gets what one measures.” In 1967, GM reported, “Market share of domestically produced cars is 51.8.” In 1968, “54.7 of North-American type passenger cars.” The implication is that imports are a different market, less important, perhaps negligible.

**Attention to Lean Production**

My consultant interviewees who worked with the auto industry for three decades told me that executives were experimenting with quality circles and other Japanese practices since the 1960s, but that mid-level managers had been only lukewarm, and workers completely uninterested. The rationale seems reasonable: Executives are concerned with overall performance and the bottom line. Mid-level managers have little time or reason to worry about overall corporate performance due to functional demands and narrow incentive structures. Workers are completely insulated, and therefore uninterested unless their jobs are threatened. The consultants believe that executives were aware of the problems and try to solve them, but that corporations are just too big and complex for even prescient executives to change.

The data from this study, however, tell a different story. Chrysler did not indicate corporate-level concern with the issues of lean-production (outlined in Table 3) until 1979; GM did not do so until 1982.

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9 According to the consultants, European workers have never taken interest in these matters, in large part because these branches of Ford and GM never experienced the layoffs that U.S. divisions did.
As illustrated in figure 2, the Chrysler letters through 1978 were dominated by the concerns of mass-production. These include:

- **Conflict in labor relations:**
  
  The company's progress in improving its operating efficiencies and its competitive position was affected by a work stoppage at the Linwood plant .... The dispute was settled ... with the company and unions agreeing to a plan for improved productivity. (1977:50-94)

- **Assembly-plant preoccupation with costs and productivity:**
  
  Chrysler Corporation in 1967 increased its sales and intensified management programs to control and reduce costs. These achievements offset in part the rising prices of material and labor. Further gains in sales and in productivity, however, will be increasingly important in order to maintain product value, meet the requirements of an expanding automotive market, and improve our competitive position (1967: 132-137)

- **A functional approach to engineering:**
  
  The 1968 models ... represent a considerable expenditure for styling, engineering and tooling new safety features, emission control equipment, and many new comfort, convenience and performance options. (1967: 101-4)

**Figure 2:** Indicators of Mass- and Lean-Production in Chrysler Letters to Shareholders 1967-86. Bars represent the proportion of the letter indicating attention to mass- (black bars) and lean- (white bars) production concerns.
• And a supply-driven marketing effort:

Last month, Chrysler initiated a Car Clearance Carnival to help stimulate new-car sales. We introduced for a limited period a comprehensive marketing program that includes cash rebates to customers who buy or lease selected models which are placed on special sale for a week's period, a semi-weekly trade-in bonus for specified used cars, and a special sweepstakes contest. (1974:126-31)

Explaining their difficulties in 1977, Chrysler restates the mass production paradigm,

Profit margins in the automobile industry have historically been related to company size. The larger company has a number of inherent advantages. It has greater integration and marketing power; it can spread fixed costs over a greater volume of units; it can maximize the efficiency of its manufacturing processes; and it has lower cost access to capital markets. Chrysler Corporation has traditionally had to compete with lesser resources and lower profit margins. (1977:270-277)

They ignore the fact that smaller Japanese rivals were, at the same time, immensely successful.

Beginning in 1979, their rhetoric and reported actions change dramatically. They emphasize, for example, “The New Chrysler Guarantees,” the introduction of ...

an unprecedented marketing program. Chrysler is the first automobile company to offer:

- $50 for test driving a Chrysler product
- A 30 day, 1000 mile money-back guarantee
- No-cost scheduled maintenance for 2 years or 24,000 miles (12 months, 12,000 miles on Mitsubishi products)
- 2-year membership in the Amoco Motor Club at no charge, with free emergency road service and towing

The new program is a dramatic expression of Chrysler Corporation's commitment to the highest standards of quality and service by every area of the organization-engineering, product planning, purchasing, manufacturing, sales, and our dealer body. (1979:120-37)

These indicators of lean-production attention are reflected in all areas. Regarding assembly plant process, they speak of cutting inventories and reducing break-even figures, and discuss for the first time new product process. Discussions of labor relations bear little resemblance to anything prior to 1979, for example:

All of Chrysler's constituents made sacrifices to help Chrysler survive and prosper. One such sacrifice came from the United Automobile Workers, which agreed to pay cuts in the darker days. In August, we signed a new 25-month union agreement which restored $2.42 an hour and enables us to plan on two years of labor stability. (1983:96-99)

General Motors Attention to Lean Production

The story for General Motors is similar except that the change is about four years delayed. There is no depiction of the concerns of lean production until 1982, and not very much until 1983. In 1981, they are still locked in conflict with the union:

Without question, noncompetitive labor costs represent the single biggest disadvantage we
must overcome. The current labor cost differential in excess of $8 per hour, comparing GM wages and benefits with those of Japanese auto workers and with the average for all U.S. manufacturing workers, represents a disadvantage to General Motors of approximately $8 billion in a typical year. No company can compete for long, and no jobs are safe for long, with that kind of disadvantage.

We were encouraged when the United Auto Workers, recognizing the seriousness of the situation, agreed to negotiations six months earlier than normally would have been the case. But the talks ended in disappointment when the Union's leaders conceded that the Union Bargaining Committee could not reach an agreement in the absence of some critical deadline. (1981:101-13)

Figure 3: Indicators of Mass- and Lean-Production in General Motors Letters to Shareholders 1962-86. Bars represent the proportion of the letter indicating attention to mass- (black bars) and lean- (white bars) production concerns.

In 1982, they are still trying to push the product through on the basis of rebates (which Chrysler developed out of desperation in 1974), rather than competing on quality, reliability, or other product attributes.

... General Motors and ...participating dealers have teamed together in an unprecedented program to pass along to car and truck buyers in the United States cost savings ranging from $500 to $2,000 over more than half of GMs North American car and truck volume. This "Let's Get
Moving* program began February 1 and will run for two months. We look to this program to stimulate sales until the upward thrust of the spring season can continue the momentum. (1981: 117-123)

Yet by 1984, even GM got religion:

Saturn, a new approach to building a line of subcompact cars competitive with small cars made anywhere in the world, became an operating unit (32) ...

The year was also a milestone in labor relations as General Motors and the United Auto Workers reached accord on a historic new national agreement. The three-year contract ratified in October provides unprecedented job security as well as solid economic gains for our U.S. employees and also affords GM the opportunity to achieve increased competitiveness. ... These pacts enabled us to resume building upon the spirit of cooperation already taking hold between management and labor. (45-55) ...

U.S. operations were strong enough to provide profit sharing funds totaling nearly $282 million (146)

Impression Management?

One might be inclined to dismiss these letters as impression management — that corporate officers may have been quite aware of production and design deficiencies, but were not about to portray themselves or their company unfavorably to shareholders. The problem with this theory is that, throughout this period, the companies were forever portraying their situation as difficult, consistently putting a negative spin on even strong performance. For example, in the 1972 letter, GM reported,

Earnings per share edged to a new high, but the margin of profit to sales, while slightly higher than in 1971, was well below that of other years. The lag of profit increases behind rising production costs and added investment was a significant consequence of inflationary costs and governmental price controls.

This was a year in which they earned $2.2 billion, more than any company had ever earned in history! The new high it "edged to" was a 12% increase over the previous year, 120% over 2 years, and 50% over 3 years. GM and the others to a lesser degree, were looking for problems to portray in order to ward off union demands, threat of anti-trust action, further price controls and regulations on safety, emissions, etc.... Even looking for problems, they apparently miss the Japanese.

Summary of Attention to Major Environmental Change

Beetles and Termites

The evidence indicates that both Chrysler and GM were attentive to some environmental changes – the trend toward small cars, the importance of fuel efficiency, the importance of global markets, and global production – but were conspicuously inattentive to others – notably declining world market share and the emergence of a superior system of automobile design and production.
Human structures are typically in far less danger from beetles and other visible bugs than termites which, unseen and undetected, can quickly and efficiently unearth the foundations of any wooden edifice, however grand and towering.

I make this observation because the difference between those changes to which the firms did and did not attend seems transparent: the firms attended to threats which were publicly announced and omnipresent on the media (e.g., the VW Beetle); they ignored those which were quietly transforming their industry (i.e., the organic work processes of the Japanese).

Practical Implications

This is not to say anything normative at all (i.e., that they shouldn’t pay so much attention to media issues). At the time GM was ignoring emerging Japanese production systems, they were responding to a myriad of public criticisms – hence the focus for so long on social and political issues. GM would have been hard pressed not to respond to the myriad of criticisms it faced. Had they insufficiently addressed these concerns, they might have been brought down by public opinion or the cold war might have gone the other way, and today we would shake our heads asking how could they have ignored these social and political developments. Rather, what I do now is simply an attempt to begin to understand theoretically the attention structure we observe in the data.

4. WHAT DID THE FIRMS ATTEND TO AND WHY?

The Dominant View of Attention: What a Profit-Maximizing Entity Might Do

While the dominant views of attention discussed in Section 1 are primarily implicit, we might summarize a few propositions that emanate from these perspectives:

1. Exactly what constitutes a threat would be defined by its effect on profitability. We would expect that attention is focused on those areas which have the greatest potential effect on costs and revenues.

2. Firms should focus attention roughly equally on threats – developments with the potential to reduce profits – and opportunities – developments with the potential to augment profits. We would also expect that these vary randomly because both opportunities and threats are, by definition, unpredictable. Those that had been predictable would have been predicted and acted upon. Both opportunities and threats related to the profitability of the firm, would, by definition, arise in unforeseen areas and changes in attention would be unrelated to past firm performance (Malkiel 1995).

3. Independent of an assumption of profit-maximizing behavior, we would expect that managers attend
to matters related to the central elements in the business curriculum. These are the subject areas that generations of management educators have determined are important for managers to know.

Were the firm a purely profit maximizing entity, executive management would focus on those central elements of the business curriculum that scholars have demonstrated to be relevant to corporate profitably.

4. Finally we would expect that firms in the same industry would have roughly similar attention patterns because the primary issues affecting both costs and revenues are roughly the same.

The attention data from this study, however, cast doubt on each of these propositions. Rather the data indicate that actual attention diverges sharply from a profit-maximizing model, and that it is more readily understood as a function of identity and socially validated rules of behavior.

4.1. Palpable threats only

The When and Why of Lean-Production Attention

We would expect that the seriousness of a threat to a profit-maximizing entity would be a function of its potential effect on profitability and that attention would focus on those areas which have the greatest potential effect on costs and revenues. The primary finding of Section 3, however, is that despite the enormous implications of lean production on costs and revenues, neither Chrysler nor GM attended to issues of lean-production until well after these techniques were developed and effectively used by Japanese firms and well after external events – the oil embargo of 1973 – made the attributes of this system all the more valuable. The inference is that, rather than try to maximize profits, the firms were satisfied with acceptable profit levels. Only once the situation became desperate for Chrysler during the second Arab oil embargo of 1979 did they attend to these issues. GM, never facing equivalent financial exigency, did not attend to them until public embarrassment motivated them to do so: an NBC documentary, “If Japan Can, Why Can't We?” (Dobbins & Rueven 1980) on the Japanese ascendancy in manufacturing quality and how it was triggered in part by the American quality control guru, Dr. W. Edwards Deming; two critical Harvard Business Review articles by prominent American Operations researchers (Hayes 1981, Wheelwright 1981); and a bestselling book (Schonberger 1982) describing the power of the Japanese way of manufacturing. After all this, GM had to pay attention.

4.2. Changes in response to threats rather than opportunities.

A profit maximizing entity would attend equally to opportunities and threats, but consistent with
Jackson & Dutton's (1988) finding based on questionnaire data that managers are more sensitive to threats, archival data used here indicate that changes in executive attention are also primarily in response to threats.

**Routinization in consecutive good years**

In consecutive good years, reports bear strong similarity to that of the previous year. This is perhaps most apparent in the one early four-year stretch of good Chrysler earnings, 1966-69. For example, they report year after year, in almost the same place in the letter, their annual overseas acquisition:

- In January 1967, the company entered into an agreement under which it will acquire a majority voting interest in Rootes Motors Limited of Great Britain by exercising its rights to a new issue of Rootes voting stock and underwriting the balance of the issue. (1966:53-55)

- Barreiros Diesel S.A. of Spain operations were consolidated in December following an increase in Chrysler International's share of from 45% to 77%. (1967:46-48)

- In Chile, agreement was reached to acquire a one-third interest in Nun y German, a company which assembles Simca and Dart passenger cars. (1968:52-53)

- In May, the company and Mitsubishi Heavy Industries, Ltd. announced the possible formation of a joint venture company in Japan, in which Chrysler will have a 35% interest. (1969:56-57)

**Performance and Change of Attention**

To quantitatively test this observation, I examined the correlation between corporate performance – measured as Return on Assets (ROA)\(^{10}\) – with the year-to-year change in primary attention categories. To obtain the latter measure I summed the absolute differences between each category between years. For example the sum of the category differences between Chrysler 76 and Chrysler 77 (Table 4) equals (15+5+7+16+3+10+5+2+16+3) or 82. Despite all the noise in this data, there is a remarkably strong negative correlation, \(r = -.48\). Figure 4 illustrates this correlation graphically. The left hand scale and dashed line graphs ROA. The right hand scale and the bars graph the year-to-year composite category change as compared with the average Chrysler composite category change.\(^{11}\) In almost every case, good years have less-than-average category change and poor years have greater-than-average category change. Six year-to-year pairs (two consecutively from 73-75 and four consecutively from

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\(^{10}\) I chose ROA rather than stock price or income so that the later year results in inflated dollars would not be overly represented in the results.

\(^{11}\) Average Chrysler composite category change = 63. Thus the 1976-77 composite category change sum of 82 is 30% above the year-to-year Chrysler average.

The bars are graphed in the year the letter was written rather than the report year. The correlation is slightly less with the report year \((r = -.43)\).
77-81) have at least 4% greater-than-average category change. These correspond with all the years of annual loss except that 1977 preceded the 5 year death walk and 1982, the final year of losses, had exactly average category change.

**Figure 4:** Chrysler return on assets (dashed line, left hand scale) correlate negatively with year-to-year changes in attention categories from Chrysler letters to shareholders, Columns and scale to right indicates deviance from the average year-to-year Chrysler composite category change. 12

Financial performance and category change do not correlate significantly for GM, but that is consistent with the argument made throughout this chapter – that financial performance is not the relevant driver of attention or behavior for GM; indeed; it is only relevant for Chrysler in proportion to the direness of its situation. The most extreme year-to-year category change in the study was GM 1964-65 (110% more than average). 1965 was the year in which GM was sanctioned and internationally embarrassed in their appearance before Congress for producing unsafe vehicles and violating the constitutional rights of Ralph Nader, the author who tried to expose this.
4.3. The General Importance of Social Issues

Dominant views of attention implicitly suggest that executives attend foremost to developments related to their specific product and secondarily to the central elements in the business curriculum, especially those demonstrated as relevant to corporate profitability.

Within business education, subjects such as organizational behavior, organizational environment, and especially business ethics have traditionally been marginalized and are considered by many as irrelevant, primarily because there is no clear connection with profit outcomes. But the data indicate that executives find them supremely important and necessary nonetheless.

To illustrate the surprising relative importance of these social issues, I recombine the codes as shown in Table 7, to examine the “attention aperture.” At the sharpest focus are issues of PRODUCT & PRODUCTION. This includes the entire PRODUCT DEVELOPMENT category (regardless of any judgment on “lean” or “mass”) and all of OPERATIONS (costs, process) – except for generic comments on capital expenditures and facilities. Opening up the lens a bit are the GENERAL MANAGEMENT issues. At the next f-stop are the issues of CORPORATE MANAGEMENT. Finally, the wide angle lens no longer focuses on making cars or even money – but rather takes in the view beyond, of THE LARGER WORLD.

As illustrated in Table 8 and figure 5, only 11% of the lines in GM letters to shareholders over the quarter century are about PRODUCT & PRODUCTION, whereas 46% of the lines are about THE LARGER

Table 7: Four degrees of attention aperture

<table>
<thead>
<tr>
<th>Attention aperture</th>
<th>Coding categories included (from Appendix A and Table 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product &amp; Production</td>
<td>Product Development (0), Operations/Process (1.1), Costs (1.4), Facilities/Fixed costs (1.3.7)</td>
</tr>
<tr>
<td>General Mgmt</td>
<td>Sales/Marketing (2), Financial (3), Labor (4), Ops/Sites (1.3.1), Production mix (1.3.2) &amp; Capital Expenditures (1.3.3)</td>
</tr>
<tr>
<td>Corporate Mgmt</td>
<td>Strategy &amp; Structure (5), Non Auto (7)</td>
</tr>
<tr>
<td>The Larger World</td>
<td>Economic conditions &amp; projections (6), Social &amp; Political issues (8), Gratuities (9)</td>
</tr>
</tbody>
</table>

Table 8: General Motors Corp. attention aperture 1962-1986

<table>
<thead>
<tr>
<th>Attention aperture</th>
<th>62-64</th>
<th>65-70</th>
<th>71-80</th>
<th>81-83</th>
<th>84-86</th>
<th>GM total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product &amp; Production</td>
<td>17%</td>
<td>14%</td>
<td>7%</td>
<td>14%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>General Mgmt</td>
<td>43%</td>
<td>29%</td>
<td>26%</td>
<td>42%</td>
<td>41%</td>
<td>32%</td>
</tr>
<tr>
<td>Corporate Mgmt</td>
<td>15%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>The Larger World</td>
<td>26%</td>
<td>61%</td>
<td>64%</td>
<td>59%</td>
<td>46%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Corporate Status:

<table>
<thead>
<tr>
<th>Respected, preeminent, industrial institution</th>
<th>Under attack as polluter, energy waster, killer, racist, oppressor, etc...</th>
<th>Under attack as monopolist</th>
<th>Subsiding anti-business sentiment, financial responsibility, but firm is now a business leader</th>
<th>Pro-business sentiment. Attempts to regain former industrial status</th>
</tr>
</thead>
</table>


WORLD. Over the sixteen years from 1965 through 1980, 56% of the lines are about THE LARGER WORLD. The other three categories of standard business concerns represent even 50% of the letter barely three times. From 1971 through 1980, only 7% of the lines are about PRODUCT & PRODUCTION.

**Figure 5: Allocation of subject matter by scope of vision in GM letters to shareholders 1962-1986**

Vision and Grace

One might presume that GM, and even Chrysler, throughout this time represent an aberration, and that part of the reason they performed so poorly was because of the lack of focus in their attention. This is, in fact, part of the story I have told, but one must be careful not to draw the wrong conclusions. In fact, Chrysler's renaissance corresponds with an increase in attention to THE LARGER WORLD. From 1967-79, they devote an average of 21% of the letter to CONDITIONS, SOCIAL ISSUES and GRATUITIES, compared with 31% from 1980-86. In particular, an average of only 2.5% of the letter is SOCIAL ISSUES from 1967-76 compared with 13.4% from 1980-86. Under Iacocca's leadership (he became Chairman
in late 1979), the letter becomes a much more forceful, readable document:

The government has refused to act against the General Motors-Toyota joint venture and we've challenged the combination in federal court. We believe this illegal collaboration harms competition and could harm Chrysler by giving the two firms the market power to set prices in all segments of the American automobile market. ...

While Chrysler will continue to speak out on these and other important national issues, we realize that we cannot control them. But we can control the quality of our products, our productivity and our service - and if our products, productivity and service are the best in our business, then we know we can make it in any economic climate....

When you get right down to it, "to be the best" is ... a commitment shared by every man and woman at Chrysler - a commitment to keep Chrysler prosperous by designing, engineering, manufacturing, selling and servicing the best cars and trucks in America.

Not Hemingway perhaps, but it is the Hemingway of auto industry communications. When I developed the category GRATUITIES while coding GM, it was with some minor derision for what seemed unnecessary, uncommunicative fluff. But some gratuities - or grace - in these letters appears invaluable. The Iacocca letters inspired in me a surprising sensation of confidence - that this is someone in whom I would be willing to trust my money, even perhaps my career. I also changed my mind on the "bailout," which I had always considered unjust and unwise policy and precedent. Reading these letters, I felt that the government helped cause the problem with their regulations, and that they really were partners. It made sense to help.

4.4. What Constitutes a Threat Depends on the Firm's Identity.

Finally, in contrast to the expectation that firms in the same industry would have roughly similar attention: patterns, the data are strikingly different for the industry leader and the also-ran even though there appears to be no important difference in how the primary external issues of the period affect the firms costs and revenues.

An Identity Interpretation: GM

Concern for Social Issues by A Tarnished American Institution

As noted previously, GM throughout this period devotes a striking percentage of the letter to issues that have little directly to do with running an automobile company. Of course, macroeconomic conditions do affect car sales and there were social and political concerns to address, but this is a letter to stockholders, not a party platform. Yet for the sixteen years from 1965-1980 an average of only 44% of the text lines are about standard business concerns within their domain of control.

Executive management of General Motors seemed to view their corporation not merely or even
primarily as an auto manufacturer, but as an American institution, perhaps THE American institution with responsibilities far beyond the shareholder. These proclaimed responsibilities include:

- providing economic benefits. Periodically from 1963-72, especially during recessions, they note overall payroll and payroll growth. Even exports are framed as a public service:

  GM is cooperating with the President's program aimed at improving the balance of payments position of the U.S. GM was responsible for a favorable effect of $776 million.... (1965)

- being a good world citizen (when America was being criticized as imperialistic):

  The conduct of a worldwide business enterprise carries responsibilities as well as opportunities... We are doing the sort of job that makes us a welcome and desired member of the business communities of the countries in which our cars are sold. (1964)

- promoting safety, clean air, etc....; but also to protect capitalism, opportunity, and freedom in the face of anti-business zealotry.

  A ... serious waste of manpower and capital resources is occurring daily... governmental standards for emission control and passenger protection... are excessively stringent. ... there is reason to question whether the standards provide benefits to the consumer that are commensurate with their costs... (1972)

Data from Table 2 suggests, however, that this extreme concern with social issues – an average of 38% of the lines over the 14 years from 1965-1978 – was a time limited phenomenon. Prior to 1965 and after 1983, averages of only 7% and 6%, respectively, of the lines concern SOCIAL ISSUES. During the period of extreme concern with social issues, from 1965-1978, the company was criticized harshly and unceasingly by the chorus of public interest groups, journalists, politicians, and academics (see citations in the first paragraph of this chapter).

Prior to this period, GM had been lionized as the model for how a modern business should be run, the premier industrial institution of the world, and more to the heart, the leading industrial institution in America, the country dedicated to industry. Presumably, this image of the firm was widely held among employees who identify with the firm (Dutton, et al. 1993). But as a result of the barrage of criticism, GM’s identity as an American institution became threatened and especially salient as a motivator for action. Dutton & Dukerich (1991) show how the NY-NJ Port Authority acted on the issue of homelessness only once an internal identity of preeminent engineering institution came into conflict with public image increasingly associated with shabbiness, danger, and homelessness. Similarly, it appears that discrepancy between an internal identity of “Hot dogs, baseball, Apple Pie, and Chevrolet” (Chevy commercial) and public image as “Baby Killer” (Kurylko 1996) and Public
Polluter #1 (Guilford 1996) focused executive attention and instilled a strong motivation for action – not to make better cars or more money, but to redeem its reputation.

**Rational Actor or Corporate Citizen?**

Executives, and perhaps workers as well (based on 1980 election results), were clearly unsettled by the Carter administration which they associated with runaway inflation, dishonor abroad, and vigorous environmentalism. In a sense the Letter to Shareholders is a party platform – GM’s opportunity to influence national events. GM is not simply an economic entity adapting to changing conditions, but rather a corporate citizen actively trying to shape those conditions. In 1979, for example, they make their case for an American “energy policy”:

> The only wise course of action for the United States has become increasingly clear: we must end our growing and costly dependence on imported oil. ... Conservation by itself will not solve the problem of U.S. dependency on oil imports. The real and lasting answer is to increase production from our own domestic resources, and to develop alternative sources of fuel.

In 1981, with friends in Washington, GM (disingenuously) takes on environmentalism:

> ... we applaud President Reagan’s call ... for prompt enactment of a responsible Clean Air Act. It is what the country needs. [Italics mine – they really want repeal of the Clean Air Act.]

Post-recovery Chrysler under Iacocca shows even stronger citizenship. At about the same time that GM becomes an auto manufacturer again (1982), Iacocca begins to express concern, regret, and harsh criticism about the increasing budget deficits. He continues each year to expand that concern. In 1985 he writes:

> ... bright as tomorrow looks for Chrysler, we’re concerned about our nation’s future. Our national debt has rocketed past $2 trillion, $32,000 for every American family. We have an uncompetitive tax policy and no energy policy at all. American businesses must compete on an unfair and unequal basis ... We are losing our basic industries, and our industrial jobs are going overseas.

> We intend to keep speaking out on these national issues, and we hope you’ll join us in demanding workable solutions.

This is surprising, not only in expressing national concerns far beyond immediate company interest, but it is also quite America-centric, for a company trying very hard to be international.

**An Identity Interpretation: Chrysler**

In contrast to GM’s identity as ‘the American institution,’ Chrysler’s identity – at least before Iacocca and recovery from near demise – was ‘(weak) third member of the big three.’ The letters present a nuts-and-bolts company with lots of numbers (no rounding) of unit sales and dollar revenues. There are usually several sales comparisons with GM and Ford – with at least one comparison
(e.g., truck sales in Canada) that shows a favorable result. Much as maintaining its reputation appears to have driven GM’s attention, Chrysler’s attention seems to be driven by a need to prove they belong in the automaking big leagues.

The issues to which Chrysler attends in the letters bear little resemblance to those of GM. The contrast of Table 2 vs. 3 and Figure 6 vs. 5 illustrate this numerically and graphically.

To the degree that there is a resemblance, it is Chrysler’s attempts to keep up with or emulate GM, presumably to do what good automakers do, much as Powell & DiMaggio (1991) predict in their discussion of institutional fields. They try to internationalize and diversify on the heels of similar GM initiative, and aim to improve productivity following a GM efficiency campaign. Prior to the period of study, Chrysler had organized the corporation in the image of GM’s multi-division life-cycle structure, and had long been accustomed to marketing and new products approaches that followed from GM success.

After following GM proved a failing strategy in the late 70s. Chrysler had a much easier time emulating Toyota than did GM itself, hence the more rapid and more complete shift in attention to lean production (Figures 2 and 3). It’s much easier for a follower to shift leaders than for a leader to become a follower.

5. CONCLUSION

Contributions

The attention database developed for this article provides a unique data source which can help address fundamental questions in organizational and managerial behavior. In this project, I have used this database to make two contributions to our literatures:

First, I show prompt attention to some important environmental change (especially the trend toward smaller and more fuel-efficient cars), but serious lags with respect to others (especially Japanese
advances in design and production).

Second, I present data that shows a surprising amount of attention to social issues and other aspects of their environment either outside their control or unrelated to the pursuit of profit.

Together, these finding suggest a social model of organizational attention that diverges from dominant, implicit economic models in four ways:

1. Issues reported in the business press and the general media command more organizational attention than important developments that quietly effect the fortunes of the enterprise;

2. Comparable threats command more attention than opportunities;

3. A remarkable percentage of organizational attention is to social and political issues beyond firm control, rather than concrete issues within their control.

4. Attention patterns are more readily understood in terms of the firms’ identity and reputation-maintenance than profit seeking.

Limitations

Two important limitations of the data sources limit the conclusions one can draw from this study. The first, discussed at length, concerns the interpretability of the data source, the Letters to Shareholders. At a minimum, however, the approach can complement the vast collection of verbal reports and straight quantitative studies of the industry. Moreover, the data and approach have corresponding advantages that have allowed the development of important findings that can now be tested with more common research methods.

Second, the study lacks independent variables. My explanation for differential attention to environmental change – that executive attention is a function of the general level of public attention – is really a hypothesis, the confirmation of which awaits further research. Such research, however, is readily conductible through systematic analysis of the general media and business press over the period in question.

The general model of attention suggested by these findings is yet more speculative. While it is broadly consistent with the data, it now awaits refinement, operationalization, and rigorous examination. This findings of this chapter suggests that such research will provide further surprises for those who implicitly accept dominant economic perspectives on executive and organizational attention.
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Appendix A: Attention Categories

(0) Product Development
   (0 1) New Products
      (0 1 1) Small Car
      (0 1 3) Features/Options
      (0 1 4) Standardization
   (0 2) Product Value
   (0 3) Product Quality
   (0 4) Product Development Process
   (0 5) Warranties
   (0 6) Car Awards

(1) Operations
   (1 1) Process
      (1 1 1) Lean Production
      (1 1 2) Manufacturing Process
      (1 1 3) Manufacturing Quality
   (1 3) Facilities
      (1 3 1) Sites
      (1 3 2) Production Mix
      (1 3 3) Capital Expenditures
      (1 3 7) Fixed Costs And Production Flexibility
   (1 4) Costs
      (1 4 1) Cost Issues
      (1 4 5) Efficiency
      (1 4 8) Productivity

(2) Sales / Marketing
   (2 1) Sales Data
      (2 1 2) North American Sales Data
      (2 1 3) International Sales
   (2 4) Market Data
      (2 4 1) Competition
      (2 4 2) Consumer Preferences
      (2 4 3) Consumer Acceptance
      (2 4 4) Market Position
      (2 4 5) Market Share
   (2 6) Marketing
      (2 6 1) Advertisements, Rebates
      (2 6 7) Guarantees, Service

(3) Financial
   (3 1) Financial Performance
   (3 2) Dividend Information
   (3 3) Financial Activities

(4) Labor
   (4 1) Union Conflict
   (4 2) Union Cooperation
   (4 6) Labor Costs
   (4 7) Quality Of Work Life
   (4 8) Employment-Pay

(5) Strategy & Structure
   (5 1) General Strategy
   (5 2) Goals
   (5 3) Identity
   (5 5) Reorganization
   (5 6) Mergers/ Acquisitions
   (5 7) Alliances
   (5 8) Management Compensation
   (5 9) Management Changes

(6) Conditions
   (6 1) Auto Industry Conditions
   (6 2) Auto Industry Projections
   (6 3) General Macroeconomic Conditions
   (6 4) Macroeconomic Projections

(7) Non Auto Divisions/Initiatives
   (7 1) Real Estate
   (7 2) Financial Services
   (7 3) Parts
   (7 4) Defense-Aerospace
   (7 5) Diversified

(8) Social And Political Issues
   (8 1) Affirmative Action
   (8 2) Consumer Issues
   (8 3) Economic Benefits
   (8 4) Energy
   (8 5) Industrial Policy
   (8 6) Pollution Control
   (8 7) Government Regulations (General)
   (8 8) Safety
   (8 9) Social Responsibilities
   (8 10) Workplace Safety
   (8 11) Pricing Fairness

(9) Other Text
   (9 1) Introduction
   (9 2) Close
   (9 3) Confidence
   (9 4) Gratitude
   (9 5) General Company Performance
   (9 6) Motivation
   (9 9) Deaths

Key:
_Underlined items_ are analyzed as Mass Production indicators
_Italicized items_ are analyzed as Lean Production indicators
### APPENDIX B: AUTO INDUSTRY STUDY TIMELINE

(Source: *Automotive News* • *American Automobile Centennial commemorative* (June 26, 1996) The issue format was of the hundred most important stories in automotive history – number in parenthesis refers to story number)

<table>
<thead>
<tr>
<th>Year</th>
<th>External Events</th>
<th>Internal Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>Nader, <em>Unsafe at any speed; the designed-in dragers of the American automobile</em> (AN77)</td>
<td>Jan. First use of rebates (Chrysler) (AN80)</td>
</tr>
<tr>
<td>1966</td>
<td>Congressional Hearings into automotive safety; passes National Traffic and MV Safety Act (AN77)</td>
<td>Toyota US sales surpass VW (AN*81)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VW builds plant in US (AN84)</td>
</tr>
<tr>
<td>1970</td>
<td>Apr. 1st Earth day (AN*78) Chevy convicted of &quot;poisoning the air&quot;</td>
<td>Jan. Chrysler introduces fwd subcompacts (AN83)</td>
</tr>
<tr>
<td></td>
<td>Clean Air Act (AN*78) Dec. signed by Nixon</td>
<td>VW opens plant in US (AN84)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>July. Iacocca fired as Pres at Ford (AN85,87)</td>
</tr>
<tr>
<td></td>
<td>Muskie Senate Report v. critical on safety, pollution (AN*78)</td>
<td>Dec? Iacocca hired as CEO at Chrysler (AN85)</td>
</tr>
<tr>
<td></td>
<td>Oct. 1st oil embargo (AN79)</td>
<td>Chrysler loses $205m (AN85)</td>
</tr>
<tr>
<td></td>
<td>Energy Policy &amp; Conservation Act - CAFE (AN82)</td>
<td>Spring. GM fwd X-cars (AN83)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Caldwell promoted to CEO at Ford (AN87)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chrysler loses $1.1 bil. (AN85)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Caldwell promoted to Chairman at Ford (AN87)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chrysler loses $1.7 bil. (AN85)</td>
</tr>
<tr>
<td></td>
<td>Jan. 2nd oil embargo (AN86)</td>
<td>Workers smash Mazda (picture AN90)</td>
</tr>
<tr>
<td></td>
<td>Dec. US backs $1.5 bil in loans to Chrysler (AN85)</td>
<td>GM first losing year since 1921, but a profitable 4th Q.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nov. First Hondas produced in Ohio (AN*90)</td>
</tr>
<tr>
<td></td>
<td>PBS Special: If Japan Can, Why Can't We?</td>
<td>Chrysler repays fed loan guarantees 7 years early. (AN85)</td>
</tr>
<tr>
<td></td>
<td>Hayes &amp; Wheelwright</td>
<td>Sept: Saturn idea. (AN91)</td>
</tr>
<tr>
<td></td>
<td>Voluntary Import Restraint agreement to take effect in 82 (AN89)</td>
<td>Nov. Chrysler Minivan (AN92) immediate hit.</td>
</tr>
<tr>
<td>1982</td>
<td>HP publishes systematic study on defect rates high in US, low in Japan (Fine says &quot;really shook people up.&quot;)</td>
<td>IMVP Book</td>
</tr>
<tr>
<td></td>
<td>Schoenberger</td>
<td>GM launches joint venture with Toyota (AN93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM reorganizes NA ops (AN93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM buys EDS (AN93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM buys Hughes (AN93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dec. Taurus is introduced. Revolutionizes Amer auto ind(AN94)</td>
</tr>
<tr>
<td></td>
<td>Plaza accord (US, German, Japan) to bring down $$value (AN95)</td>
<td>Off-the-boat imports crest. Transplants fill the gap</td>
</tr>
<tr>
<td></td>
<td>(AN95)</td>
<td>(AN95)</td>
</tr>
</tbody>
</table>
APPENDIX C. METHODOLOGICAL APPENDIX

First round of coding: grounded theory

This project began as true grounded theory (Glaser & Strauss 1967). I did the original coding in my first year as a Ph.D. student, knowing little about Organization theory, the auto industry, or research methods. I coded a few letters from the big three American auto companies from widely different years to establish preliminary coding categories and then went through first GM and then Chrysler chronologically so that I also got a sense of the history of the companies coding. Shortly after beginning, I decided to work with the paragraph as the basic unit of meaning. By attempting to understand why the authors had included the paragraph in the text, I was usually able to assign the text to a single category, but I retained the line as the basic unit of analysis so that long paragraphs would count for proportionally more than short ones in the quantification.

As I worked through the documents, I would first identify the key theme of the paragraph. Next I would categorize the theme on two or sometimes three levels of generality. The first level is a functional breakdown based on core subject areas at the two Management schools with which I am familiar (Sloan and Wharton): Operations, Finance, Marketing, Strategy, etc... the second and third level adds additional detail, associated with lean production (below) or other topics I found interesting. Early on, it became apparent that a large percentage of paragraphs were outside this taxonomy and I included other primary categories such as SOCIAL AND POLITICAL ISSUES and CONDITIONS. A sample from the first round of coding is included in Table C1 below. These data formed the basis for the Nud.ist categories

Dealing with coder subjectivity (Methods I tried but Abandoned)

I was acutely concerned with potential subjectivity and bias problem. I variously considered developing explicit rules, using computers, “living with it”, and abandoning the project; but in the end, a human solution seems to have emerged.

Computer content analysis/ Explicit coding rules

Early in the project, I harbored hope of computer coding. I explained what I was trying to do to people at the Artificial Intelligence lab and they were encouraging, saying that there were systems that could do so much more, but that I’d have to invest some effort in applying some of these systems.
I considered two strategies—(1) counts of words and phrases or (2) actual computer thematic understand based on explicit rules.

Regarding Strategy (1): I had the thought that perhaps I could use my own subjective coding to develop hypotheses about specific words, phrases or word categories that would not be subject to bias, i.e. word and phrase counts, word counts by type of word, etc. ... I subjected the documents to “analysis” by programs such as the Harvard III inquirer (Stone et. al. 1966), which counts and categorizes words, but a brief empirical examination revealed no pattern in the results, nor could I theoretically come up with plausible hypotheses. I suspect that words have too many meanings, and are too dependent upon context to be very useful in this way.

Regarding Strategy (2): despite grand ambitions and claims, these systems are nowhere close to even being able to understand words let alone paragraphs. As for developing my own explicit rules, this, too, seems an impossible task. The surprising adequacy of the vague human instructions (“Think about why the authors are including this.”), fortunately, led me to abandon this thought.

**Ambiguity, Intelligence, Research and Understanding**

In doing the coding, there are always ambiguities. These were frequently paralyzing for me, as I wanted to make sure everything was “right,” but confidence from both the intra- and inter-coder reliability results helped me to go on: the choice made may not be the only choice, but it is a reasonable choice. To the best of my abilities I have tried to code them as honestly as I could, trying to understand the point behind each entry. To the best of my knowledge, there is no reason to suspect systematic bias.

Table C1 is a portion of the spreadsheet I used in the first round of coding. Each datum in the database represents the central idea of a paragraph although occasionally two or more themes are extracted from a paragraph. The number that follows is the number of lines in the paragraph, my quantitative measure of attention. My assumption is that the percentage of lines in each category

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1 These were made explicit in my paper, A Proposed Empirical Study of Organizational Response to Loss in the Auto Industry. Draft Date: March 15, 1995
2 The software has been updated twice since, hence Harvard III.
3 For example, I was looking for emotional content, but the Harvard III system ascribing words such as pleased or gratitude as “emotional words” did not permit me to infer anger or any emotional content. I think that the pattern of word content revealed no patterns.
4 Surprisingly perhaps, Simon’s description of “rational” decision making as procedurally rational rather than outcome rational, comforted me in this regard.
represent a rough expression of how important management feels a particular topic is, and how much of their attention should be focused on it. Following that is a category and subcategory. Below are broad category compilations, followed by broad category breakdowns.

Table C1: Sample from the original Attention Database

<table>
<thead>
<tr>
<th>Theme</th>
<th>1963</th>
<th>Lines</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>New High Ground</td>
<td>4</td>
<td>FP/Sales/PR</td>
<td></td>
</tr>
<tr>
<td>Worldwide sales</td>
<td>3</td>
<td>Sales</td>
<td></td>
</tr>
<tr>
<td>Earnings</td>
<td>5</td>
<td>Fin</td>
<td></td>
</tr>
<tr>
<td>Business Expansion</td>
<td>8</td>
<td>MEC</td>
<td></td>
</tr>
<tr>
<td>Long Term Growth</td>
<td>5</td>
<td>MEC-Auto</td>
<td></td>
</tr>
<tr>
<td>Sales Growth</td>
<td>5</td>
<td>Sales</td>
<td></td>
</tr>
<tr>
<td>Market trends</td>
<td>7</td>
<td>Mkt</td>
<td></td>
</tr>
<tr>
<td>Non Auto</td>
<td>3</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Plant Modernization</td>
<td>6</td>
<td>Mfr CE</td>
<td></td>
</tr>
<tr>
<td>Flexibility in mfr</td>
<td>8</td>
<td>Mfr Lean</td>
<td></td>
</tr>
<tr>
<td>World Auto Markets</td>
<td>5</td>
<td>Mkt</td>
<td></td>
</tr>
<tr>
<td>New 1-liter cars</td>
<td>6</td>
<td>PD</td>
<td></td>
</tr>
<tr>
<td>Overseas Expansion</td>
<td>2</td>
<td>Strgy World</td>
<td></td>
</tr>
<tr>
<td>Total Car sales</td>
<td>4</td>
<td>Sales</td>
<td></td>
</tr>
<tr>
<td>Value of Long term agreements</td>
<td>6</td>
<td>Union</td>
<td></td>
</tr>
<tr>
<td>Praise(plea) for labor</td>
<td>4</td>
<td>Emp Praise</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>81</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

I've heard people criticize coding as grudge work, but this kind of coding most certainly is NOT. If anything, it's the opposite. Taxonomizing taxed all of my abilities and then some. It was simply too hard at times to try to make it work. Typically, one out of five paragraphs or so would not fit into the schema presently in use, and I repeatedly had to ask 'What am I trying to get at?', 'What is the author trying to get at?', 'What is the central essential theme?', and 'How does this compare with others in this category?'. It is hard work, for which my abilities were too limited. On the other hand, this seemed to be exactly the kind of work social scientists should be doing. A less interpretive process insufficiently utilizes our intelligence; a less rigorous process does not test impressions and does not allow us to relay with confidence that our interpretations are better than alternatives which can also be found in the data.
Intercoder Reliability

A first test of intercoder reliability produced disappointing results. The category choices of two undergraduates were more often different than the same as mine or each other. Poor reliability was perhaps to be expected; evidence summarized in Weber (1990:Ch. 2) shows that “it is more difficult to achieve intercoder reliability on large units, such as paragraphs than smaller units such as words” (p. 23), and that even for words it’s not always that high. In this case, there were several obstacles to high intercoder reliability:

1. some paragraphs were badly written; they were not organized as coherent sets of thoughts.
2. the students did not read carefully enough. They frequently picked up on a single point rather than the paragraph context. It become clear that abstracting a central theme from a paragraph is no trivial task even when the authors seemed to me to have one.
3. They needed to understand better my taxonomy.

To overcome these obstacles, I:

1. dropped Ford, which seemed the worst written and for whom we had the lowest intercoder reliability.
2. worked only with the student with whom I had higher correlation, Don Lacey, and asked him to think about why the authors are including the paragraph, and practiced this exercise with him for ten paragraphs or so.
3. Spent some time with this student explaining my categories, providing examples of paragraphs and why I coded them as I did.

Surprisingly (to me at least), these fairly simple instructions worked, especially thinking about why the paragraph has been included. It seems at though even when we can’t quite put into words why this was done (or even begin to write an algorithm), we can share an understanding with both the author and other careful readers.

We subsequently achieved broad category consensus in 81% of cases (39 out of 48 paragraphs), which was quite good because we restricted ourselves to one idea per paragraph. I was still in the process of defining the finer categories at the time (I still am). In the nine paragraphs of disagreement, we subsequently agreed in three cases to break up the paragraphs into two themes; he agreed with my point once we discussed it in three others; I agreed with him on one (and went back
to recode a few other similar paragraphs coded earlier). The other two were sort of toss-ups that could have gone either way.

Much of the difference came from a greater inclination on Don's part to break up paragraphs.

Protocols

I did, however, add an extra line to each paragraph in the quantification for the blank line that usually precedes each paragraph. I did this for originally for two reasons: first, it more accurately reflects the total amount of space devoted to a topic in the letter; second, it gives some extra weight to the paragraph, recognizing that I found this the only reasonable way to assign text and that the authors felt it worthwhile to include a distinct paragraph. I kept this protocol when I scanned and recoded the data more systematically, because it made for easier legibility to keep the extra line between paragraphs and summing the total lines of text to 100% allowed me a simple check that each line was coded once and only once.

Companies Studied: GM and Chrysler

I had originally intended to analyze the three surviving American auto companies and possibly American Motors, but it turned out that two companies was a monumental effort (although subsequent ones may be far easier). There were two additional reasons to those mentioned in the text (variance and American focus) why I studied GM and Chrysler rather than Ford. These are that I found the Ford letters particularly poorly written. It was difficult to determine a central theme of each paragraph or even two themes and Ford reports fared worst on initial intercoder reliability tests. 5 Additionally, I had to analyze General Motors' letters because that case was central to the "loss" analogy that emerged from a preliminary review of the materials (Freeman, 1996). GM had been clearly the leader in the industry since the late '50's; part of that thesis is that, whereas Ford and Chrysler had long been accustomed to emulating GM practices, it was easier for them to then emulate practices from Japan.

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5 The best written letters are Iacocca's: Active voice, nouns and verbs, no obfuscation. It might be interesting to subject them to a grammar test. As an aside, Subramanian, et. al (1993) found that better performing companies wrote clearer letters (as measured by reading grade level). Both Swales (1986) and Euske and Matthews (1994) found explicitness predicts firm performance.
Q.S.R. NUD*IST Power version, revision 4.0.
Licensee: Steve Freeman.


+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Selected nodes coding none of document C 1975:
[I 4] //Index Searches/Labor
(I 12 14) //Index Searches/Mass v. Lean/Lean Prod
Margin coding keys for selected nodes in document C 1975:
A: (I 10) //Index Searches/Prod Dev
B: (I 1) //Index Searches/Consum
C: (I 2) //Index Searches/SalesMkt
D: (I 3) //Index Searches/Fin
E: (I 5) //Index Searches/Strat&Struct
F: (I 6) //Index Searches/Conditions
G: (I 7) //Index Searches/Non Auto
H: (I 8) //Index Searches/Social Political
I: (I 9) //Index Searches/Gratuties
J: (I 11) //Index Searches/Mass v. Lean/Lean Prod

+++ ON-LINE DOCUMENT: C 1975
+++ Retrieval for this document: 215 units out of 215, = 100%
++ Text units i-215:

In 1975, worldwide sales by Chrysler Corporation and its
consolidated subsidiaries were $11.6 billion, compared with sales
of $10.9 billion in 1974. Worldwide unit sales of cars, trucks,
and tractors amounted to 2,475,597 units compared with 2,762,842
units in 1974. The company incurred a net loss of $259.5 million
for the year ($4.33 a share) including a loss of $55.0 million
($0.92 a share) from the sale of the Airtemp Division on February
23, 1976. This compares with a net loss of $272.4 million ($5.92 a
share) in 1974. The 1975 losses were reduced by $22.8 million
($0.38 a share) because of an accounting change made in the first
quarter.

The loss for 1975 includes $26.4 million of tax expense
rather than a tax credit because taxes were incurred on earnings in
certain foreign countries, but full tax carryback benefits were
unavailable on the losses in the U.S. and other foreign countries.

Fourth Quarter Operating Results Improved
Chrysler returned to profitable operations in the fourth quarter of
1975. Earnings from operations, excluding Airtemp results, were
$14.9 million ($0.58 a share) compared with a loss of $71.7 million
($1.73 a share) in the fourth quarter of 1974 (restated to exclude
Airtemp). With the $55.0 million loss on the sale of Airtemp,
Division and Airtemp's operating loss of $7.6 million included,
Chrysler incurred a net loss of $27.7 million ($0.46 a share) in the
fourth quarter of 1975.

In the fourth quarter, dollar sales by the Corporation and
its worldwide subsidiaries totaled $3.2 billion compared with $2.5
billion for the fourth quarter of 1974. Worldwide unit sales of
cars, trucks, and tractors were 50,504 units, compared with
34,180 units in the fourth quarter of 1974.

We announced in our last quarterly letter to our shareholders
that the management of Chrysler would take action with respect to
those operations which showed the prospect of being a continuing
financial drain on the Corporation. The sale of Airtemp, which has
had several years of losses, is consistent with that policy. Chrysler
will continue to manufacture its automotive heaters and
air conditioners at its Dayton, Ohio plant.

U.S. and Canada Vehicle Sales
Retail sales of Chrysler Corporation's passenger cars including
Dodge Colt in 1975 were 1,057,372 units, compared with 1,246,961
units in 1974. Our share of the domestic market was 14.9 percent
in 1975, compared with 16.6 percent in 1974.

Retail truck sales in the United States in 1975 totaled
259,442 units, compared with 300,629 units in 1974. Our share of
the domestic truck market was 12.7 percent, compared with 11.6
percent in 1974.

In Canada our dealers sold a record 206,062 new cars,
compared with 194,327 units last year. Our share of market held at
24.6 percent. Canadian retail truck sales were 45,450 units, up
from last year's 44,778 units. Our share of the Canadian truck
market was 15.0 percent, compared with 15.9 percent in 1974.

International Results
Total vehicle sales by Chrysler operations outside the United
States and Canada were 911,927 units, compared with 993,366 units
in 1974. Dollar sales totaled $4.8 billion, compared with $3.4
billion in 1974. As a group, the companies operating outside the
United States and Canada incurred an after tax loss of $46.7
million, compared with a loss of $7.5 million in 1974, restated to
exclude Airtemp operations. Currency fluctuations contributed
significantly to the 1975 losses.

United Kingdom Developments
During the past two years Chrysler has experiences difficult
operating conditions in the United Kingdom where that country's
depth economic crisis, a declining automotive market, and serious
labor problems combined to depress the entire industry's sales and
earnings.

Faced with the prospect of continued losses in our U.K.
operation in 1976, we reached an agreement in December under which
the British Government will share losses by providing grants up to

a maximum of approximately $100 million to Chrysler U.K. in 1976, and will share additional license if any, up to certain limits for the next three years. In return, the Government will receive half of any profits for the same period. The Government will also provide loan guarantees to help provide the capital needed for new products and working capital.

We expect that our new products come on the U.K. market, Chrysler U.K. will improve its competitive position in the British and world automotive markets.

Other World Markets
There are also encouraging developments in other markets of the world.

Sales by Chrysler France totaled 437,883 units, up 2.5 percent form 1974. The Simca 1100 continued to be one of Europe's most popular cars, and accounted for more than half of Chrysler France's sales.

During the year we introduced the Simca 1307-08-exciting new front-wheel drive cars that combine unmatched roominess, performance, and fuel economy. In response to the overwhelming demand, our subsidiary is increasing production schedules for these new models.

In Spain, the automotive market declined last year, but Chrysler Espina sales of 77,868 units set new records, up 4.7 percent from 1974. During the year Chrysler Espina introduced new models which have been well received. We are hopeful that the current transition to a new government in Spain will have a minimal effect on our operations in 1976.

In Latin America and Asia, there are signs that most markets are improving after the difficult period of 1975.

Car of the Year on Two Continents
Chrysler's new products for 1976 have been acclaimed for their styling, customer appeal, and advanced engineering features. The Simca 1307-08 has been named Europe's Car of the Year for 1976. It is the first time a subsidiary of an American company has ever won this prestigious award.

In the United States, our new small cars—Plymouth Volare and Dodge Aspen—have been named Car of the Year by Motor Trend magazine. This is the first time a manufacturer has had the Car of the Year on both sides of the Atlantic in the same year. Volare and Aspen combine the roominess, comfort, and quietness of large cars with the fuel economy of small cars. They have a unique suspension system that is drawing an extremely favorable reaction from buyers. We believe Volare and Aspen will be the family cars of the future, and we hope our shareholders will visit their dealers and test drive these exciting new cars.

Stronger and More Competitive Position
Chrysler now has its most innovative and competitive product line, and its broadest market coverage in its history.

Chrysler now offers: Subcompact-size cars for both Dodge and Plymouth dealers—Dodge Colt and the new Plymouth Arrow. The only new full 111-inch car of 1976 including a station wagon unique in its class—Dodge Aspen and Plymouth Volare—which, along with our Valiants and Darts, took nearly 10 percent of the compact market in January. A personal luxury Cordoba— With more than 50 percent of its trade-ins coming from owners of competitive models in 1975. A strong mid-size line—Dodge Charger, Plymouth Fury, Chrysler Cordoba, and Charger Special Edition. Full-size and luxury cars—led by Chrysler New Yorker Brougham—priced to give top product value. A line-up of compact vans and wagons that captured 37.5 percent of its market in 1975, and outs in every foreign and domestic competitor. A complete line of light-duty trucks, sports utility vehicles, and compact trucks that now account for more than 20 percent of all our U.S. vehicle sales. The industry's only one-year warranty with no mileage limitation. An electronic lean burn engine that meets 1976 emissions standards without a catalyst and operates on any kind of gasoline.

In February, 1976, we announced an agreement with Volkswagen to purchase four-cylinder 1.7 liter engines and manual transaxles (transmission and differential in the same unit) for the all-new subcompact we plan to introduce in the fall of 1977. We will continue to develop our own four cylinder engine and automatic transaxle for production in the United States. Our new subcompact will be unique in its market segment—the first North American built front-wheel-drive subcompact.

Outlook
After the extraordinary problems of 1975, we expect a gradual and steady return to stronger automotive markets. The nation's economy is showing steadily greater strength, and consumer confidence is at its highest level since October, 1973. This confidence is reflected in the nation's rate of total retail sales which in the first six months of 1975 increased nearly 13 percent over the corresponding period in 1974. The auto industry's rate of sales is also slowly but steadily improving month-by-month, with increasing demand for the size and style of vehicles which are Chrysler's greatest strengths.
There are still some uncertainties ahead for the entire automobile industry. General inflation and cost increases which have not recovered in new-car prices continue to be a problem as costs continue to rise. Even though Chrysler continues to work toward the nation's goals of cleaner air and energy conservation, government regulations often tend to inhibit our progress. We intend to continue our efforts to cooperate with the government in conducting careful cost-benefit studies before new regulations are established for the industry.

In spite of these and other problems, Chrysler is moving toward improved market strength and profitability. In January, our share of the domestic U.S. car market rose to 15.8 percent, the highest since August, 1975. As our dealers receive an adequate supply of new Volare and Aspens, we look for improved sales volumes and share of market during the year.

Chrysler is moving ahead with a major product program that will enable it to renew and resize its entire product line by the end of the 1970s, and increase its share of the markets out ahead. The company's products will cover a broader range of the market than today, with significantly improve fuel economy, and integrated and simplified products for even further reduced unit costs.

Permanent and significant reductions have been made in our overhead and our operating costs. Inventories were reduced during 1975 by $384 million. Total debt was reduced $297 million in the period. We have relieved a serious financial drain through decisions on Airtemp and the United Kingdom operations. In all, Chrysler has come through a most difficult period to a position of profitability.

We appreciate the support and cooperation we have received during this time from our shareholders, suppliers, bankers, dealers, and employees. As the national economy continues to improve, we expect that the continued efforts of this management to move the company ahead will bring significant improvement in Chrysler's results in the months and years ahead.
Most people in the American automobile industry had never experienced anything quite like the beginning of 1975. Inventories of unsold cars were alarmingly high, production was sharply curtailed, two of every five hourly automobile workers were laid off, consumer confidence was never lower and in showrooms across the country shoppers were few-and buyers were even fewer.

Turbulent 1974, which had opened with a crippling worldwide oil embargo, had ended on a dismal note of deepening recession. In the year’s final two months, the annual rate of car sales in the United States—also the level of the industry—had fallen to about 7.0 million, the lowest level since the early sixties. Worse still, imported cars had taken an uncommonly high percentage of these sales.

The doleful economic news, not only in the United States but around the world, seemed to confirm pessimistic predictions and awaken fearful memories of the Great Depression of the early thirties. Many were noting that what was a recession elsewhere was already a full-blown depression in the automobile industry. The concern for the industry’s future was widespread and long-term, and some were convinced that the best days were past, gone forever.

For General Motors, the first quarter of 1975 turned out to be the worst since 1946. Earnings fell to $0.20 per share, net income was less than 1% of sales, and other automobile manufacturers were reporting even worse results.

Yet even when 1975 was darkest, GM saw signs of a better day ahead. We noted the increased value in our products, the long-term soundness of the economy, and the central place of the automobile in American life. With these as a basis, we forecast a steady strengthening of car sales in 1975, estimating that the annual rate for the industry in the United States would rise to 9.5 million by the end of the year. And GM scheduled its production to match its prediction.

At the same time, we pressed ahead with future products programs in response to the pronounced shift in public tastes toward smaller, and particularly more fuel-efficient, cars. General Motors committed billions of dollars as we set out to redesign our entire line of cars and trucks by 1980, a marketplace reaction on a scale unprecedented in the history of the industry.

To maintain a strong financial position in the face of such low earnings and high capital requirements, the Corporation reduced its first-quarter dividend to $0.60 per share (compared with $0.85 paid a year earlier) and by early April completed a $680 million borrowing-the-largest ever by a single industrial firm. Even as GM tried to husband and augment its resources to weather the uncertain times, it redirected itself to improve cost control and asset management.

The long-awaited turnaround in auto sales began in the first quarter, spurred by widely advertised rebates to customers and lower-priced versions of some small cars, showroom traffic picked up and sales for the industry revived. In March, we began to recall some of the 137,500 employees from indefinite layoff.

In the second quarter of 1975, the national recession bottomed out, and the recovery process began, with the automobile industry leading the way. In May, the first of the new generation of GM cars, the distinctive international-sized Cadillac Seville, was introduced and enthusiastically received. Beginning that month and continuing through the rest of the year, GM’s annual sales rate as well as the industry’s-like steps on stairs, climbed steadily upward.

GM’s labor and material costs increased, however, as inflation, while moderating, continued at historically high levels. By the time the 1976-model introduction, these economic costs on a base car were about $375 above those of a year earlier. Mindful always of the competitive importance of offering the highest value at the lowest price, GM increased the wholesale prices of its 1976 base cars by an average of only $216 or 5.9%—and retail prices slightly less—anticipating our ability to improve our efficiency.
and thereby remain competitive. The 1976 model pricing was
described as "tailored to the current realities of the automobile
marketplace" by the President's Council on Wage and Price
Stability, and the rising demand continued unchecked into the new
model year.

In October, Chevrolet successfully brought to market the Chevette,
a car smaller and with better gas mileage than any other built in
the U.S., which was directly competitive with the best-selling
imported cars. Like nothing else could, the Chevette symbolized
the readiness of General Motors to change quickly and to compete
strongly. The impact of the import sales is impossible to
tailor out from other competitive and seasonal factors.

Nevertheless, the percentage of foreign-car sales in the United
States, which had averaged more than 20% for the first nine months
of the year, declined to 13% in the fourth-quarter-the lowest
level for any quarter since 1971.

Industry car sales reached an annual rate of about 9.5 million in
December, and for the year as a whole trailed 1974 by less than
3%. For General Motors, deliveries of new cars in the United
States for the year even edged ahead of the 1974 total. Improving
sales meant more jobs. Including the employee recalls scheduled for
early 1976, the number of hourly layoffs has been reduced by over
100,000.

The dramatic recovery of car sales in the United States was by no
means the whole story for GM in 1975. Truck sales experienced a
steady revival through the year, generally tracking the recovery
in the national economy, and with special strength in pickups and
vans in Canada, retail sales of cars and trucks, as well as
dollar sales, also hit new highs. Outside the United States and
Canada, dollar sales also were a record but factory unit sales
were 14% below the record of 1973. U.S. dollar sales of GM's Power
and Appliance Group also were at a record $2.4 billion, 8% over
1974, with three divisions, Detroit Diesel Allison, Electro-
Motive, and TRAXX, establishing new highs.

In sharp contrast to its poor beginning, 1975 ended on a rising
note for General Motors. Thrifter competition, economic
circumstances- and indeed a measure of good fortune- had turned the
tide. The financial results for 1975, while not as good as we
would like them to be, demonstrated some of the basic strengths of
General Motors. Worldwide dollar sales reached $35.7 billion, 13%
above 1974 and only slightly below the 1973 record of $35.8
billion. Worldwide factory sales of cars and trucks, 6,629,000
units were 61,000 fewer than a year ago, but GM's earnings
increased to $4.32 per share, 32% more than 1974 although still
barely half of the record of 1973. Intensive cost-control programs, improved operating efficiencies, and higher dollar
volume in almost every area of our business contributed to the
increase in earnings in 1975. But these hard-won gains were
significantly offset by the persistent increases in our labor and
material costs which we were unable to recover in prices alone.

For the year, net income as a percentage of sales was 3.2%,
compared with 3% in 1974 and 6.7% in 1973.

Looking back, General Motors results in 1975 represent a triumph
of confidence - a consistent confidence in the people and the
products of General Motors and in the underlying strengths of the
American economy and the automobile industry. Most gratifying was
the teamwork demonstrated by the entire GM organization- men
and women, hourly and salaried, working together in almost every
country in the world. GM's performance in 1975 provides further
certainty in the ability of our Corporation to do the difficult,
and to continue to prosper in the still-difficult months and years
ahead.

The American automobile industry faces another critical year in
1976. Confidence is again critically required, but this year it is
cooperation that will be the key. A more cooperative relationship
must be achieved with the unions with which we will be negotiating
in 1976. We also will need a cooperative attitude with government
whose laws and regulations will materially alter the design, the
performance, and the cost of our future products.

Cooperation is imperative because the unions and the government
share with the manufacturers a common stake in the continued
success of the automobile industry. Unless the industry is able to
continue to offer the kinds of products that people need and want
and insist upon, and at prices they can afford, both the industry
and the government are affected. Legislative and regulatory
excesses, illustrated by the now-rescinded but never-lamented
requirement for a smarter-seatbelt interlock, all too often
restrict the customer's freedom to choose. Then, to whatever
extent reduced prices mean reduced sales, the overreach of
government weakens the industry's ability to provide jobs.

Federal law now establishes standards for gasoline mileage as well
as exhaust emissions for future model years. To meet
requirements, all but a small fraction of our post-1984 cars could
be no heavier than today's Chevrolet Vega. This massive disruption
of the market choice would be caused by the Energy Policy and
Conservation Act of 1975, and we are seeking its amendment before
its impact begins to be felt, which would be as early as the 1978
model year.

An even more immediate problem, now compounded by the newly

gasoline-mileage requirements, is to meet the further tightening of the Federal emission standards scheduled for 1978 models. We have informed Congress, which is now reviewing these standards, that neither General Motors nor any other manufacturer as far as we know can comply with them. Certification of 1978 cars must begin this year, but the engine technology does not exist which will enable us to meet the standards on a mass-production basis. There is true no only of the conventional piston engine but of any of the alternatives which we have been exploring, such as the gas turbine, the dies-I, or the stratified-charge engine.

These laws demand that we achieve significant breakthroughs in technology—and soon. While we search for such breakthroughs daily, and while we have had some success in the past, we have only the hope—and certainly no assurance—that they will be achieved this time, and in time. The consequences, both human and economic, of any substantial curtailment of automobile production in future years would be severe, as recent experience has taught. It would matter little to the laid-off worker or the frustrated car-buyer that the cause lay in the laws of man rather than the laws of economics.

For these reasons, it is essential that in 1976 we enlist the understanding and cooperation of government to assure the continued health of the industry. General Motors is petitioning the government for sensible revisions of the Federal laws; in one case to forestall unnecessary tightening of the emission standards, and in the other to allow the customer's free choice—rather than arbitrary gas mileage requirements—to dictate the sizes of the cars we can offer for sale.

At the same time, we must achieve greater understanding and cooperation with our labor representatives as we approach the negotiations of 1976. American auto workers are among the best compensated of those in any large industry in any country, and their wages have more than kept pace with the inflation of recent years. Today, for the first time in history, the average cost to General Motors of an hour's work is more than $10.30 per hour more than in late 1973 when our last agreement was signed. Still-higher costs, with their predictable impact on the prices of our products, present obvious perils to sales and consequently to employment in the industry as well as to the nation's competitive position in world markets.

We are confident that the leaders of our unions representing our employees will recognize the interest we share in the success of our industry. Such an understanding will instill the essential spirit of cooperation that can produce, in 1976, a reasonable and equitable agreement without any stoppage of the sustained and steady production which played so large a part in the recovery of 1975. We will continue to meet our deeply felt commitment to equal employment opportunity throughout General Motors, knowing that, as always, the strength of our organization lies ultimately in the fullest use of the talent and energies of all employees.

The confidence we demonstrated a year ago in the future of our industry and General Motors is certainly no less today. Difficulties lie ahead, to be sure. But we are equally sure that General Motors is the best equipped to deal with them. We are looking forward to a year in 1976 when industry car and truck sales in the United States will be 20% better than 1975 and will be on an uprend throughout the world. This high level of sales offers immense opportunities to General Motors. To you, the owners of our business, we pledge our dedicated efforts to take full advantage of these bright opportunities.
CHAPTER III.
IDENTITY MAINTENANCE AND ADAPTATION:
A MULTILEVEL ANALYSIS OF RESPONSE TO LOSS

Abstract:

I introduce a concept of organizational loss, presenting original research from the American automobile industry and several other brief cases which illustrate that organizations respond to loss in much the same way that individuals do. To explain this similarity, I argue that a common identity imperative drives the process at all social levels through all phases. I explain loss as a chasm between two forms of identity – structural and cognitive – that a viable entity must hold in some reasonable congruence.

This thesis provides a logic for Kübler-Ross’ stage theory of loss, a model that has enjoyed widespread clinical acceptance but has met with scientific skepticism. I show that this framework can reconcile various schools of organization theory by offering a temporal sequence along which each is salient at a particular time. In the process, I explain several important anomalous findings about loss – loss aversion, escalation, and rigidity under threat – based on an economics of identity.

In the final section, I illustrate and explain the value of several types of theorizing currently out of favor – stage models, clinical research, and multi-level analysis – and provide a multi-dimensional conceptualization of adaptation and resistance, cognizant of what is lost as well as gained.

This chapter has been accepted for publication in Research in Organizational Behavior, (Vol. 21, January 1999). An earlier version of the chapter won the 1996 Best Paper Award, Academy of Management Organizational Development and Change Division. It was presented at the Academy of Management annual meeting (Cincinnati, August 13, 1996).
Loss has long been an important concept in psychology, and clinical therapists worldwide have long found Kübler-Ross’ (1969) five-stage model of loss – denial, anger, bargaining, depression, and acceptance – extremely useful in talking about, understanding, and treating those who experience a sharp negative break with their past. The model has also proven clinically robust to a wide variety of loss situations including matters relating to work, injury, and status.

In contrast, there is no consensus prescriptively, predictively, or even in words to describe organizations which experience sharp breaks. Organization scholars see widely divergent patterns, running the gamut from neo-classical economists who see efficient diffusion of adaptive practices (e.g., Holmstrom & Tirole 1991) to organizational ecologists (Hannan & Freeman 1989) who argue that organizations remain inert regardless of environmental change. Summarizing the literature on organizational decline as “static,” McKinley (1993:6) concludes that, “there is an urgent need to move toward more dynamic models.” In this chapter, I argue that many apparent theoretical discrepancies can be reconciled by clarity in specifying the timing of responses. Specifically, I propose that organizations and other social entities that experience sharp negative breaks with their past pass through a pattern remarkably similar to that proposed by Kübler-Ross.

The argument is complicated by controversy about the validity of Kübler-Ross’ and similar stage models used by clinicians. The academic community is skeptical of both the empirical and theoretical bases for such theories; even the applicability in principle of a stage theory seems ill conceived, at odds with fundamental tenets of free will. So I begin the chapter with an explanation for why we might expect to see Kübler-Ross’ stages in the wide variety of loss situations in which observers have seen them, and hypothesize a logic underlying the stage theory as it generally applies to loss. In Section II, I present cases of organizational loss including original empirical research on the American auto industry in the aftermath of Japanese advances. I conclude in Section III with some general thoughts on loss, stage models, multi-level research, clinical research, and the current state of knowledge.
1. Loss and Identity

In this section I derive and explain the identity-maintenance and adaptation thesis, a process which I propose drives response to loss through all phases and at all social levels. I then introduce Kübler-Ross’ model as a general model of response to loss and explain why both individuals and organizations tend to respond in this way.

The Identity-Maintenance Thesis

Some skepticism about a concept of organizational loss is in order: as individuals we feel deep emotion from loss; organizations feel nothing. But the objective situation is not so different: An esteemed colleague dies; a firm’s close trading partner goes bankrupt. A person’s role changes due to employment, unemployment, marriage, divorce, births and departures; a firm’s role changes due to market gains. setbacks, alliance, reorganization, growth and divestiture.

At both levels, I propose that "loss" is identity incongruence, a concept I derive from the juxtaposition of two distinct understandings of identity: psychological perspectives in which identity resides within the individual versus sociological accounts which define identities as a function of relationships. The former, more familiar, view conjectures that throughout life we remain in some important way the same (hence the term, “identity”). Erikson (1968, 1980), the leading architect of this view, believed that a stable identity is necessary to mediate between internal aspirations and the demands of society. He explained identity formation as the synthesis of developmental experiences. In contrast to this account of relatively fixed and enduring identities, most sociologists postulate situated selves. For example, Goffman (1959) describes various masks we learn to put on as we learn the appropriate rules of situation. Observing that, “when the occasion demands we can act as salesperson, moralist, or customer,” Van Maanen (1979:92-95) argues that, “humankind is social to the core, not just the skin.”

At the organizational level, the same theoretical distinction holds. Most organization theorists who use the concept of identity use Erikson’s understanding by analog or aggregation. Albert and Whetten (1985) define identity as a statement of central character based on shared understandings.
Presumably these shared understandings arise through shared formative experiences such as described by Schein (1992: chapter 4). Other principal works on organizational identity include those by Dutton, Dukerich and associates who demonstrate in a series of papers (Dutton & Dukerich 1991; Dutton, et. al. 1993; Pratt & Dutton 1996) the ways in which organizational identification by members affects individual self-concept, social interaction, and organizational behavior (an example of which is given at length in Section III). In contrast, White (1992) defines identity structurally – as a function of present relationships – and suggests that identity can be mapped on the basis of social relations such as production arrangements, status hierarchies, and memberships.

That these two different explanations of identity can both coexist and draw empirical support suggests that they are usually more-or-less consistent. Indeed, the importance of congruence between cognitive and structural identity could hardly be overstated. Individuals go to great lengths to reduce cognitive dissonance (Festinger 1957), and labor mightily to attain a well-integrated life (e.g., Mowray 1961). Maintaining such a fit could be understood as the function of a healthy ego (Freud 1921), or, for that matter, a healthy culture (Durkheim 1933). Political thinkers have consciously sought to create such a synchrony at least since Plato's Republic (Bloom 1968) and a primary aim of education is to create “well-adjusted” individuals whose interests and comportment allow them to live comfortably in their environment. Likewise, it’s widely accepted that organizational success is a function of “isomorphism” with its environment (Hannan & Freeman 1984), the debate within organization theory being whether isomorphism is better understood in economic, technical terms (Aiken & Hage 1968, Thompson 1967) or social, institutional ones (Meyer & Rowan 1977; Orru, Woolsey Biggart & Hamilton 1991).

Loss, however, changes structural relationships such that they are far less likely to correspond to cognitive understandings of roles and responsibilities, creating a sudden chasm which must be spanned before an entity can proceed. What happens when a woman who thinks of herself as a wife no longer has a husband? Or when a firm presumed to be at the pinnacle of the industrial world is bypassed by an upstart from a lesser nation? The apparent response among entities at all social
levels seems to be the pattern described by Kübler-Ross: First we ignore discrepancies. If they persist, we fight to prevent or reverse structural change. If we cannot prevent structural change, we bargain hard to preserve what is most precious. If we must accept change, a depression ensues during which we work to reconcile past and present. Finally, if we survive this lengthy process, we accept and adapt.

**Kübler-Ross' Model**

**Background, Summary, and Applicability**

Elizabeth Kübler-Ross developed her model through observations of how terminally ill patients reacted to being informed that they are going to die. Most went through some or all of the following five stages:

1. Denial and shock: The person denies that the loss is inevitable.
2. Anger and irritability. The person questions why the loss should be happening and feels resentful.
3. Bargaining: The person attempts to postpone the inevitable through appeal made to a high power by making a promise of a certain behavior or sacrifice if the wish is granted (i.e., "If I promise this or do that, I'll get better").
4. Depression and beginning acceptance: A period of hopelessness results in which the person recognizes that the loss is inevitable.
5. Acceptance: A more positive attitude regarding the loss, and readiness to move on.

The Kübler-Ross theory is among the most cited, best known, and widely applied in all of psychology,¹ but it has also been sharply, persistently critiqued (Kastenbaum 1976-1997, Branson 1975, Santmire 1983, Corr 1993) and it is not respected in the upper tiers of academic psychology.

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¹ According to David Pendlebury of the Institute for Scientific Information (personal communication, 1995), Kubler Ross (1969) had at that time generated more than 2300 citations. This places it among the 500 most-cited works in the Social Science citation index, and among the top few most cited conceptual frameworks (most of the 'most-cited' are methodological works). The book has been translated into almost every written language, and is one of the few academic books to be a best seller, and perhaps the only book on death and dying to make the list. In 1980, 58% of medical schools included a course on death and dying and the standard curriculum generally focused on Kübler-Ross' stages (Dickenson 1981). Even 30 years later, the stages are remarkably well known among the general public, probably better known than any other psychological theory. They are still widely used in grief counseling and remain a standard item in nursing-school curricula (Doka 1995). In medical school courses on death and dying "Kübler-Ross' theories are [still] the most widely taught" (Holleman, Holleman & Gershenhorn 1994:260).
or social science. On a radio interview, a Harvard Medical School cancer specialist dissed, "anytime I hear a so-called 'expert' talk about denial, anger, etc. I just want to throw-up." (Kaufman 1997).

Part of the reason for this disdain may be that the model is misspecified: It has proven robust not about death per se, but rather loss. Evidence indicates that her model does not generalize to all individuals' experience of death, but is probably limited to the kind of patients whom she initially observed – prime-of-life cancer patients, for whom the news of death unexpectedly destroyed dreams, plans, and the ability to fulfill responsibilities. Retsinas (1988) finds that Kübler-Ross' model is not usually applicable to the dying experiences of elderly patients. She argues that (1) the elderly see themselves as part of a reference group that is also confronting senescence; (2) death of an elderly person may be timely; and (3) aging involves a series of role redefinitions – bodily decay, retirement, and social disengagement. Distinguishing Kübler-Ross' mid-life cancer patients from her own elderly subjects, she notes, "Cancer may make the middle-aged patient stop practicing law, while the octogenarian has left his legal practice long before" (p. 85-86).²

The model, however, has proven robust towards understanding individual loss generally. The Encyclopedia of Psychology discussion of "Loss and Grief," for example, focuses almost exclusively on Kübler-Ross' work and derivatives, noting:

The stage ... method of conceptualizing grief processes has proved quite popular and has been applied in a variety of forms to other losses including divorce, homosexual identity formation, and spinal cord injury. (Barón 1994)

To Barón's list, we can add sports career death (Blinde & Stratta 1992), family members of alcoholics (Breen 1985, Sapp 1985), unemployment (Winegardner 1984), and AIDS (Sarwer & Crawford 1994; Ross, Tebble & Viliunas 1990).

Today Kübler-Ross' theory is almost thirty years old and it has generally been replaced by more specific theories in more circumscribed domains. Until quite recently, these have tended to be quite

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² Accordingly, I make no claim about organizational death. Sutton, the researcher best known for work in this area (i.e., 1987), explicitly rejected the Kubler-Ross model in his dissertation (1984). The important distinction is that he was working with organizations which had long been on the verge of insolvency; in the 1960s the American auto industry was the leading industry of the world's leading industrial power.
similar in framework such as Simos' (1979) model of "anticipatory grief":

Phase 1. shock, alarm, and denial.
Phase 2. acute grief
Phase 3. integration of the loss and grief.

Another example is Parkes' (1983) cognitive model of bereavement (summarized in Cleiren 1993:18):

Phase 1. searching behavior marked by arousal and anxiety.
Phase 2. the loss becomes more 'real'...
Phase 3. disorganization and despair.
Phase 4. constructing a new model of the world in which predictability and control is restored.

In the 1990s, researchers studying grief and loss have become increasingly likely to frame studies in terms of correlations and contingencies much as in organization studies, yet the practical impact of the stage theories has been and continues to be enormous. Early psychological crisis theory overlooked many aspects of the grief process and even tended to view these feelings and behaviors as dysfunctional (Simos 1979). Therapists focused on coping rather than on grieving, the goal being to help people quickly resume the normal functioning experienced before the loss. In the aftermath of Kübler-Ross, attention to process and acceptance of "grief-work" has become the norm. Barón (1994) concludes his entry in the Encyclopedia of Psychology by observing:

These conceptualizations provide guidance in understanding the varieties of losses and grief reactions experienced by human beings and point toward helpful and healthy patterns of recovery (Vol. 2, pg. 353).

General critiques of Kübler-Ross and the Stage theory

Despite this apparent usefulness, Kübler-Ross’ theory meets with specific and general skepticism among academics. Empirically, it is critiqued for lack of rigor: the stages are never operationalized, nor is there argument that this is an exhaustive or logical subdivision of response sets or stages. The hundreds of studies that support Kübler-Ross are primarily psychiatric, social work, or nursing accounts based on small sample clinical experience or autobiographical accounts of experiences with grief. For such an influential theory and extensive literature, there is little cross-
methodological testing or rigor in design sufficient to meet a standard of falsifiability, Popper's (1959) canon of scientific research. Kastenbaum (1997:106) observes that, "neither Kübler-Ross nor any subsequent observer has provided operational definitions of the stages and carried out competent research to test the theory."

On the other hand, there is no such "competent research" rejecting Kübler-Ross either. The apparently damning critique concerns the stage theory in principle: A stage model implies a predetermined path which is inconsistent with the fact of individual differences, environmental differences including treatment variations, and free will, the human power to choose a response.

I will revisit this discussion in Section III, where I consider the relative merits of clinical observation and stage models. For now, I argue that simply dismissing Kübler-Ross' and other stage models is both wrong and unfair. It is wrong because there may in fact be an underlying logic. It is unfair because they are intended as empirical generalities rather than unalterable programs: many of those who suffer loss proceed through the stages in order, others backtrack or follow their own sequence; most go through at least some of the stages... but nothing is foreordained. Presently, I ask the reader to grant hypothetically both the many clinical accounts of loss and my observations about organization theory and organizational behavior in an attempt to understand why it might be that entities pass through the stages Kübler-Ross observed in the order she observed them.

In the next section, I review each of Kübler-Ross' five-stages, and show that psychological research supports her observations and can explain why individuals tend to respond in these ways.

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3 Two studies are regularly cited as evidence that do not support Kubler Ross theory. These are a literature review (Schulz & Alderman 1974) showing that five other studies from the 1960s modeled the death process with varying degrees of disparity to Kubler Ross, and a paper (Metzger 1980) finding "little indication of systematic changes [of patient description] across time from mastectomy to the present." This is a paper based on a Master's thesis designed as an exploratory investigation of an experimental research method ("Q methodology") barely explained and unjustified for this "test." The usage is admittedly "compromised": "Q sorts have previously been used over a period of time to describe changes occurring in a dying patient's needs." In this study, "retrospective descriptions of the course of illness were provided." Finally, only two couples were questioned, and even among these two, there was little congruence of answers: in one case, the patient and spouse "had fundamentally different perceptions of the patient's experience." (One of the four respondents, by the way, did "indicate systematic change across time," but these terms are never defined, and the data are not presented or discussed. The only "substantive" information in the published article is on the "factor loadings" that result from the questionnaire responses. What point in time they represent is unclear.) The author acknowledges that the study was exploratory, designed to test the methodology, but no further papers have been published.
In parallel, I show that organizational research supports a theory of analogous behavior at the organizational level, and that organizational theories normally considered in conflict may instead be operative during different phases. In each case I propose a new label for the stage that more comprehensively identifies the behavior and helps explain it.

**Response to Loss Generalized**

Loss, as generally conceived, is a retrospective account. In the beginning, we do not know how a potential loss will run its course, but the process functionally makes sense if we think of each stage as the next level of a decision tree:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Decision</th>
<th>Next Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Denial (Ignore)</td>
<td>Is the event/information something we can ignore? Can we continue business-as-usual?</td>
<td>No</td>
<td>If no, proceed to:</td>
</tr>
<tr>
<td>2. Anger (Defend)</td>
<td>Can we prevent the change?</td>
<td>No</td>
<td>If no, proceed to:</td>
</tr>
<tr>
<td>3. Bargaining (Negotiate)</td>
<td>Can we consolidate and preserve what’s most important?</td>
<td>The more we can, the less extensive the ensuing,</td>
<td></td>
</tr>
<tr>
<td>4. Depression (Reorient)</td>
<td>What changes must we make in order to go on?</td>
<td>Can we preserve what is still valuable from the past, and reestablish a satisfactory pattern of relationships? If yes, then</td>
<td></td>
</tr>
<tr>
<td>5. Acceptance (Proced)</td>
<td>Having made these changes, is existence viable?</td>
<td>The better the “solutions” in “depression,” the more successful the ultimate acceptance and adaptation.</td>
<td></td>
</tr>
</tbody>
</table>

**Stage 1. Ignore (Denial)**

The tendency among people to ignore data which is personally threatening has been long observed (i.e., Freud 1917) and widely documented (see Holmes 1987). Likewise, in organizational crises, Starbuck, Greve & Hedburg (1978) found that denials of need for strategic reorientation are standard practice.

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4 This conceptualization was contributed by Karen Norberg, M.D., a psychiatrist at Boston City Hospital and affiliated with Boston University and the National Bureau of Economic Research in Cambridge.
Yet it’s still difficult to understand why people ignore or reject information concerning their own welfare. Denial is perhaps easier to understand at the collective level than at the individual. Starbuck, et al. (1978) found that part of the reason managers would deny the extent of organizational crises was to avoid blame. More generally, individuals often have a vested interest in the status quo despite potential organizational benefits arising from change. Accordingly, denial is widely seen as dysfunctional both for individuals and organizations (e.g., Argyris 1990, 1995).

Part of the difficulty in explaining this phenomenon arises from the label. “Denial” presents a vivid image of active rejection which has drawn attention to the concept, but also caricatures it. Cases of outright “denial,” are, in fact, extreme manifestations of a much more general tendency to ignore important information or developments. Those who suffer loss simply do not initially grasp its full implications. For example, when my father died unexpectedly in an accident, I never “denied” he had died (although I did often dream that he was still alive); rather, I went on about my life as though little had changed. It was only after several weeks that I began to understand how much his death would affect me and how much my own life would necessarily change as a consequence of it.

Lazarus & Lazarus (1994) document quite concrete functional aspects of denial. For example, Cohen & Lazarus (1973) show that among patients facing surgery, those who underestimate the dangers recover more rapidly and have fewer postsurgical complications than those who are aware and vigilant. The authors speculate that this is because hospital patients have little or no control over their outcomes. In the hospital, and in many other settings, it’s better to relax and keep anxiety levels down. It would appear that people have evolved to ignore some things because such denial often serves the denier well. The alternative – identifying the loss – often sets us on a course to try to do something about it, which may not be possible – or even desirable.

Loss, again, is a retrospective assessment. Not all indications of loss are accurate, and even actual losses are often temporary – investors, suppliers, and customers can usually be replaced. In situations of ambiguity, a passing storm, and stochastic or cyclical change, “denial” may well be the most successful coping strategy. In an instructive scene from the movie Lawrence of Arabia, a
young lieutenant raves during a crisis in the aftermath of World War I, "We can't just sit here and do nothing!" to which the old major calmly replies, "Why not? It's usually the best thing."

Even when it might not be the best thing, cognitive limits prevent both recognition of unexpected problems and attention to them. Decision-makers interpret events and information based on mental models and schemas, which in turn are based on education and experiences (Holyoak & Gordon 1984). Thus we often fail to observe events that we have not yet experienced or been taught; rather they are part of the great mass of things that must be filtered out so that we can focus on what experience and training have taught us is important. Ocasio (1995:293) observes that, "Adversity cannot be determined by 'objective' measures, but is enacted through application of schemas which determine what measures are important and which levels of performance or external events constitute a threat." At the time that American auto companies were being surpassed by the Japanese in quality, time-to-market, efficiency, and growth, they were still doing well by their own performance measures: profitability and domestic sales. Even once a problem is acknowledged, there is often little that can immediately be done: Individuals and organizations facing a new threat may already have a full slate of commitments which cannot simply be dropped. Accordingly, Cohen, March & Olsen (1972) show that under heavy load, decision-makers tend to ignore problems for which solutions are not readily available.

A period of denial provides time where there had been none. Kübler-Ross regards denial in the face of loss as healthy.

Denial functions as a buffer after unexpected shocking news, allows the patient to collect himself, and, with time, mobilize less radical defenses (p. 39).

Individuals may be unable to respond quickly and flexibly to unexpected, shocking news for much the same reasons that organizations cannot. There are powerful forces holding us in place similar to the 'technical factors' described by Hannan and Freeman (1984) and the 'institutional factors' emphasized by Powell & DiMaggio (1991). The former point out that socioeconomic selection processes favor organizations with high reliability and accountability – traits which require standardization, which in turn generates strong inertial pressures. The latter emphasize the
importance of stability and legitimacy in the web of relationships. Some degree of denial, for both the individual and the organization, is perhaps the necessary consequence of having ever been a successful entity.

Stage 2. Defend (Anger)

Anger is an unpleasant emotion, both to the possessor (linked with high blood pressure, heart attacks, etc. ...) and those around him. Kübler-Ross notes that this stage is the most difficult for the family and loved ones, but adds that when denial can no longer be maintained,

the next logical question becomes, "Why me?" ... We are angry at those who are taking life from us, mainly God, but anyone else who denies us: the nurse who impedes our mobility, the mother who prevented us from taking a trip when we could have, etc. ... (1969:50)

Anger is a remarkable mechanism to protect ourselves, our family, our clan, etc. An assertion of anger is often enough to ward off an adversary, and if it fails to ward him off, it stimulates adrenaline to prepare for fight. Frank (1988:5) points out that economic reasoning leads to a serious deterrence problem; anger, however, signals commitment to retaliation even when the apparent costs may outweigh apparent benefits. Studies in humans and other primates (recounted in Lazarus 1991 and Goleman 1995) show that anger and other emotion work effectively and efficiently as signaling devices: Appropriate displays of emotional commitment not only lead others to refrain from opportunistic behavior, but allow for quick, haggle-free settlement of potential battle-provoking conflicts.

Organizations and other social entities face the same deterrence commitment problem that individuals do. For forty years, the U.S.A. and the U.S.S.R. had to convince each other that they would react angrily rather than with cool reason in the event of a crippling first strike by the other. And for over forty years, M.A.D. (mutually assured destruction) worked – perhaps because we did irrationally hate each other! This is an extreme case of the kind of signaling which organizations must continually make and monitor. For example, firms facing the possibility of a price war or market incursion must try to persuade adversaries to refrain.
Although organizations do not have emotions, human beings whose interests and identities are tied to the organization do. Leaders rally the troops against "enemies"—communists, Republicans, United Parcel Service, or Toyota. Rallies both motivate the organization and signal to adversaries that a particular behavior will not be tolerated. Anger may also be unleashed from the lower echelons. In the auto industry, anger seems to have come most directly from auto workers who lost their jobs, or whose jobs were threatened.

Staw, Sandelands & Dutton (1981) propose that acknowledged threats lead to restriction in information and constriction in control in organizations as it does physiologically in individuals during anger. A leader trying to rally the troops both to signal the adversary and preparing for fight accentuates the process. Centralization in response to threat has been documented by Singh (1986), Cameron, Kim & Whetten (1987) and Starbuck, et al. (1978); the latter two articles also suggest a more generalized rigidity.

Like "denial," "anger" is a specific, striking instance of a more general phenomenon. Anger is one mechanism by which we protect and defend the self. Rigidity and centralization are others. Additional mechanisms and manifestations of identity-preservation include risk taking, escalation, and dominant response.

That we try very hard to avoid losses is an important, well-documented (see Tversky & Kahneman 1991, Levy 1996) anomaly in economic psychology. Kahneman & Tversky (1979) demonstrated that while individuals are risk-averse with respect to gains, we are risk-seeking in the domain of losses. Similar behavior among firms has been documented by Bowman (1980, 1982) who observed in the bottom quartile of firms in various industries a propensity for acquisitions, litigation exposure, and the undertaking of new and risky activities, approaches, and ventures. Studies using both questionnaire (Jackson & Dutton 1988) and archival data (Freeman 1998) have shown that managers are much more sensitive to threats than opportunities.

Loss aversion may be understandable in terms of an economics of identity: the one constant in nearly all theories of identity from White's structuralism to Eriksonsonian developmentalism is that
identities are enormously difficult – and costly – to construct. White (1992) emphasizes the vast, complex net of interrelationships which essentially define us and which we therefore struggle to maintain. Erikson (1968) characterizes the period of identity creation (youth) as a time of crisis (commonplace use of the term “identity crisis” suggests that this concept has resonated strongly and widely) and proposes identity formation as the primary task of adolescence. Sartre (1943) and other existentialist philosophers (see Olafson 1967) go further still – claiming that creating an identity is our essential “life project.”

Identity as such is a precious “possession,” perhaps our most precious possession. An economics of identity must account for the enormous life investment entailed in constructing and mastering a self-understanding, effective methods of self-presentation, and an appropriate network of social relations with whom one understands and among whom one is understood. We would expect risk aversion among the satisfied – it takes much more than money to develop a new, higher status identity. Relevant to discussion of loss, it is likewise rational to engage in objectively poor risks if it means that identity can be preserved: the cost of developing a new identity at a lower economic or status level may be extremely high. Hence, we observe anger that risks alienation and the all-or-nothing risk-seeking gamble (e.g., betting on the long-shot horse at the end of a losing day).

Threat-Rigidity and risk-seeking seem anomalous findings in Organizational Behavior that are difficult to reconcile with the two dominant paradigms of the field: economic adaptive rationality and organizational inertia. These findings are, however, consistent with the logic of this phase. So are two additional multi-level phenomena: escalation and dominant response.

Learning theory presumes that negative consequences lead to changes in behavior, but Staw (1976) observed that poor results actually lead to an escalation of commitment when self-assessment is at stake. Such behavior can be observed in individuals under experimental conditions (Staw 1976), in corporations (e.g. Lockheed’s increasing commitment to the L1011 jet program which ultimately led to bankruptcy), in communities (e.g., British Columbia’s steadfast decisions to host a world’s fair despite rapidly increasing deficit projections, Ross & Staw 1986) and nations (e.g., escalation in Vietnam to avoid humiliation, Staw 1976:29). Decision-makers under these
circumstances show less concern for obtaining favorable outcomes than for justifying past actions (Staw 1981, Conlon & Parks 1987) – an important aspect of preserving an identity.

Dominant response is yet another multi-level phenomenon consistent with the logic of identity-defense. People and other animals (Zajonc 1965), groups (Staw, et. al. 1981), and organizations (Ocasio 1995), when faced with threats tend to revert to dominant response. This is true at all levels both when threats are typical in which case dominant response tends to be functional, but also when the threat is novel, in which case dominant response is usually dysfunctional. Dominant response has been explained in terms of cognitive limits under stress, but the strong emotions which characterize all the phenomena grouped together here indicate something more purposive: a concerted effort not only to prevent change, but turn it back.

Stage 3. Negotiate (Bargaining)

Kübler-Ross describes the next maneuver of the terminally ill as bargaining.

"If God has decided to take us from this earth and he did not respond to my angry demands then perhaps he will respond more favorably if we ask nicely." (p. 82)

These three stages can be readily observed in lesser forms of loss, transparently so in the behavior of small children. When we order them to do something they do not want to do – e.g., go to bed – they first ignore us hoping we’ll do the same, then they might throw a tantrum or angrily refuse to obey. If that fails, they will bargain, "Please just five minutes, then we’ll go right to bed."

Bargaining hardly needs empirical examples or explanation. As the stock in trade of economics and social exchange theory (Homans 1950, 1958; Blau 1964) bargaining is the way we typically understand that changes occur: all of life involves trade-offs; to get one good, we must give up another. The description of Kübler-Ross’ patients offering up their vices and body parts to God in return for a postponement of death is striking not because the bargain is unreasonable, but rather because of the patients’ apparent faith in an active God who might make such a trade. Given this faith, bargaining is perfectly reasonable.

Bargaining is also the widely accepted form of business adaptation and change. As we shall see,
organizations facing analogous threats to Kübler-Ross’ patients sell off divisions, excise employees, and offer up vices as the situation demands. Such behavior is quite explicitly consistent with contingency models of the firm (Lawrence & Lorsch 1967, Thompson 1967, Stinchcombe 1972): a central enduring essence that maintains continuity and a flexible periphery that adapts to a diverse and dynamic environment.

Two aspects of loss bargaining, however, differentiate it from standard economic understanding of the phenomenon. First, trade-offs in loss bargaining or consolidation are painful— in extreme cases such as Sophie’s Choice (Styron 1979), unbearably so. The pain does not enter into the economic equation: we should be content if we give up something to preserve something that (by definition) we value more, but that is not the way it feels. We viscerally dislike to back away from our commitments or scale down our expectations. This pain is perhaps explainable as a mechanism that helps enforce the defense mechanisms of the stage before: we fight to avoid the pain of consolidation.

A related aspect of loss bargaining is that it is phase-limited, a process that falls in-between bullying and acquiescence. In contrast to an economic view that behavior is market behavior, we bargain only if we cannot get exactly what we want, and it only works then if we have adequate barter. Cases of loss are, by definition, those in which we do not.

Stage 4. Reorient (Depression)

Depression is probably the most difficult of these responses to understand. Freud (1917:154) was perplexed by the “mental economics” of mourning, and it remains perplexing. Although an explanation has proven elusive, mourning, grief, and depression in the wake of loss are hardly contestable as empirical facts. Evidence indicates that communal loss is also accompanied by communal grief and depression. Researching a tragic 1972 West Virginia dam burst, which killed 125 and destroyed communities throughout a river valley, Erikson (1976) found survivors still

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5 This observation is compatible with Grannovetter’s (1985) argument that economic action is embedded in social structure, and Etzioni’s (1988) explanation of competition as 'encapsulated conflict' which is constrained by social bonds.
frightened, lonely, and grieving four years later. He surmised that individual losses were paralleled by an even more pervasive communal loss. Marris (1974) observed similar themes in research on a wide variety of topics concerning crucial transitions: bereavement, slum clearance, graduation into an educated elite, and the pioneering of new business ventures.

Although it is clear why we prefer not to lose someone or something we value, it is not at all clear why we should waste time ‘crying over spilt milk’ once it is lost. Kübler-Ross (1969:86) says that depression prepares the terminally ill patient for "his final separation from this world," but doesn’t say why or how.

Therapists believe that one important function of grief is to dissipate the anger (stage 2) that constricts our options, limiting us to a maladaptive dominant response.6 Therapists observe that patients who cannot get angry at others become depressed (Hirschfield & Shea 1985), and psychoanalytic theories hypothesize that depression is anger-turned inward (Marsella 1988).

One important function of mourning is probably to help us appreciate just what has been lost. Most of life we usually tend take for granted; as Joni Mitchell (1969) put it, “You don’t know what you’ve got till it’s gone.” Bowlby (1973) speculated that the sadness we feel as part of separation and loss motivates us “to recover the lost object,” but most of what we define as loss is unrecoverable. So mourning may represent the beginning of a long process of putting together a satisfying life: ‘What precisely has been lost?’ ‘What are we now missing?’ In the absence of mourning, we may try to simply recreate relationships which cannot be recreated simply.

The word depression, however, signifies something beyond grief and mourning, a physical low. One possible explanation for this low is that a slowdown in outward activity allows one to do

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6 One explanation of the seemingly intensifying and accumulating anger in our society may be that we have forgotten how to grieve and mourn. The rituals for grief and mourning among primitives were among the most extensively developed; contemporary rituals, where they exist at all, are mere relics. In particular, we have lost communal rituals for grief and mourning. Perhaps individuals still do so in their own way, but we rarely do so as communities and as organizations. The surprising collective outpouring over Princess Diana’s death suggests the possibility of tremendous unmet communal need.

In studies of organizational death, Sutton (1984, 1987) noted that six out the 24 organizations he researched performed a "wake" within two weeks of the official death. This theory suggests that those who participated in such wakes will have adjusted better over the long term than those who did not.
important internal work: formulation of genuinely adaptive cognitive constructs consistent with a new pattern of social ties. Depression in individuals is an inward phenomenon. It is typically accompanied by worldly withdrawal, which would allow a complementary process: leaving time and space for the creation of new social relations consistent with new cognitive understandings.

Depression goes on so long because it represents a crucial internal struggle: “bargaining-turned-inward.” We struggle within ourselves to decide what to preserve and what to give up – what values to maintain or adopt (cognitive identity) and what realities to accept or struggle for (structural identity). This inward struggle implies reduced outward activity, which appears to an observer, even a self-observer, as depression.

The first three stages of response to loss are characterized by identity maintenance – first we ignore threats, then we aggressively defend against them, then we bargain to preserve what’s most essential. Only if and when these strategies fail do we take up the task of adaptation, and when we do it takes a long time. The reason why we are extremely reluctant to reorient and why depressions are long and hard are one and the same: if youthful identities are difficult and costly to create, mid-life complications multiply the challenge. Finding an appropriate niche is sufficiently difficult for an adolescent or a new venture with no established commitments. Before an established person or organization can find a new appropriate niche, it apparently must withdraw from existing commitments to reorient structurally, cognitively, or both. Marris (1974: 31) explained grief as,

... the expression of a profound conflict between contradictory impulses – to consolidate all that is still valuable and important in the past, and preserve it from loss; and at the same time, to reestablish a meaningful pattern of relationships in which the loss is accepted. Each impulse checks the other.

Individuals and organizations must not only find a suitable environmental niche, they must also satisfy competing internal interests. While grief and mourning are uniquely individual phenomena, the more general phenomenon of internal struggle in the aftermath of loss is ubiquitous across all social levels. Staw et al. (1981) review findings showing that whereas competition initially increases group cohesion, losing groups subsequently suffer a decrease in cohesion. Internal battles
for leadership break out in the aftermath of defeat. Ocasio (1994) makes similar observations about the circulation of power in industrial corporations. He shows that poor corporate performance triggers political dynamics, CEO succession, and a circulation of elites. Organizations are often viewed as a single more-or-less coordinated entity, but a fuller, more accurate picture of the organization recognizes that there are many interests and interest groups. March’s (1962) observations of the firm as a political coalition and Selznick’s (1949, 1957) observations of competing values are particularly salient under conditions of loss and change.

Like the tendency to ignore problems (stage 1), internal struggle is probably more easily understood as a organizational phenomenon than an individual one. When I struggle with myself, who precisely am “I” and with whom am I struggling? The question may arise because of the prevalence of Eriksonian identity as a model of the self. Sociologists explain such struggle as role conflict, and increasingly a concept of multiple identity (Elster 1989) is being embraced in neurology (Damasio 1995) and psychology (Pinker 1997) as well as in economics. Schelling (1984), in explaining economic anomalies, describes mental life as a parliament within. Ainslie (1994), in explaining ambivalence, describes the individual as a population of bargaining interests whose first order of business is resolution of conflict.

Stage 5. Proceed (Acceptance)

Kübler-Ross observes that,

Acceptance should not be mistaken for a happy stage. It is almost void of feelings. It is as if the pain had gone, the struggle is over ... (p. 100)

Kübler-Ross’ “depression” and “acceptance” correspond with the last two stages of Lewin’s (1947:34-35) unfreezing-moving-refreezing model of group change. (Again, I speak of Kübler-Ross’ model with respect to loss; with respect to death, the correspondence is too literal). After failing to maintain an identity, organizations and individuals necessarily change (reorient) through

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7 This is primarily done for research tractability and modeling ease, but such a view is itself political. It supports the efforts made by most corporate management to delegitimize and eliminate competing interests.
depression, internal struggle, restructuring, etc... After the reorientation, we proceed once more relatively devoid of strong feelings. Once we proceed, we necessarily refreeze for the reasons laid out by Hannan & Freeman (1977, 1984, 1989), Erikson (1968, 1980), and White (1992): we need an identity which the world we deal with can understand and rely on.

In describing and amending Kübler-Ross’ theory, I have taken it as my primary task to explain “Why a loss process?” We’d obviously rather not lose, for example, use of our legs but, given the loss, neither denial, nor anger, nor bargaining, nor depression will do anything to get it back. Other intellectual approaches, however, might raise the opposite question: “How do we change at all?” or even, “Do we change?”

One might choose to see human beings as extraordinarily malleable: a non-disabled person may well find the thought of life without legs as unbearable. Soon after spinal cord injury, victims are extremely dissatisfied with their lives (Crewe 1980), probably feeling even worse than they might have predicted because the injury causes problems far beyond loss of limb. Questionnaire data from studies of life satisfaction (Krause 1992, Krause & Dawis 1992) indicate, however, that within a few years after injury, paraplegics and even quadriplegics are highly satisfied with most aspects of their lives.8 Reference groups change, goals change, and life is as worth living as before, sometimes more so, because little things are appreciated anew. Viewed from both change and persistence perspectives, people are a remarkable compromise between commitment and adaptation. Organizations and institutions share an equivalent need to balance these two attributes.

The evidence indicates that we do eventually accept losses and that loss results in change, not instantaneously perhaps, but eventually. The entire field of behavioral economics has shown that people respond to incentives and changing environmental conditions in almost every conceivable

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8 Unfortunately there are no studies specifically comparing long-term cases with the non-disabled population. The scale that Krause & Dawis used was specifically designed for victims of Spinal Cord Injuries to learn what areas they are satisfied with and not satisfied with. Nevertheless the satisfaction level of the study’s 286 respondents (61% quadriplegic) for whom at least 2 years had passed since the injury, seem quite high to me. These levels range from, at the high end: Living Arrangements (4.3 average satisfaction on a 5 point scale from (1) very dissatisfied to (5) very satisfied), Family Relations (4.2) and Emotional Adjustment (4.1) to, at the low end, Sex Life (3.1), Finances (3.3), Employment (3.5), and Life Opportunities (3.5).
area from criminal behavior to choice of marriage partners to how many hours we sleep (see Becker 1976). Likewise the entire field of industrial organization has shown that firms similarly respond to incentives and changing environmental conditions (Scherer & Ross 1990). Theories of adaptive learning (March & Simon 1958; Nelson & Winter 1982) and common observation tell us that people and organizations are forever changing and at least trying to either adapt or progress. While the case may be overstated in terms of the tendency for any particular person or organization, and while the generally assumed desirability of such change is open to question (see Section III), it is hardly debatable that some change occurs and that, over the long term, there must be some reconciliation of both organizational and individual attributes with environmental selection criteria.

**Summary**

The psychological and organizational theories which underlie this generalized model of loss are summarized in Table 1:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Salient Psychological Theories</th>
<th>Salient Theories of Organizational Change</th>
<th>General Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Reorient (Depression)</td>
<td>Depression as internal struggle (Marris 1974), multiple identity (Schelling 1984, Elster 1989)</td>
<td>Adversity-induced search (Ocasio 1995), firm as political coalition (March 1962), institutions as forums for competing values (Selznick 1957)</td>
<td>Withdrawal, internal struggle, novel response</td>
</tr>
</tbody>
</table>
2. ORGANIZATIONAL RESPONSE TO LOSS

In this section, I examine specific cases of organizational response to loss. The first is a widely cited case study from the Organization Theory literature. Next, I present original research on the American automobile industry in the aftermath of emerging Japanese preeminence in design and manufacturing. I conclude with a few brief summaries of other well-known cases of collective loss.

The New York-New Jersey Port Authority: Loss of Mission and Prestige

In highlighting the role of image and identity in organizational adaptation, Dutton and Dukerich (1991) provide a rich eight-year case study of the New York-New Jersey Port Authority's response to a sharp increase in the number of homeless people occupying their facilities (page 518). The agency suffered loss of both mission -- its role as a premier professional engineering organization -- and prestige -- its place in the community of organizations. This loss was manifested as a severely deteriorated image (p. 520), resulting from its association with homelessness -- "a blight on our professionalism" (p. 517). The events Dutton & Dukerich document can be reformulated to illustrate the five stage pattern:

Stage 1. Ignore. Senior management at the Port Authority ignored dramatic increases in homeless people occupying their facilities for over two years; rather it was treated as a police-security issue. Top management only took notice once the homeless appeared at the organization's flagships -- the World Trade Center and the airports (p. 531).

Stage 2. Defend (anger and dominant response). When the problem could no longer be ignored,

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9 In this grounded study, Dutton and Dukerich observe the following five phases in the Port Authority's "struggle with the homelessness issue" (p. 527). Homelessness is:

1. a police security issue (1982-84)
2. a corporate issue, but the Port Authority is not in the social service business (1985-86)
3. a business problem and needs moral solutions (1987)
4. an issue of image and no one else will solve it (1988)
5. linked to other problems; homeless in transportation facilities are unique and need advocates (1989)

Although these phases do not correspond precisely with Kubler-Ross' stages, the correspondence is quite close. The reformulation shows a general pattern consistent with other entities' responses to loss.
56% of interviewed employees expressed anger, frustration, and disappointment that [social service] organizations had shirked their responsibilities. (p. 537).

The amount of times the words anger and angry appear is striking for an article by academics about engineers, two professions characterized by dispassion. Moreover the organization itself was characterized as angry. A local newspaper wrote:

In its last board meeting before Christmas, the Port Authority played Scrooge ... by outlawing begging and sleeping at the ... PATH Transportation Center. (p. 534).

Extremely poor relations ensued with the city, press, and police unions (p. 539): the city repealed its anti-loitering law, "significantly restricting the ability to move the homeless out" (p. 533), and police unions hired a public relations agency to put pressure on the Port Authority to hire more police.

Authority actions at this stage indicate use of readily available solutions (March & Olsen 1976; Mintzberg, et. al. 1976) consistent with theories of dominant response to stress (Ocasio 1995; Staw, et. al. 1981): (1) Following bureaucratic process, the Authority formed a committee to collect data, analyze it, and make recommendations; (2) as a facility manager, they tinkered with their facilities, removing benches and restricting access to make areas "uncomfortable"; and (3) as a professional agency, they tried to educate patrons. The researchers described this as:

the first of many attempts to improve [their] image ... using a well-learned recipe:
"educating others or helping them to get smart on the issue." (p. 532)

Stage 3. Negotiate. After attempting and failing to embarrass, coerce, and threaten social service agencies into "doing their job," the Port Authority tried to bargain with external groups. They spent several millions renovating and building new facilities for the homeless in the hope of getting the city to assume responsibility for their operation, but this too failed when the city backed out of an informal agreement.

The activities of these three stages all serve to maintain an organizational identity that the researchers summarized as "a professional organization with a uniquely technical expertise, ill-suited to social service activities" (an ascription made by every one of the researchers' 25 employee-
informants during open-ended interviews, p. 526). When they grudgingly accepted responsibility for the problem, they stepped in with an engineering solution consistent with their (cognitive) identity as a premier engineering agency – building a state-of-the-art homeless shelter.

Stage 4. Reorient. When attempts to maintain this identity failed, the agency seemed to fall into something remarkably like depression. Informants commented:

– we're two feet deep into the business of homelessness, and we don't want to be.

– We may be throwing a lot of resources at this, but our heart just isn't in it. (p. 540)

Increasingly severe morale problems and vivid emotional expression occurred as a result of increasing association with homelessness (p. 538). Informants conveyed with "great disdain" stories about "architects holding babies with AIDs, engineers changing diapers, and sanitation engineers cleaning filthy bathrooms" (p. 545). The researchers surmised that,

informants expressed negative emotion when inappropriate involvement of individuals or the organization in certain activities compromised the Port Authority's identity. (p. 545)

These emotions are the mechanisms by which employees preserve what is most valuable to them from the past. At the same time, however, an important minority involved in new roles were helping to reorient the agency. These included some of the engineers to whom the informants reacted so strongly, but, more often, those in new roles for the agency. Members of a newly created Homeless Project Team were particularly useful in reestablishing a satisfactory pattern of relationships. They did this by becoming a quiet advocate for the homeless and seeking partners in creating social service capacity.

During this period the conflict with local governments and media began to subside as the agency, however reluctantly, quietly accepted responsibility for the homelessness problem. Toward the end of this period, emotions within the agency cooled: “Actions were increasingly deliberate, intentionally highlighted or downplayed,” yet we still see the agency working out its reorientation:

... the organization's position was still not solidified, (one informant said, “We are still like an amoeba with this issue” …) (p. 542)

Stage 5. Proceed. The research came to a conclusion before the process could fully play out,
but already we see the seeds of acceptance, proceeding, and even "refreezing." The Homeless Task Force took on an institutional permanence and the agency established an academic fellowship to study transportation and homelessness. The negative emotion about the issue continued to wind down and, despite all the reluctance, new ethics, goals, and emotions were forming. The data section of the paper ends with the forming of a new identity:

... the organization was increasingly recognized as a leader on how to deal with homelessness in the transportation industry. Port Authority members expressed tremendous pride in the organization's method for dealing with homeless. In their eyes, it was the "most humane approach" used by any transportation agency in the region (p. 542).

American Automobile Industry: Loss of Customers, Purpose, and Status

In the aftermath of emerging Japanese preeminence in design and manufacturing, the American automobile industry seems to have suffered three types of loss: (1) customers – a large percentage of the world and domestic market; (2) purpose – valuable competencies in mass production, mass marketing, and massive vehicles; and (3) industrial status – places near the top of the world industrial and social structure. Whereas once a cabinet nominee could state before the Senate, "What's good for General Motors is good for America," the auto industry became increasingly unwelcome supplicants in the political system.10

Stage 1. Ignore (Denial)

Despite the magnitude of this loss – or because of it – the American auto industry seemed almost oblivious to Japanese advances for a quarter century. In an authoritative book, Womack, Jones & Roos (1990) conclude that American companies missed the essence of Japanese improvements in design and manufacturing until well into the 1980s.

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10 Choate (1990) argues that Japanese auto manufacturers routinely out legislated their American counterparts in the 1980s. For example, their lobbyists were successful in getting pickup trucks classified as cars rather than trucks for tax purposes (2% tariff on cars vs. 30% on trucks), while getting them classified as commercial vehicles for regulatory purposes. ("Cars" are subject to strict Corporate Average Fuel Economy standards from which trucks are exempt.)
Japanese advances in automotive production and design go back to post-war Japan and the development of a new production system which has come to be called “lean production” (Althuscher, et. al. 1984; Krafick 1988). Womack, et. al. (1990) argued that this system – characterized by low inventories, production flexibility, minimal rework, statistical quality control, and a skilled, dedicated work force – is a revolutionary production logic – the third major paradigm of industrial organization, succeeding mass production, which itself replaced “craft production.” This thesis has largely been accepted in auto manufacturing and American manufacturing in general, and the eventual adoption of these lean production practices by American automakers in the 1980s and early 1990s created competitive parity.

American manufacturers might have been expected to pick up on these developments long before then. Figure 1 illustrates the long, sustained increase in world market share of the Japanese auto industry beginning in the late 1950s, climbing from 0% in 1950 to 5% in 1961 and 17% in 1970, and superseding that of America by 1980.

The first Arab oil embargo of October 1973 brought gasoline rationing and a fourfold price increase which in turn made the attributes of the lean production system all the more valuable. Japanese automakers could flexibly shift production to more fuel efficient cars while American automakers could not, and the Japanese could introduce a new model fourteen months faster and with only half the engineering effort (Clark, Chew & Fujimoto 1988, Fujimoto 1989: Tables 7.4, 7.8). Also, because lean production is less energy intensive, oil price increases resulted in even greater comparative advantage in production costs. From 1973 on, three related threats appear (at least in retrospect) transparent:

- Oil supply was unstable and oil shortages and/or price increases would result in a dramatic shift in consumer demand that American manufacturers were ill-equipped to meet.
- Fuel efficiency was not the only advantageous feature of Japanese cars: perhaps it was what sent buyers into a Toyota showroom, but once there they also found better

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11 This production system also had been documented by Cusumano (1985) and MacDuffle (1991) using the terms “Toyota production system,” and “flexible.”
reliability, craftsmanship, and overall quality.

- Japanese manufacturing was lower-cost, and, presumably, more efficient.

**Figure 1:** Auto production (millions of units) by US and Japanese firms 1960-1990. Source: Wards.

Yet data from Chapter II indicates that throughout this period American auto companies were *not* paying attention to the Japanese. Analysis of auto industry letters to shareholders reveals no mention of Japanese competition or any of the attributes that gave them competitive advantage until the late 1970s. No company even mentions world market share until 1976. Yearly performance is evaluated, instead, on gross sales and profitability. Until the 1970s there is relatively little discussion even of domestic market share, and that, moreover, is obliquely measured. In 1967, GM reported, “Market share of domestically produced cars is 51.8%.” In 1968, it’s “54.7% of North-American type passenger cars.” The implication is that imports are a different market, less important, perhaps negligible.

One might be inclined to dismiss these letters as impression management crafted to portray the firm in its best light, but throughout much of this period, the companies seem to have wanted to
portray themselves as worse off than they were. For example, GM reported for 1972,

Earnings per share edged to a new high, but the margin of profit to sales, while slightly higher than in 1971, was well below that of other years. The lag of profit increases behind rising production costs and added investment was a significant consequence of inflationary costs and governmental price controls.

This was a year in which they earned $2.2 billion, more than any company had ever earned in history! The new high it “edged to” was a 12% increase over the previous year and 120% over two years. GM, and the others to a lesser degree, put a negative spin on every performance statistic in the effort to mitigate union demands and ward off government price controls, anti-trust action, and regulations on safety, pollution, and affirmative-action. Even looking for problems, they seemed to miss the Japanese.

A broader analysis of text roughly associated with lean- versus mass- production indicates even less attention to the work processes that were quietly transforming their industry. Table 2 summarizes key differences between lean- and mass- production described by Womack, Jones &

<table>
<thead>
<tr>
<th>Area</th>
<th>Mass Production (Fordism)</th>
<th>Mass Production Coding Constructs</th>
<th>Lean Production (Toyota Production System)</th>
<th>Lean Production Coding Constructs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work force</td>
<td>Worker as interchangeable part; constant tension with union.</td>
<td>Union conflict, labor costs.</td>
<td>Need for multiple skills and dedication. Work for life.</td>
<td>Union cooperation, worker training, quality of work life.</td>
</tr>
<tr>
<td>Assembly Plant</td>
<td>“Move the metal”; rework at end. Many specialists and foremen.</td>
<td>Direct costs, automation efficiency, standardization, or productivity</td>
<td>Few defects. Everyone a line worker - encouraged to shut line down if there is a problem. Just-in-time production.</td>
<td>Manufacturing process. Reduction of fixed costs, overhead and inventory.</td>
</tr>
<tr>
<td>Product Development/engineering</td>
<td>Specialization of Labor (e.g., electronic door lock designer reports to the senior door lock designer). Functional hierarchy.</td>
<td>New product features, options.</td>
<td>Team-design. Rewards to team players. Overall quality and reliability.</td>
<td>Product development process, reliability, time to market.</td>
</tr>
<tr>
<td>Approach to marketing/customer relations</td>
<td>Low prices/good value through large runs. Create demand through advertising. Adversarial relations: factory vs. dealer, dealer vs. customer.</td>
<td>Product “value,” low costs. Promotion through advertising, rebates.</td>
<td>Flexibility, more models, smaller runs, faster to market. Good relations between factory, dealer and customer. Build-to-order.</td>
<td>Reliability, warranties, repeat customers, trust, service, dealer relations.</td>
</tr>
<tr>
<td># Supply chain</td>
<td>Low bidders for company specified parts.</td>
<td># supply costs.</td>
<td>Long term relationships with single suppliers</td>
<td># supplier relationships (Alliances?)</td>
</tr>
</tbody>
</table>

I did not use this distinction in the compilation and analysis because of the lack of direct statements about suppliers or supplier chain, but even here a weak construct did show a similar pattern to the others. There was “mass” language about supply costs, mergers & consolidations through 1978 for Chrysler and 1981 for GM; there was “lean” language about alliances and “relationships” thereafter.
Roos (1990) and constructs used to operationalize them in my coding of letters to shareholders (see Freeman 1997).

In the attention study, I coded each line of every GM and Chrysler Letter to Shareholders beginning in the 1960s. Figure 2 illustrates that Chrysler did not indicate corporate-level concern with even the broadest issues of lean-production until 1979 and that GM did not do so until 1982! (Data for Ford was not coded, but was believed to be similar with a transition period after Chrysler and before GM.) From 1964 through 1978, 11% of the total text in the letters were devoted to issues related to mass-production and less than 1% to the broad issues of lean-production. (See Freeman 1997 for specific examples of text usage, and actual numbers)

**Figure 2:** Indicators of Mass- and Lean-Production in Chrysler and GM Letters to Shareholders during three periods: 1964-78, 1979-82, and 1983-86. Bars represent the proportion of the total lines of text indicating attention to mass- (black bars) and lean- (white bars) production concerns in each period.

Despite the enormous implications for costs, revenues, and even viability, neither Chrysler nor GM were attending to issues of lean-production long after these techniques were proven profitable and effective by Japanese firms. They did not attend to these issues even after the first oil embargo
in 1973. Rather as American big-car buying patterns returned with the ensuing calm, Ford and GM enjoyed record profits (see figure 3) building the big cars of old, and all three companies continued to ignore Japanese production advances.

Only once the situation became desperate for Chrysler during the second Arab oil embargo of 1979 did they attend to these issues (figure 2 center columns). GM, never facing equivalent financial exigency, did not attend to them until public embarrassment motivated them to do so. MIT Operations Management Professor Charlie Fine (personal communication, 1997) recalls this as a critical period in the field of operations management. In particular, an NBC documentary, "If Japan Can, Why Can't We?" (Dobbins & Rueven 1980) on the Japanese ascendancy in manufacturing quality and how it was triggered in part by the American quality control guru, Dr. W. Edwards Deming, "really shook people up." This program was followed by publication of two Harvard Business Review articles by leading American manufacturing academicians (Hayes 1981, Wheelwright 1981) and a bestselling book (Schonberger 1982) describing the power of the Japanese way of manufacturing. After all this, GM had to pay attention. But even then, it was not necessarily to make changes.

Stage 2. Defend (Anger)

The steep decline in the fortunes of the American auto industry from 1980-82 elicited a great deal of anger. As a quantitative measure, I searched all references in the New York Times to autoworker anger. From June 1980 through 1983 there were 21 such stories (10 in the nine months from October 1982 through June 1983); over the next four full years there was only one.12

There were nationally publicized Japanese car-bashing parties – compliments of Chevrolet – and a grisly case of a young Asian-American killed by two autoworkers who picked a fight with him in

12 This count was performed by using automated features of the Lexis-Nexis news retrieval service, which includes New York Times on-line beginning June 1980. (the earliest full text database offered.) I searched the New York Times for all stories that include the words "autoworker(s)" and ("anger" or "angry"). From these items, I excluded irrelevant juxtapositions (news summaries where "autoworker" and "angry" reference different stories), stories about workers that are "not angry," (evidently by the mid-80s, editors found lack of anger in autoworkers newsworthy), reviews of a book (July 7, 1985) and a play (Nov. 22, 1987) about the earlier period, and a TV review (Jan. 10, 1988) criticizing an angry autoworker character as cliché. (There were no such reviews 1980-83.)
a Detroit bar. Despite guilty pleas acknowledging that they struck him repeatedly in the head with a baseball bat, the autoworkers were freed on probation and $3,000 fines (Cummings 1983). Other New York Times articles from the period include:

* DISPLAY OF JAPAN FLAG STARTS PROTEST AT PLANT. Milwaukee auto workers spontaneously ripped down a Japanese flag flown to honor visiting businessmen from Tokyo (Nov. 18 1981: 13)

* RESENTMENT OF JAPANESE IS GROWING, POLL SHOWS. 63 percent of Americans had a favorable attitude toward Japan, while 29 percent had an unfavorable one. In a 1980 poll, 84 percent of Americans looked favorably on the Japanese and 12 percent had negative feelings. (April 6, 1982: Sec. B,12)

* IN OHIO, THE ENEMY IS JAPAN documents very strong anti-Japanese sentiment throughout the midwest. Powerful Congressional committee chairman John Dingell (D-Michigan) is quoted as saying that the problems of the American auto industry were the fault of "those little yellow people." (April 25, 1982: Sec. 3:8).

This anger was not simply emotional aftereffect. Chevrolet management, the criminal justice system, the congressman, and popular opinion sent out an important signal with official sanctioning. This anger had strategic value. It was used, if not fomented, by American auto manufacturers, much as individual anger is used: to protect their turf. Anger, resentment, and fear were at the heart of buy-American campaigns, protectionist legislation, and, most successfully, persuading the Japanese to accept "voluntary" import restraints.

Stage 3. Negotiate (Bargaining)

When financial conditions became ominous for the companies, the normal bargaining which is part of business operations took on an unusual intensity. When, for example, Chrysler's situation further deteriorated, they "began lopping off limbs" (Sawyers 1996:140) to reduce costs and raise money. The firm sold its operations abroad, closed several plants, laid off white collar workers, and entered into agreements with unions and government to an extent unprecedented and unequaled in American history. The United Auto Workers renegotiated contracts at lower wages and benefits, giving up $1.1 billion in concessions (Sawyers 1996). In return Chrysler provided full access to the
corporate books, profit sharing privileges, and a seat on the Board of Directors. Such an accord would have been unthinkable even a few years before, and met with criticism from both industry and labor. The U.S. government agreed to back loans of $1.5 billion, an arrangement which upset thinking on corporate relations even more than the union agreements, generating bitter criticism of corporate welfare from across the political spectrum. Additionally, new arrangements were made with dealerships, whereby dealerships also provided loans and the company put in place a new accounting/inventory system that geared production more closely to sales (Kisiel 1996).

Stage 4. Reorientation (Depression) at Chrysler and Ford

Fundamental reorientation occurred in the industry only after all the alternatives had been tried and failed. As with the Port Authority, these reorientations occurred under conditions well described by the term “depression.” Share values of first Chrysler and then Ford dropped to a fraction of their former value. Detroit and other auto communities suffered severe economic depression. Morale was low not only because of economics – managers and workers throughout the company didn’t like learning from the Japanese. The joke circulated about the Japanese and American auto engineers who were to sentenced to death and offered a final request: the Japanese engineer requested the customary last meal; the American simply said, “Shoot me first. I couldn’t bear to listen to another lecture on quality.”

Failure happened first at Chrysler. In 1978, Chrysler began a four-year deathwalk, losing a record $1.1 billion in 1979, and an even more staggering $1.7 billion in 1980 (see figure 3). Along with these losses came internal struggle and change. Between 1978 and 1980, the company had three major management reorganizations including changes in the top two posts. There were massive layoffs and divestment. The company took on new partners in the government, union, and dealer network. It was a leaner, different company that emerged with different priorities and an all new market identity. The company focused fully on automotive operations with an emphasis on altogether new cars, quality, and guarantees. Its promotions were particularly novel – CEO direct appeal, money for simply taking a test ride, and everything-covered, multi-year warranties.
Ford's precipitous decline followed soon on the heels of Chrysler's, and so too did major layoffs, plant closings and selloffs. As with Chrysler, there were several top management changes. Iacocca was fired as President in 1978 and Henry Ford II resigned as chairman in 1979, relinquishing family control. Like Chrysler, Ford adopted new priorities in quality and new product design. The company's $5.1 billion investment in Taurus/Sable was the greatest new product development effort in history (Doody & Bingaman 1988). Like Chrysler, Ford emerged as a new company – oriented toward product quality and reliability.

**Figure 3: Annual income (before extraordinary items) 1963-1993. Source: Compustat**

Confounding prevailing "liability of newness" theories, both reorientations were remarkably successful: $1 invested in Ford at the beginning of 1982 was worth $29.02 as of the end of 1993; $1 invested in Chrysler was worth $59.02. (By contrast $1 invested in the S&P 500 index would have only increased to $3.80.) Both have had strings of fine products: Ford Taurus has been the world's most popular vehicle for a decade and Chrysler created a new, hugely popular market for the minivan. In 1993, the *Wall Street Journal* ran a lead story (Miller 1993) on the reversal of fortunes, over the course of a decade, of Chrysler and Ford on the one hand and Honda and Nissan...
on the other.

**General Motors: Deeper Loss, Deeper Pockets, and an Elongated Response Cycle**

Severe as the crisis was for Ford and especially Chrysler, GM took much longer to adapt. Whereas Ford and Chrysler had essentially remade themselves by the mid 1980s, GM did not make major changes until the 1990s and their adaptation to the new world order remains suspect to this day. I postulate that the explanation lay with three identity-related factors: (1) a greater loss of status, (2) deeper pockets to resist the loss, and (3) prior loss from which the firm had not recovered.

*Status.* GM’s fall was from the pinnacle of the industrial world, a point from which Ford had already long since fallen and Chrysler never attained. Long accustomed to emulating GM, it was a comparatively straightforward transition for Chrysler and Ford to emulate Toyota and Honda instead. GM was *not* an emulator, it was a management and technological *leader.* GM Letters to Shareholders never mentioned a competitor and typically half the text was devoted to issues of national or world significance rather than narrow corporate interest (see figure 4).

Once Japan actually surpassed America in auto production in 1980, Ford and Chrysler were quick to copy Japanese manufacturing and supplier partnership practices, and made product reliability and production quality (those features which made Japanese imports so popular) their top priority. In all these areas, GM changes lagged far behind. Even today, GM retains a policy of multiple, competing suppliers with whom they are notoriously tough negotiators. Rather than emulate Japanese practices, GM bet their future on advanced technology, spending several billions to acquire Ross Perot’s Electronic Data Systems and Hughes electronics. This enormous investment in technology is difficult to justify knowing what we know now or even knew then of Japanese manufacturing and design advances: lean manufacturing advantage (Table 2) comes primarily from improvements in human processes and supplier relations. Nor do the acquisitions seem to make much financial sense. Perot himself claims GM overpaid by at least 50% for both the acquisition of EDS and the buy-back of his GM shares (Levin 1989). But the move could be seen as an attempt to
reacquire the industrial preeminence upon which the corporate identity rested.

**Buffering.** The second difference for GM was that it did not suffer the financial losses of its less well-endowed rivals. Unlike Chrysler and Ford, firms which nearly failed to survive the 1979-81 crisis and needed to promptly reform themselves, GM never feared for its existence. GM’s vast resources allowed it to create and control its world to a great degree, and its tremendous competitive advantages in marketing, distribution, and economies-of-scale were further strengthened by weakened domestic competition. Chrysler lamented in its 1976 Letter to Shareholders how difficult it was to maintain continuity in the face of conflicting demands. GM stockholders may well lament how difficult it was to disrupt continuity.

The former President of GM’s Chevrolet and Pontiac divisions, John DeLorean, describes a “Fourteenth Floor” completely cut off from accountability or knowledge of the world. A culture of cronyism developed where loyalty to one’s boss was the only performance criteria. He recounts an archetypical Executive Committee meeting exchange:

[Chairman] Dick Gurstenberg: “Goddamnit. We cannot afford new models next year because of the cost of this federally mandated equipment. There is no goddamn money left for styling changes. That’s the biggest problem we face.”

[Executive Vice President] Dick Terrell (10 minutes later): “Dick, goddamnit. We’ve just got to face up to the fact that our number one problem is the cost of this federally mandated equipment. This stuff costs so much that we just don’t have any money left for styling our new cars. That’s our biggest problem.”

Gurstenberg: “You’re goddamn right, Dick. That’s a good point.” (Wright 1979:39)

**Prior loss.** Finally, lean production and the oil embargoes came for GM on the heels of a series of attacks upon its identity which diverted its attention, sapped its resources, and created a bunker mentality. Beginning with Nader’s (1965) criticism on safety, waste, and pollution, and GM’s heavy-handed attempt to destroy his reputation, GM suffered a dramatic fall from respected industrial giant to establishment villain. This loss of public trust led to more than a decade of preoccupation: from 1965 to 1978 an average of 38% of the lines in the Letters to Shareholder
concerned social issues – safety, pollution, efficiency, consumer issues, and affirmative action (figure 4). From 1970 to 1983, the key years in which the company was losing its dominant position in the industry, an average of only 7% of the lines concerned product and production, those areas in which the Japanese and, by now, their American rivals as well, had surpassed them. For the sixteen years from 1965 to 1980 an average of only 44% of the text lines were about business concerns within their domain of control; 56% were about social issues, macroeconomic conditions, and gratuities (e.g., "We’re confident about our future.").

**Figure 4: Allocation of subject matter in GM letters to shareholders 1962-1986**

Collapse and Change at GM

GM was able to avoid the kind of change in practices that Ford and Chrysler adopted for a long time, even when their US market share declined sharply in 1987 to 37% from 42% the year before (it had averaged 47% for the previous two decades). Financial losses did not occur until 1990,
though when they hit, they were of astounding magnitude: GM lost $2 billion in 1990 (as U.S. market share further dropped to 33%), $5 billion in 1991, and another $2.6 billion in 1992! It would appear that these losses finally stirred the traditionally compliant GM Board of Directors. The chairman, vice chairman, president, and an executive vice president were forced to retire; the CFO was demoted, and an outside director became chairman. Now at least GM speaks the same language as the rest of the industry. Criticized recently for slowness in stepping up production of popular cars, GM responded: “We’re putting quality first. If it takes longer to get it right, so be it.” (Plume 1996).

Other Examples of Collective Loss

One might imagine these cases to be oddities that coincidentally fit Kübler-Ross’ stage theory of response, but the model seems to hold for other examples as well.

GM and Safety

Accidents and death had been a serious problem associated with automobiles since the inception of the industry. Beginning in the 1950s, the American Medical Association began calling for safety devices in cars as Cornell University studies documented the grisly impact of car crashes and demonstrated conclusively the value of safety devices. But GM dragged their feet on the issue, even pressuring Ford to back off from a 1956 safety campaign on the principle that, “If buyers thought they needed safety devices in a car, they would hesitate to buy one in the first place” (Kurylko 1996). When a young lawyer, Ralph Nader (1965) documented serious safety defects in the Chevrolet Corvair and charged that GM was responsible for deaths by not spending trivial amounts on recalls, GM reacted by spying on Nader and intercepting his mail in an effort to destroy his reputation.

Various other movements followed. Guilford (1996) looks back at the first Earth Day in 1970:

... the automobile, long considered a symbol of US affluence and technological mastery was suddenly recast as a wasteful, pollution-spewing indulgence. ...

New York’s Fifth Avenue was closed to traffic for two hours.... Students at Florida Tech
tried and convicted a Chevrolet for poisoning the air. (Morris & Seaman 1981)

GM spent the next decade battling public interest groups and policy makers bargaining over regulations they claimed were too costly, not technically feasible, or otherwise intrusive.

A ... serious waste of manpower and capital resources is occurring daily... governmental standards for emission control and passenger protection ... are excessively stringent. ... there is reason to question whether the standards provide benefits to the consumer that are commensurate with their costs... (1972)

The 1980s brought a sharp decline in GM's stature as an industrial leader. With this fall, the company apparently no longer felt a need to protect capitalism, opportunity, and freedom in the face of anti-business zealousy.\textsuperscript{13} A new generation of officers who did not see their role as leaders of the free world tended to accept goals more concordant with public sentiment. Today the company proudly trumpets their safety features and other public interest endeavors. In the same Automotive News centennial commemorative that recalled the Nader battle, GM ran an oversize two-page color spread boasting how their new daytime running lamps will reduce collisions and save lives (Automotive News 1996:6-7).

The Chemical Industry and *Silent Spring*

Hoffman (1997) documents a strikingly similar story in his study of chemical industry activity in the aftermath of Rachel Carson's *Silent Spring* (1962). The industry initially ignored Carson's claims that growth in the use and potency of chemical pesticides was having increasingly destructive effects on the natural environment. When the debate over the environmental implications of the synthetic chemical industry nevertheless broadened into mainstream media and government, the industry sought to discredit environmental charges by arguing that they are scientifically baseless and that the benefits of technological development merit an acceptable level of risk. The response included harsh personal attacks directly on environmentalists (Meadows 1993). Once they finally

\textsuperscript{13} One might imagine that the change in attitude was the product of a less hostile political environment, but just as GM stopped editorializing in their annual report, Chrysler began to. In the aftermath of his company's resounding recovery, Iacocca uses the letter annually beginning in 1982 to vigorously argue for reduction of the national deficit, seemingly taking over the baton on discussion of national policy issues from GM as the relative stature and influence of the firms reverse (Freeman 1997).
did acknowledge environmental problems with their products and processes, they tried to counter criticism by developing new products that could mitigate the effects of existing ones.

When events such as Bhopal and Seveso destroyed any hope that this approach would restore a good public image, the industry was demoralized: polls reflected an immense public distrust for the industry which translated into difficulty attracting young engineers and scientists, lack of internal commitment to carry out past policies, and increasing self-doubt. From this depression, new voices emerged that were more concordant with the contemporary environmental ethos. Finally today, chemical firms are often at the forefront of the environmental movement, frequently as leading patrons of environmental groups and initiatives.

Maritime Resource Depletion

A similar story seems to hold for the fishing industries of New England and the Canadian maritime provinces as they deplete the resource on which they depend. Despite abundant evidence, many commercial establishments and independent fisherman long refused to accept that banks had been overfished and continued to invest in equipment (Collins 1995). When environmentalists sought or government regulators imposed limits and other restrictions, these communities responded with displays of great anger, even when the objective of the regulations was industry preservation. When the anger cooled, the communities would continually bargain for greater privileges and higher takes rather than support more rational taxation measures (Becker 1995).

Russell (1996) observes that, with their "survival at stake, fishermen are finally beginning to change their wasteful habits and develop sustainable practices," but he argues that "it is too little, too late." At present these areas are quite depressed, both economically and psychologically, as the process has insufficiently preserved fishing stocks. In the end, there seems little question that the industry will be cut back dramatically, and that these economies will change as tourism or other industries are substituted for fishing.
3. DISCUSSION

In this final section, I probe some general epistemological and conceptual issues raised by this research. In this chapter I’ve relied heavily on three types of theorizing currently out of favor – stage models, multi-level analysis, and clinical research. In this section I discuss their value as well as their limitations, and why and how researchers may use them beneficially. I then reconsider our normative praise of adaptation and condemnation of resistance. I conclude with a chapter summary.

Stage theories and the alternatives

I have argued that Kübler-Ross’ and similar models are dismissed not on the basis of empirical evidence but, rather, because they are stage theories. Stage theories are currently held in disrepute in behavioral science as a sort of primitive substitute for more serious theorizing, largely because they imply a predetermined path, a conjecture which seems ill-conceived when applied to the variability of human behavior. But this rejection of stage theories may reflect contemporary overassessment of both our current state of knowledge (Schein 1993) and our ability to rationally control behavior (e.g., White 1992). Stage theories are valuable for two categories of phenomena: those about which we understand little, and those for which the alternatives to stage theories are even more problematic. I suspect that both of these categories are larger than is generally acknowledged.

In exploratory research, Kübler-Ross’ included, stage theories are not considered an inexorable process, but rather an empirical generality or even simply a prototypical model that is deviated from in reality. This latter view is the way much of the loss literature treats the five stages. Clinicians write about how their subjects follow the process in some ways but deviate in others. The model provides a way of conversing about a phenomena that generates useful further discussion. Even in somewhat more heavily studied phenomena, stage theories represent useful heuristics, providing insight into process not available through correlations.

For some aspects of behavior, stage theories may be more than just useful – they may be phenomenologically sound. Van de Ven & Poole (1995) observe that theories of change may be universally categorized into four basic types – life cycle, teleological, dialectical, and evolutionary –
each of which involve different "motors." The latter two explain change as the result of changes between units rather than within the individual: evolutionary change, for example, occurs through variation-selection-retention processes involving births and deaths. Life cycle or stage theories explain change as immanent development based on logic, program or code (usually genetic). Kübler-Ross' five stages have lacked contemporary credibility because neither she nor subsequent observers identified any specific change mechanisms, let alone a programmatic one. Most contemporary theories of human behavior emphasize Van de Ven & Poole's final motor – teleology – choice based on goals or intention. At first glance, this seems the obvious explanation of human behavior including loss, but loss is interesting and unusual precisely because it disrupts goals and upsets the continuity of teleological behavior that might otherwise exist.

Stage theories may have more validity than we typically grant them simply because teleological theories have less. How free is choice? It is perhaps the oldest debate in philosophy – and it remains unresolved despite a contemporary predilection for rational actor theories (March & Olsen 1988). Responses like grief or anger are beyond intelligence and beyond our control, as are emotions generally. The best we can do is understand and manage them. Goleman (1995) observes that those who try to strictly control them or, worse, deny them, find themselves subject to "emotional hijacking." In the case of loss, goal-oriented behavior is problematic because loss changes identity which changes goals. It is only within the context of a relatively fixed, unchanging identity that scientifically meaningful teleological behavior is possible.

Clinical research and the alternatives

Clinical research is generally not treated seriously in academic social science, where it is rejected in favor of a research paradigm based on quantitative measurement occasionally infused with exploratory ethnographic work. A key concern is, "How do clinical researchers know when they know something?"
While careful research practices (e.g., Schein 1987) can mitigate this concern, most clinical research, including that on loss, is not, I believe, conducted with high standards of rigor. Few clinical studies contain explicit thought experiments and there is little triangulation, acknowledgment of the limits of the method, or suggestions for operationalization and testing. On the other hand, clinical research often provides comparatively careful observation and description, and clinicians are trained to operate with self-insight and a healthy skepticism (Schein 1993). Despite extant limits on the rigor of clinical inquiry, there are, as with stage theories, two large categories of phenomena in which clinical research is useful: those about which we understand little, and those for which the alternatives to clinical research are even more problematic. Response to loss falls within both categories.

Cameron, Sutton & Whetten (1988:13-15) observe "formidable impediments" of access, cost, and funding for traditional research in decline and loss. Few subjects care to have a dispassionate observer studying them. The stigma associated with decline and failure leads people to want to forget, avoid, or ignore it. This leads to low participation and response rates, which require more sophisticated researchers and research designs, and therefore higher costs. At the same time, resources are more difficult to obtain. Whereas successful companies often are willing to support research about their firms, losses result in reluctance or inability to do so. Moreover, it is difficult to obtain general research funding and interest – most research consumers want to learn how to win, not how to deal with loss.

Clinicians, in contrast, are already there – because people need them. Even more important, they have skills, training, and license that traditional researchers lack to overcome the tendency under conditions of loss to evade, avoid, deny, or in other ways distort what is going on. Schein observes that,

If I am a traditional researcher and ask, “How do you get along with your boss?” the

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14 Schein (1987) emphasizes replication: Do others see what I see? Weick (1979) presents additional ideas on how case studies can be more rigorous. He relates how two prominent traditional researchers came to appreciate the value of the case study based on the value of the interpretation in context (Cronbach 1975) and the insight that, within a single case study, one can test multiple theoretical implications (Campbell 1975).
respondent may evade giving an answer because it may be viewed as being none of my business. If I ask the same question as part of a process of helping the client to solve some problem, it is much more likely that I will get a meaningful answer… The very fact that the client has initiated the process licenses the clinician researcher to ask questions that would under other circumstances be viewed as invasions of privacy or be evaded in order to maintain an image. (Schein 1993:704)

Multi-level research

Multi-level theory and, more generally, multi-domain theory make two important contributions to social science: condensation and insight.

One reason for employing concepts in different contexts is to strive for a useful level of generalization (Boulding 1956), no small point in our age of exponentially expanding information. In an academic e-mail network discussion heralding new electronic journals that could provide virtually unlimited pages and data, one subscriber quite reasonably asked, “But how do I get all this into my low baud brain?” (McKinley, personal communication, 1995). Simon (1969) observes that even the most dedicated professional is limited in the amount of knowledge she can acquire (he estimates roughly 12.6 million “chunks of information”). Thus,

... some of the most important progress in science is the discovery and testing of powerful new theories that allow large numbers of facts to be subsumed under a few general principles (Simon 1969:109).

Much of the appeal of economics, for example, is due to the parsimony of its predictive power rather than the accuracy of its assumptions.

A risk of employing multi-domain concepts to simplify knowledge is that even experts do not attain the appropriate-level accuracy. Theory is not advanced simply by observing similarities: People find patterns everywhere, even where they don’t exist (e.g., Soelberg & Armstrong 1968). The next step is to prove them and explain why there are similarities: which mechanisms are the same and which are different? When comparing human beings with something else, there are the particular dangers of anthropomorphizing on one hand and dehumanizing on the other. Most scholars today are quite sensitive about the former, but the latter is quite common: For example,
frequent (often implicit) comparison of the brain with a computer leads to the view of the brain as a (flawed) information-processor. Careful observation and reasoning, however, can illuminate both the subject and source of analogous reasoning.

For science as a whole (as opposed to the individual scientist), the benefit of employing concepts in different contexts is to allow us to see what is shared. Newton, for example, developed the laws of gravity by observing what a falling apple has in common with planetary orbits. By employing concepts of power and influence then in use at political levels of analysis and applying them to dyadic relations, Emerson (1962) developed fundamental principles of equity and exchange still widely cited today. General systems theory (e.g., Boulding 1956) and system dynamics (see Senge 1990) have identified a wide array of structures and processes (e.g., reinforcing feedback loops, tragedy of the commons) that we understand better for their deployment in a variety of domains.

Weick (1979:48) argues that anthropomorphizing is a useful starting point in understanding any puzzling object. "I am the metaphor by which I can initially comprehend the organizational things around me." Such analogies are also valuable for what they can teach us about ourselves. Part of the value of this chapter is that the organizational phenomenon sheds light on the process of loss that we as individuals suffer.

**Toward a Normative Reconceptualization of Adaptation and Resistance**

Many early theories of organizational adaptation, in particular the contingency theory of Lawrence & Lorsch (1967) and Thompson (1967), observed reasonably functional fit and emphasized the nature of structural functionality. Much of organization theory since has challenged the notion of functionality both positively and normatively (functional for whom?).

The identity theory put forth here attempts to reconcile these traditions. Adaptation occurs; at some point it is clearly desirable, and eventually it is necessary for survival. Those who laud adaptation and change, however, should recognize what is lost in the process. An apt image of organizational change is domestication of an elephant. *National Geographic* (1989) documented the
painful process: a young elephant is tricked away from his pride, after which he refuses to eat for
days, wails incessantly, and does anything including self-mutilation to get free. It takes three
months or more of what could only be described as torture to “break” the creature and make him
amenable to service.

The intensity of loss, the baffling “mental economics,” the sense of lost love and lack of
meaning commonly experienced (Bowlby 1973, 1980, 1982) suggests a complication in the way
we understand rational behavior. We all wish to be well-adapted, integrated, or “isomorphic with
our environment.” In short, we seek to increase our utility. But what if, to do this, we must become
something other than what we are? Do we increase our potential or spend ourselves as we best see
fit?

Organizations, also, and especially institutions (Selznick’s 1957 distinction), do not merely
serve their members’ interests, but rather are themselves “infused with value.” They are relatively
steadfast in fulfilling a purpose far beyond the capability of mortal beings. Both individuals and our
organizations fight hard to maintain their purpose even in the face of apparent loss. During grief and
depression, outward struggle makes no sense because the goals we have struggled for are no longer
valid. Before it makes sense to take on the world again, we must retreat for awhile to do the hard
work of rebuilding adapted goals that satisfactorily motivate behavior. Only after this very hard
work is done can we accept the loss and proceed.

Conclusion

My principal aims in this chapter have been, first, to introduce a concept of organizational loss
by presenting original research from the American automobile industry and several other brief cases
which illustrate that organizations respond to loss in much the same way that individuals do.

To explain this similarity, I have developed an identity maintenance and adaptation thesis that a
common identity imperative drives the process at all social levels through all phases. I explain loss
as a chasm between two forms of identity – structural and cognitive – that a viable entity must hold
in some reasonable congruence. This thesis provides a logic for modified, generalized Kübler-
Ross’ stage theory of loss, a model that has enjoyed widespread clinical acceptance but has met with scientific skepticism.

I have argued that this framework can reconcile various schools of organization theory by offering a temporal sequence along which each is salient at a particular time. In the process, I have introduced an explanation for several important anomalous findings about loss – loss aversion, escalation, and rigidity under threat – based on an economics of identity.

In this final section, I have illustrated and explained the value of several types of theorizing currently out of favor – stage models, clinical research, and multi-level analysis – and provided a multi-dimensional conceptualization of adaptation and resistance, cognizant of what is lost as well as gained.

To understand both individuals’ and organizations’ reactions to loss requires a view of ourselves and our institutions that goes beyond that of economics’ rationally efficient actor or behavioral decision theory’s rationally deficient actor. Loss, like tragedy, provides perspective that highlights emotions, commitment, and the subtle interplay of human constancy and change. Loss has always been close to the heart of literature and the humanities. I believe it now also warrants a place in the frontal lobe of social science.
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Plume, J. (1996, June 26). In '80s, poor quality tripped the big 3. Automotive News • American Automobile Centenial commemorative, p.162


Appendix: Autoworker anger in the New York Times

Search terms: [Autoworker(s) and ("angry" or "anger")]

This list was obtained by using automated features of the Lexis-Nexis news retrieval service, which includes New York Times on-line beginning June 1980. (the earliest full text database offered.) I searched the New York Times for all stories that include the words "autoworker(s)" and "anger" or "angry". From these items, I excluded irrelevant juxtapositions (news summaries where "autoworker" and "angry" reference different stories), stories about workers that are "not angry," (evidently by the mid-80s, editors found lack of anger in autoworkers newsworthy), reviews of a book (Flint 1985) (July 7, 1985) and a play (November 22, 1987) about the earlier period, and a TV review (January 10, 1986) criticizing an angry autoworker character as cliché. (There were no such reviews 1980-83.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Headline (who is angry at whom)</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 5, 1980</td>
<td>Hopelessness and fear pervade once-strong auto union (workers are angry at economic conditions and imports)</td>
</tr>
<tr>
<td>July 19, 1980</td>
<td>Rising joblessness driving many auto workers into Reagan camp</td>
</tr>
<tr>
<td>Aug 13, 1980</td>
<td>Kennedy delegates: the hard choices (a Kennedy auto worker partisan is angr</td>
</tr>
<tr>
<td>Oct. 28, 1980</td>
<td>Fear of Reagan is the major impetus for intensive union drive for Carter</td>
</tr>
<tr>
<td>Sept. 9, 1981</td>
<td>Mrs. Thatcher is target at British union congress</td>
</tr>
<tr>
<td>Nov. 15, 1981</td>
<td>Robots build a new Renault (robot production could anger trade unions)</td>
</tr>
<tr>
<td>April 25, 1982</td>
<td>In Ohio, the enemy is Japan</td>
</tr>
<tr>
<td>April 25, 1982</td>
<td>Concessions by unions prompt worried debate (union workers angry at auto plants not participating in collective bargaining).</td>
</tr>
<tr>
<td>May 23, 1982</td>
<td>Democrats and G.O.P. in Ohio see the labor vote as vital '82 campaign (Speculation on union workers angry about unemployment, who they blame)</td>
</tr>
<tr>
<td>Oct. 28, 1982</td>
<td>Blue-collar anger at Reagan poses threat to Republicans</td>
</tr>
<tr>
<td>Nov. 21, 1982</td>
<td>Garvey limited by pressures (Union leaders are angry about NLRB slowness)</td>
</tr>
<tr>
<td>Nov. 23, 1982</td>
<td>Coast jobs disappear through 'gateway to Pacific'</td>
</tr>
<tr>
<td>Dec. 14, 1982</td>
<td>The Job-Killer bill (politicians, labor* angry at Japanese protectionist policies)</td>
</tr>
<tr>
<td>Jan. 2, 1983</td>
<td>A bleak reality tempers Canada's union militancy (Canadian workers are angry at Chrysler)</td>
</tr>
<tr>
<td>April 24, 1983</td>
<td>Litton's angry labor conglomerate (union workers are angry at economic conditions)</td>
</tr>
<tr>
<td>May 1, 1983</td>
<td>The strains of Fraser's dual role (potential union anger useful for bargaining at Chrysler)</td>
</tr>
<tr>
<td>May 15, 1983</td>
<td>Finally, consumers start spending (UAW angry at Toyota about lost American jobs)</td>
</tr>
<tr>
<td>June 5, 1983</td>
<td>Farmers and unions joining to fight economic hardship (anger about lost jobs)</td>
</tr>
<tr>
<td>June 12, 1983</td>
<td>Detroit's sad voices (an auto workers need to control his anger)</td>
</tr>
<tr>
<td>Dec. 4, 1983</td>
<td>Lobbying for Japan Inc. (politicians, labor angry at Japanese protectionist policies)</td>
</tr>
<tr>
<td>Dec. 29, 1986</td>
<td>U.S. goods made in Mexico raise concern on loss of American jobs (politicians, workers are angry at mexicans and U.S. gov't)</td>
</tr>
</tbody>
</table>

![Figure A1: Number of New York Times stories referring to autoworker anger per 12 month period beginning June of the year noted.](image-url)
CHAPTER IV. GOOD DECISIONS: RECONCILING HUMAN RATIONALITY, EVOLUTION, AND ETHICS

Abstract: The utility principles upon which decision theory is based conflict with both empirical findings and ethical thought. Evolutionary analysis cognizant of human interdependence, dependence, and death explains why we find genetic attributes and cultural values inconsistent with the tenets of rational choice. This analysis provides a rationale for deontological ethics and "logic of appropriateness" as alternative foundations for decision-making models, and suggests future research that breaks with the traditional vision of human reasoning as a defective approximation of a utility maximizing ideal.

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The Academy of Management annual meeting (Boston, August 11, 1997)
The Society for Business Ethics annual meeting (Boston, August 8, 1997)
The Judgment/Decision Making Society annual meeting (Chicago, Nov. 3, 1996)
1. RECONSIDERING A UTILITY-CENTERED UNIVERSE

Utility theory – in particular, the supposition of a cardinal utility function that decision-makers should maximize (Von Neumann & Morgenstern 1944, Savage 1954) – has served as the orienting point of decision science since the inception of the field. More generally, this orientation is so unquestioned in analytical education that few of its alumni can even conceive of an alternative to its implicit consequential logic. We know the “right” way to make a decision: figure out what we want, consider our choices, and choose the path most likely to lead to our goal. Uncertainty and risk complicate, but do not change, this basic decision formula.

Yet this is not how people actually make most decisions. Contemporary counsel to reason consequentially also conflicts with nearly all ethical prescription throughout history and across cultures. In this chapter, I argue that these conflicts are due to an unwarranted theoretical commitment to utility theory, that we misread the heavens when we see utility as the North star and use it even to orient our moral compass. Unhitching our wagon from this star allows us to find guidance from other sources of illumination. One pair of alternative orienting lights is deontological ethics (e.g., Kant 1785) and a logic of appropriateness (March & Olsen 1989).

Based on analysis of human evolutionary process, I propose a rationale for why we might expect healthy people to behave appropriately rather than calculatingly and to reason ethically rather than consequentially. Moreover this analysis suggests that reasoning about responsibility and appropriateness aid in intergenerational survival and human fulfillment precisely because such reasoning serves to limit personal utility.

1.1. Chapter organization and key propositions

In the remainder of this introductory section, I provide background on utility and decision theory. I explain the origins of the common wisdom on decision-making, review the empirical research, and explain the theoretical argument and evolutionary assumption on which the utility model is based. I then detail the theoretical problem that generates this chapter, and introduce March & Olsen’s logic of appropriateness as a solution.
In Section 2, I challenge the evolutionary assumption on which utility theories rest. Evolutionary analysis cognizant of the importance of human interdependence, dependence, and death explains why we find genetic attributes and cultural values inconsistent with the tenets of rational choice. Both biological proclivities and adopted aspects of identity can be best understood not as a function of attributes that best support self-interest, but rather of what has been inherited or otherwise transmitted from ancestors who were able to fit in and successfully propagate as members of a tribe.

In Section 3, I attempt to close the chasm between utility-based decision prescription on one side and actual decision-making and ethics on the other. In Section 3.1, I provide the rationale for intuitive morality and non-utilitarian ethics, and use insights from Kant (1789) as a starting point for an alternative prescriptive framework. In Section 3.2, I outline elements of a descriptive model that emanate from the proposition that goals are artificial constructs rather than central motivators.

I conclude in Section 4 with implications for research — on the relation between goals and context; on what is meant by a good decision; and, most of all, on the study of human reasoning process not as a defective approximation of a utility maximizing ideal, but rather as a process to understand on its own terms for the keys it holds to a different, possibly better ideal.

1.2. The common wisdom on decision-making

1.2.1. Generic utility theory (Rational Choice)

Utility theories either advise that choices reflect values associated with expected outcomes or presume that they do. Such behavior is how adherents define "rationality." Adherents include almost the entire field of economics (although there is sharp division within the field as to both the extent and domain of this type of rational behavior —Friedman 1964 and Becker 1979 present particularly universalist views), a large and increasing percentage of political science (see Green 1994 for a review), much of psychology (explicitly modeled in expectancy theory, e.g., Lawler 1971) and much of the other social sciences (in sociology the position is most prominently set forth by Coleman, 1993). Utility also serves as the basis for a spectrum of philosophical and policy theories ranging from utilitarianism (Bentham 1841, Mill 1859), the ethic that counsels the greatest good for
the greatest number, to self-interest, which prescribes the greatest good for oneself.\(^1\)

But these positions raise some fundamental questions: First, do decision makers naturally behave in accord with the precepts of utility theory? Indeed, there would be no need for prescriptive decision theories if they did.\(^2\) Second, what does it mean to choose based on value? What kind of choice could conceivably not be based on value? Third, if the rational way to make a decision is through goal-based reasoning, why is it that most people can’t even say what their goals are, let alone use them as decision beacons? The first problem is discussed presently (1.2.2); the second in the following section (1.3); the third occupies the remainder of the chapter.

1.2.2. Choice and outcome: Herbert Simon on cognitive limits

Decision science and behavioral decision research are new fields, only a half-century old. Reasoning and decision-making processes play little role in classical economics or the behaviorist psychology perspective dominant at mid-century (i.e., Watson, 1925; Skinner 1938) because it was assumed that people respond directly to incentives and disincentives. Today behaviorist psychology is largely discredited (although it remains the basis of economics – see DeBond & Thaler 1994) as experiments have repeatedly demonstrated that construal plays a central mediating role between the environment and behavior, and that incentives can even be counter-motivational.\(^3\)

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\(^1\) Some classical economists and contemporary libertarians claim that actions motivated by self-interest result in the greatest good for the greatest number by means of the invisible hand of a free market (Smith 1776). Few contemporary scholars would back Smith’s claim without important qualifications; nevertheless, many contemporary social scientists, including most economists, use descriptive models of behavior motivated by narrow individual self-interest. This is not because narrow self-interest results in the best of all possible worlds or even because it comprehensively describes human behavior, but rather “so that the theory has predictive value” (Milgrom & Roberts 1992:42-43). See also section 1.3.

\(^2\) In management fields, the reader often doesn’t even know if the author is proposing a descriptive or normative theory. Authors sometimes go back and forth between description and prescription, apparently without recognizing the contradiction even in otherwise impressive work. For example, Wernerfelt (1984) in the article voted “Article of the Decade” in Strategic Management Journal, proposes his “Resource-Based View of the Firm” as a tool to both (1) analyze an implicitly deterministic relationship between profitability and resources and (2) help manage the firm’s resource position over time. The bulk of the article argues what firms should do, but the argument is made by examples of what they do do.

\(^3\) For example, Festinger & Carlsmith (1959) show that subjects poorly paid to perform a tedious task are more motivated than higher paid subjects; it’s postulated that the subject’s assume that the task must be intrinsically interesting – otherwise they could not satisfactorily explain to themselves why they are doing it. Lepper, Greene and Nisbett (1973) show that nursery school children lose interest in play activities for which they are rewarded, presumably because they come to view the activity as a means to an end rather than attractive in its own right.
Simon’s contribution to this cognitive revolution was to explain the implausibility of early economic models of behavior. Throughout his work, Simon (especially 1945, 1960) is sympathetic to the aspirations economics postulate ("outcome rationality") while noting the difficulty in practice of attaining such outcomes. Optimization requires the omniscience of a god, but we are limited by the "information processing capabilities" of the human brain. Actual behavior necessarily falls short of economic rationality on three key dimensions (1945: chapter V):

1. Rationality requires complete knowledge ... of the consequences that will follow ... each choice. In fact, knowledge of consequences is always fragmentary.

2. Since these consequences lie in the future, imagination must supply the lack of experienced feeling in attaching value to them. But values can be only imperfectly anticipated.

3. Rationality requires a choice among all possible alternatives. In actual behavior, only a very few of all these possible alternatives come to mind. (Simon 1945:81)

This formulation led to major streams of descriptive and prescriptive research, beginning with the effort of Simon and colleagues to systematically map human capabilities, deviations from rationality, and human heuristics for coping with inherent limitations. Simon’s view that people are "intendedly rational" more or less represents today’s common wisdom. Simon’s limitations form the basis for decision sciences (and far beyond – see Appendix A). Decision techniques, aids, and algorithms are designed to overcome or push back these limits to rationality.

There is a resonant logic in this formulation and utility theory in general: at first consideration, it seems, prescriptively, the obviously appropriate guide to intelligent action. And as a descriptive model, it provides a respectful guide to actual behavior, in that we assume a person’s actions to be reasonable and proceed to search out those reasons. But as behavioral decision researchers probe utility theory, individuals often fail to meet even liberal interpretations of "intended rationality."

1.3. Utility axioms and violations

Just what does it mean that choice reflects value? What kind of choice could conceivably not reflect on value? Utility theory is agnostic with regard to ends, and this sometimes leads to tautology: “How are the things people value determined? By observing what they choose” (March

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4 For summaries of research in given periods see Edwards (1954); Miller (1956); Newell & Simon (1972); Slovic & Lichtenstein (1977); Hogarth (1987); and Kleindorfer, et al. (1993). Deviations are also summarized in Appendix D.
To provide rigor, Von Neumann & Morgenstern (1944) analyzed the notion of expected utility axiomatically. Behavioral decision researchers have shown, however, that four apparently modest substantive assumptions – cancellation, transitivity, dominance, and invariance – upon which the theory depends are systematically violated. For example, cancellation, the axiom that,

If A is preferred to B, then the prospect of winning A if it rains tomorrow (and nothing otherwise) should be preferred to the prospect of winning B if it rains tomorrow because the two prospects yield the same outcome (nothing) if there is no rain tomorrow,

is necessary to represent preference between prospects as the maximization of expected utility (Tversky & Kahneman, 1988:168). Allais' paradox (1953) illustrates, however, that people consistently violate this principle (see Appendix B).

Preference elicitation shows that even the most essential assumption of utility theory – invariance – is not supported. Invariance is the apparently reasonable assumption that,

different representations of the same problem should yield the same preference. That is, the preference should be independent of their description. (Tversky & Kahneman, 1988:169)

Yet in a wide variety of studies (see Dunegan, 1993) framing is shown to make a great difference. In a study of preferences between medical treatments, McNeil et al. (1982) gave patients, physicians, and students statistical information about the outcomes of two alternative treatments of lung cancer. The same statistics were presented to some respondents in terms of survival rates ("90% survive surgery ...") and to others in terms of mortality rates ("10% die during surgery ..."). This inconsequential difference in formulation produced a marked effect. The overall percentage of respondents who favored radiation therapy rose from 18% in the survival frame to 44% in the mortality frame. Moreover, the framing effect was not smaller for experienced physicians or for statistically sophisticated business students. In replications, Tversky & Kahneman (1986:S260) observed that, even once the inconsistency is explained, respondents persistently hold on to the two

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5 This influential work is a brief chapter of the magnum opus founding game theory. Von Neumann & Morgenstern thought it possible that with time and effort the fuzzy concept of utility could become measurable and mathematically operable just as the once-fuzzy concept of heat had become measurable and mathematically operable through the development of temperature scales. Interestingly, the authors' observations on the strategic nature of economic behavior – the "games" people play – actually adds to the "Herculean challenge of rationality" that Simon posed. Even assuming infinite information processing capabilities, optimization is infinitely difficult because my action leads you to take actions which alter my environment in unforeseen ways. As a player, you know this and try to influence my actions. Etc., etc. ...
conflicting frames, maintaining an ambivalent “wish to remain risk averse in the ‘lives saved’ version and risk seeking in the ‘lives lost’ version.” (Although they also do want to be consistent.)

1.4. Flawed decision makers, studies, or theory?

This striking discrepancy between empirical studies of choice behavior and predictions from utility-based theory means there is something wrong with either the decision makers, the studies, and/or the theory. The common wisdom is that human beings are seriously flawed decision makers, but there are two other possible explanations: Studies may not reflect real choices made under real circumstances or utility theory may be inappropriate as a general normative basis for choice. I consider each explanation in turn.

1.4.1. Human, all-too-Human?

When students first hear of framing experiments and a long list of other “heuristics and biases” uncovered by behavioral decision researchers (see Appendix D) they are surprised, but they quickly recover and readily acknowledge that people are foolish. It seems incontrovertible that people (especially other people whose decisions affect us) sometimes, perhaps often, make bad decisions. In general, Simon’s explanation carries the day: people are limited information processors who rely on relatively simple rules to make manageable the complexities of the optimization problem. So accepted is this explanation that in this day of reliable machines that “human” as an adjective often means “flawed” (e.g., “human factors”).

In some ways, however, most behavioral decision research seems to greatly overstate human rationality. Simon’s examples of limited cognition come from the most extreme of rational activities – chess players and technical experts. Behavioral decision researchers most often use test taking students from elite universities. In common experience, we see around us people driving to gambling casinos in overinsured cars, running up credit card debt despite money in savings accounts, succumbing to temptation and regretting it at the same time, treating loved ones cruelly and then desperately mourning them when they’re gone....

On the other hand, there is reason to suspect “flawed decision maker” as an explanation for these phenomena. Human evolution has produced a powerful thirty-trillion synapse mind with abilities that
far exceed those of science to understand or replicate. Living things evolve remarkable solutions to important problems they face. If maximizing utility really were of central import to humans, we would have built in functions for linear programming. This assertion may at first sound ludicrous, but consider that birds possess algorithms that allow them to navigate by the stars and even ants and bees track location. The kinds of utility optimizing problems done in decision analysis are infinitely easier to solve than others that humans face, such as bipedal locomotion, speech recognition, visual perception, or, as I discuss in Section 2, empathy.

In a parallel question of human intuitive statistical abilities, evolutionary psychologists Cosmides and Tooby (1996) provide compelling evidence that supposed human inability to reason probabilistically is due to the inapplicability of probabilistic reasoning to single events, a concern raised by statisticians in internal technical debates. When problems are expressed in frequentist terms, a more generally accepted 'technical' position, people’s intuitive estimates are highly accurate. Likewise, supposed inability to maximize utility may be due to the inappropriateness of utility-based reasoning as an all purpose problem-solving strategy, a concern raised in internal 'technical' debates of the discipline which has grappled for centuries over normative frameworks for choice. For reasons I discuss in Section 3.1, few ethicists accept far-reaching application of utility theory.

### 1.4.2. Utility theory in light of Kahneman & Tversky

Despite the now widespread belief that people are not-so-good decision makers, utility-based theories of behavior (a.k.a. Rational Choice Theory) have never been more prominent; Green (1994) found, for example, that the percentage of articles using a rational choice perspective in the leading journal of political science steadily increased from 0% in 1957 to 38% in 1992.6

Some utility-based theorists have challenged conclusions of behavioral decision research,

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6 This increasing volume of articles in *Political Science Review* might be taken as evidence of superior scholarship, but Green (1994:6) argues that it is unwarranted fanfare: "... theoretical models of immense and increasing sophistication have been produced by practitioners of rational choice theory, but ... the case has yet to be made that these models have advanced our understanding of how politics works in the real world. To date, a large proportion of the theoretical conjectures ... have not been tested empirically. Those tests that have been undertaken have either failed on their own terms or garnered theoretical support for propositions that, on reflection can only be characterized as banal: they do little more than restate existing knowledge in rational choice terminology."
claiming that experimental results may not reflect real choices made under real conditions. Lopes (1996) argues that subjects in McNeil et. al. (1982) did not consider their choices as fully as they would have in reality. She claims that the different framings represent arguments: on the one hand, we’ll be more likely to survive if... on the other hand, we’ll be more likely to die if…. The discrepancies represent responses to arguments, rather than a choice made in natural conditions. Other scholars suggest that the laboratory subjects are too conscious. Indeed, in the midst of the cognitive revolution, psychology may have come to overstate the mediating effect of cognition between stimulus and choice. Lost has been psychoanalytic appreciation of the power of the unconscious, which recent work in the study of emotions has highlighted (e.g., Lazarus 1991, Goleman 1995). Recent findings in neuroscience show that some actions are directed from noncognitive centers such as the hypothalamus and a second “brain” located in the gut (Blakelee 1996). It is possible that these other mechanisms serve to attain optimal outcomes in the absence of conscious reasoning.

A few behavioral economists continue to provide utility-based explanations for even the most apparently inutil actions – for example, Becker & Murphy (1988) explain addiction as the best choice made at any given point during a downward spiral of options – but most contemporary rational choice theorists accept that individuals do not necessarily behave as predicted by the expected utility model. Rather, the theory now rests on an evolutionary imperative: In a competitive world, behavior in accord with the model will aid, if not determine, survival. Moreover, when real-world behavior deviates too far from the equilibrium behavior suggested by the model, at least a few rational individuals will exploit aberrant behavior to their own advantage, and through either learning and adaptation or selection and retention processes, a pattern of rational behavior MUST eventually predominate (Bell, Raiffa & Tversky 1988). It’s the so-called “hard reality” of this argument, rather than ethical principles or empirical evidence, that’s at the heart of economic theory, utility theory, and rational choice – and tends to marginalize those working outside this paradigm, regardless of any other argument or evidence, however insightful or well documented. This evolutionary imperative underlies both descriptive and prescriptive theory, and therefore almost the entire curricula of management science and strategy, as well as the theory and applications of rational choice in
academic disciplines.

In Section 2, I argue that this goal-oriented view of evolutionary process is incomplete and that, by implication, the utility model of decision-making is, at best, overextended. Careful analysis of the actual selection and retention processes that shape what and who we are leads to very different descriptive and normative models of decision-making.

1.4.3. An alternative: Logic of appropriateness

The analysis points to a rationale for March & Olsen's (1989) "logic of appropriateness." In contrast to the familiar logic of consequence – reasoning based on preferences, alternatives, and expectations – logic of appropriateness requires reasoning based on identity, recognition, and rules. The decision maker, implicitly or explicitly, must answer these three questions:

* Who I am?

* What is the situation?

* What does a person such as myself do in a situation such as this?

Although this logic is unfamiliar to decision theory, March notes that it is immediately recognizable both in common experience and in other theories of behavior. Individuals learn from parents, schools, peers, and TV what it means to be a mother, a manager, a college student, or a man:

... political scientists talk about the importance of institutions, anthropologists about culture and norms, sociologists about roles, and psychologists about identities, production systems, and schema. (March 1994:58)

That people often follow rules rather than reason consequentially is not a new observation. Economists explain this as a function of information and experimentation costs, making the point that cheap imitation is often more efficient than costly optimizing (Conslisk 1980, Nelson & Winter 1982). March (1994:79-95) himself suggests that rules and identities may be useful because they capture with at least some degree of success the wisdom and experience of the past. True enough, but in this essay I propose a more direct rationale: that we use alternatives to consequential reasoning primarily because reproduction is often enhanced by adopting roles that limit personal utility.
2. Evolutionary Considerations on Decision-Making

Rational choice theory makes much of "selection" process, but finesse the role of reproduction and helping of progeny, and addresses only superficially the role of the group. Here I argue that an economic "evolutionary" foundation based on the favorable effects of self-interested behavior ignores more prominent features of the human condition: interdependence, dependence, and death.

Throughout this section, I consider evolution both of genetic proclivities as it is commonly used in biology and psychology (Darwin 1859, Wilson 1978, Dawkins 1989, Buss 1995) and evolution as it is used within the social sciences to examine the change over time of rules (e.g., Axelrod 1984), routines (e.g., Nelson & Winter 1982), values (e.g., Wiener 1988), and other aspects of culture (e.g., Harrison & Carroll 1991) or identity (e.g., Atkinson 1989). Whatever position one takes in the nature vs. nurture debate, evolutionary analysis yields the same conclusion: neither genes nor values need necessarily benefit (as we normally understand the term) their human carriers; they must simply be successful in propagation. Biologists observe that the key to genetic survival, and therefore biological proclivity, is not individual success or even survival, but rather genetic reproduction; for a human gene or genetic trait to survive, its carrier must mate and guide progeny toward successful reproduction. Likewise, those studying rules, routines, values, culture, and identity also come to emphasize various factors of transmission (Cavalli-Sforza & Feldman 1981, Cavalli-Sforza 1988) rather than their instrumental value (utility).

Assumptions of Evolutionary Reasoning

Evolutionary psychologists understand the human brain and mind as an integrated bundle of complex mechanisms (adaptations), each "designed by natural selection in past environments to promote the survival of the genes that directed its construction by serving some specific function" (Symons 1992:138). A rigorous evolutionary approach to understanding behavior (Symons 1992; Cosmides, Tooby & Barkow 1992) is based on adaptations that occurred in response to selection pressures of the Pleistocene era, the period in which these researchers believe most attributes of the mind and body were formed, and in which people lived in tribes as hunter-gatherers.7

7 Even allowing for uncertainty about how much of our evolution occurred in the Pleistocene era and the nature of life and conditions in the period, this approach has demonstrated success in generating hypotheses that are often
Findings in decision research can be understood from such evolutionary considerations. For example, Klein (1995) finds few "decisions" *per se* among firefighters and others in life and death situations, but rather that a particular pattern leads directly to a particular response (see Appendix C). His respondents claim that "intuitive" responses have at times saved their lives. Such a capability would have had similar survival value in the Pleistocene era, where pattern changes often signaled danger. Concretely, Pleistocene survival would depend much more on intuitive responses to avoiding catastrophe than calculative reasoning.

2.1. Interdependence

2.1.1. Importance of the Group

It seems reasonable to imagine that Pleistocene survival also depended more concretely upon the success of the tribe and one's relationship within their tribe than maximizing personal utility. It's ironic that in the public mind evolutionary processes tend to be exclusively concerned with competition; in both biological and social science, researchers are more likely to study and emphasize the importance of *cooperative* phenomena (Barkow, et al. 1992:22; Axelrod 1984). Pleistocene life, as we understand it, required that one work with others as part of a hunting party, homemaking unit, and other such groups -- depending concretely on others for sustenance and shelter. Presumably it was very difficult to leave the group to join a "better" one or to go it alone. A proper appreciation of the importance of the tribe and one's place in it leads to viewing the role of reason in a new light -- any practical value in intellectual capabilities is contingent on the trust of the group. The ability to outsmart one's tribesmen is a dangerous gift. Aristotle (338 BC/1958:153) relates the unspoken advice substantiated by further research. Using this approach Profet (1992) explains why women get morning sickness -- to deter ingestion of a material that was potentially hazardous to embryos. Cosmides & Tooby's (1992) hypotheses of cooperation as implicit social contract leads to mapping of mental capabilities and experimental tests used to produce the findings cited earlier on probabilistic reasoning (Cosmides & Tooby 1996).

Important academic work in this area includes special journal issues of *Journal of Social Issues* v.47(3) (ed. Caporeal & Brewer 1991), *Psychological Inquiry* v.6(1) (target article: Buss 1995), *Behavioral and Brain Sciences* v.17(4) (target article: Wilson & Sober 1994; continuing commentary in v.19(4); two volumes of commissioned articles originally presented at Stanford conferences (Barkow, et al. 1992; DuPré 1997), and many books such as Buss 1994 and Pinker 1997.

What I have proposed is broadly consistent with 'hierarchical evolutionary theory,' (Buss 1987; Eldredge & Grene 1992; Wilson & Sober 1994, 1996; Caporael & Brewer 1991, 1995) according to which "interdependence at the group level serves as the primary strategy for survival -- the group providing a critical buffer between the individual and the physical habitat." (Caporael & Brewer 1995:32).
given by an ancient king when asked how to deal with potential rivals: the king took his student out to a field of corn and proceeded to level the tops, lopping off all the outstanding tassles. On the other hand, there would have been – and continues to be – great value in fitting in gracefully, and making others like and want to help you. Trust is easier to win when one poses less of a threat. Enfeebled ability, however, is fortunately not the only way to be less of a threat.

Research in artificial intelligence has shown that logical-mathematical tasks which people find difficult (e.g., differential equations) are remarkably easy for machines, whereas tasks which people find effortless (e.g., language recognition) prove incredibly challenging, almost intractable (Pinker 1994). People are amazingly good at understanding others, even when few or no words are spoken. We have a further gift of empathy, an ability as yet unthinkable for computers. People often know how others will feel about their actions without verbal communication or direct contact. Such understanding allows individuals to fit in and work with others. These remarkable human attributes and their evolutionary importance suggest a human proclivity for reasoning using a logic of appropriateness rather than a logic of consequence.

2.1.2. Importance of “Ethical” action

Even utility studies cognizant of interpersonal interactions find a surprising benefit for non-opportunistic, ethical action. Axelrod (1984) invited decision theorists from a variety of fields to enter programs to compete in a round-robin iterated Prisoner’s Dilemma tournament along with a program of random cooperation and defect. The winner of both this tournament and a subsequent more heavily publicized one was TIT-for-TAT, a program that simply rewards cooperation with cooperation and punishes defection with defection. This surprising result\(^8\) was achieved despite its being the simplest program – only four lines – and the fact that it cannot possibly win any given game.\(^9\) TIT-for-TAT won the tournaments by eliciting behavior that allowed both it and its

\(^8\) Although TIT-for-TAT’s superiority may seem obvious in retrospect, in each of the two tournaments only a single entrant submitted the program. The entries of the first tournament were submitted by 14 eminent scholars who had studied and written on the Prisoner’s Dilemma; the entries in the second tournament included submissions from 62 scholars who had seen the results of the first.

\(^9\) The best TIT-for-TAT can do is tie. If there are no defections it’s a tie; otherwise TIT-for-TAT is always a defection behind. The wins were also achieved despite contest considerations that seemed predisposed against TIT-for-TAT: it is a known poor-performer against the random program and total payoff for a single defection was close to mutual cooperation but much higher than for mutual defection. Additionally, the first contest was fixed length, allowing other
“opponent” to do well.\textsuperscript{10}

Outside of such stylized simulations, TIT-for-TAT implementation is far more complicated than in a lab experiment. It’s often difficult to know when one’s associates are cooperating or defecting, and even more difficult to determine and execute the appropriate TIT to reward or punish the relevant TAT behavior. But that’s largely what ethical reasoning and appropriateness is all about, and it’s primarily to deal with this challenge rather than maximization functions that we need our sophisticated brains and complex reasoning abilities.

2.2. The rest of the evolutionary story: Dependence, Reproduction, and Death

As important as this point is about interdependence, the argument I want to make goes far beyond. I propose something that appears trivially obvious, but is neglected in current theory – that adult survival is of limited importance in human evolution. Equally essential is the need to reach adulthood, mate, and successfully direct progeny, and for all of these processes the value of utility-maximizing is even more suspect; pure utility-maximization would probably lead to reproductive failure. The exigencies of human reproduction, even more than survival, require reasoning about appropriateness and morality. They also require the flexibility to change goals and priorities as the situation demands.

\textsuperscript{10} This was just one of many fascinating observations and lessons Axelrod drew from these tournaments. Other findings of particular relevance to themes discussed in this article include:

Nice programs – those that never defect first – almost always did better overall than other programs because they do so well with each other. Moreover, iterated tournaments, in which successful programs multiply and poor performers die, illustrate an additional problem of sophisticated defection: One opportunistic program that managed to score well against low ranked entries faced fewer and fewer strategies it could exploit as these exploitable entries were weeded out. A not nice strategy may look promising but in the long run it can destroy the very environment it needs for its own success. (p. 117)

Maximization programs did poorly. Despite sophisticated attempts to make inferences about the other player, these inferences were often wrong. Worse, their own behavior lead to counter-productive reactions. Complex probabilistic strategies were sometimes perceived as random and yielded total defections. In a zero sum game it’s good to keep the opponent guessing. In a non zero-sum game, cooperation is encouraged by clarity.

“Forgetting” strategies also do well under some circumstances, such as under noisy conditions or with bellicose opponents determined to punish even justified retribution. Indeed, economic analysis generally concludes that revenge is irrational because past opportunism is a sunk cost (recall the ancient Chinese aphorism, “He who plots revenge should dig two graves”). In contrast, TIT-for-TAT seems the ethical, if sometimes irrational response to unprovoked defection. But in the long run, forgiving strategies are exploitable by defectors and TIT-for-TAT is not. TIT-for-TAT does well because it is a balance between punishing and forgiving. Extracting more than one defection for each defection risks escalation; extracting less than one-for-one invites opportunism.
2.2.1. The Biological Life Cycle

To reach the age of reproduction requires not wits but love. Human babies enter the world completely dependent, and live only because someone feeds and cares for them. To continue to receive care and survive, children must learn the rules of the providers.

Reproductive factors differ for men and women, but two general requirements hold:

- ability to attract/seduce/impregnate a mate
- willingness to have and nurture children.

One might imagine that effective consequential reasoning would aid in the mating game, but even the prototypical calculator, Machiavelli, emphatically rejected this idea in his famous metaphor:

... it is better to be impetuous than cautious, because fortune is a woman ... We see that she allows herself to be taken over more by [bold] men than by those who make cold advances; and then, being a woman, she is always the young man's friend, because they are less cautious, more reckless, and with greater audacity command .... (1513/1964:215)

Virtually everyone who has ever written on such matters believes that nothing is so contrary to romance, the prelude to procreation, as cold logic. Frank (1988) hypothesizes that calculated logic leaves a spouse vulnerable to changing fortunes and wary of making the sacrifices child-bearing entails. To provide at least a possibility of a lasting union and family in a world where commitment is important and fortune changes, people must behave on some basis other than calculated logic.

The whole relation between children and utility is problematic. Although most people want to have children, a desire that could in principle be included in one’s utility curve, it’s questionable how rational a desire it is. The average parent-to-be probably underestimates the costs and sacrifices involved in child-rearing by a factor of ten. This doesn’t mean people shouldn’t have children, just that it’s a non-rational genetic impulse rather than an accurately assessed consequential decision, and that, in becoming a parent, we sacrifice our own utility for something else. Moreover it begins a lifetime of choices especially infused by obligation. Willingness to have and nurture children is almost in contradiction to strict self-interest – imagine what one could do with all the time, money, and energy! At very least, an economically rational woman would not decide to have many. The first

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11 To say nothing of the pain of child-bearing. The Parent's Dictionary (Spear 1997) defines “impregnable” as “A woman whose memory of labour is still vivid.”
thing that family planning agencies do to encourage smaller families is appeal to utility. Commercials in Mexico contrast the well-groomed family of four living an orderly middle class life in a nice home, with the overweight, underdressed, overwhelmed mother of six screaming kids living in unruly poverty. Here in America, we have the ad campaign appealing to children not to destroy their options by having a baby.

Having lots of babies or having them young is demonstrably not economically rational in terms of lost income and life opportunities (Maynard 1997), but whether behavior is passed on through genes or culture, people are likely to be the offspring of someone who found love and nurturing or unprotected sex more appealing than other, utility enhancing, life options. Some refer to this reality as de-evolution. Call it what you wish, but it is the operating selection process. Economic well-being is strongly negatively correlated with fertility both within nations (Herrera & Kiser 1951) and between them. In a cross-national sample of 54 countries, Heerink (1994:94, table 3.3.1) finds that the correlation between fertility rate and per capita real income, life expectancy at birth, and literacy are $r=-.87$, $-.88$, and $-.85$ respectively.¹²

To marry and raise a family one must normally assume a role both in a family unit and a larger supporting social structure – both of which demand understanding and empathy, abilities linked to the logic of appropriateness. The willingness to further guide one’s children and grandchildren to successful maturity is almost in contradiction to utility theories. Raising children well requires selfless devotion to particular others – little ones that are most dependent on us and most like us. It conflicts with both self-interest and the utilitarian’s professed concern for the greatest good for the greatest number, wherever and whomever they might be.

2.3. A parallel process for identity evolution

Biology provides important clues for what to expect in terms of cognitive proclivity, but human

¹² Although I’m speaking here of current times rather than Pleistocene conditions, the point is important because evolution is an ongoing process. The population mix is always changing as a function of propagation.

The term de-evolution, incidentally, betrays not only bigotry but a fundamental misunderstanding of evolutionary process. It implies evolution as a progression or march toward some inexorable end (i.e., greater intelligence) rather than a dialectic – an increased probability of replication in a given environment, which in turn is also changed as a result of population change and activity.
beings are not simply, or primarily, arrangements of genes. When we think of ourselves, we are more likely to think of values, beliefs, and other aspects of our identity. This spiritual side also undergoes an evolutionary process in which utility considerations are less central than those of transmission.

One could look at human identity and human organism as a symbiotic relationship. Values, rules, beliefs and routines are in this sense like bacteria that live within bodies. Such bacteria can adopt "strategies" along a continuum from exploitative to beneficial. Beneficial bacteria improve their survival chances by improving those of their host. Harmful bacteria can suck the life out of their hosts to their temporary advantage, but must then find new hosts to exploit. Particularly pathogenic bacteria and viruses probably produce public fear out of proportion to the true risks because virulence almost always decreases over time; bacterial and viral survival is a direct function of amenability to a host. Aspects of identity can be viewed on similar terms. Just as individuals and organizations seek identities, identities are out there in legend, books, movies, and (human) models seeking host bodies, organizations, and most preferably, institutions in which they can reside and propagate. Bizarre new identities arise periodically (e.g., at time of this writing the latest trend in fashion advertising and magazine covers is a style referred to as "heroin chic") but these virulent identities usually burn themselves out. Those that are the most supportive of the beings that house them and that facilitate reproduction have an evolutionary advantage. But, as with genetic proclivity, survival advantage is not the only evolutionary consideration.

The existence and extent of a given cultural trait or aspect of identity (e.g., religious identification) – is based less on the utility it provides to individual adherents than on the motivation of these adherents to try to instill it within others. Particularly important is the effectiveness of a dictum to "go forth and multiply." Two points relevant to the general argument emanate from this obseveration: first, to the degree that reasoning practices are learned rather than genetic, people are more likely to think ethically than consequentially simply because ethically-minded parents and teachers normally are more motivated to instill their style than consequentially-minded parents and teachers; second, the particular values that are incorporated as part of the identity are passed along on the basis of ethical actions rather than calculated reason. We are who we are because someone took
the time and trouble to make us as we are. Our values will be passed along to the next generation partly on the basis of what these values can provide, but also in part based on the time and trouble we take to pass them along.

Studies of collective action, for example, show that people are recruited to social movements on the basis of personal relations. Marx (1851) argued that worker readiness to arms is a function of "class consciousness," which arises through concrete relations with other workers, and network researchers have demonstrated that this is the key explanatory factor in a variety of social action and social identification studies. Through meta-analysis, questionnaire, and participant-observation, Snow, Zurcher & Ekland-Olson (1980) conclude that participation in political and religious movements is due more to proximity, availability, and interactions than psychological / dispositional factors.

2.4. Summary of evolutionary argument and findings from behavioral decision research

Ability to reason pragmatically toward achieving a goal may have evolutionary benefit, but not so much as is usually assumed. More important and usually overlooked is the ability to fit into the social support system and the inter-generational continuum – to get support, to work with others, and to be supportive. This ability requires reasoning based not on consequence, but rather appropriateness (rules) and ethics (responsibility). From an evolutionary perspective, we would expect behavior that permits one to get along, to seduce and be seduced, and to love and give to others – especially those others for whom we feel responsible (children and kin; students and kindred spirits). If possible, it would be even better if we could shift roles to do all of these things as appropriate.

From this perspective, the fact that different frames elicit different preferences as per Tversky & Kahneman (1981, 1986) makes good sense. As we move in and out of different roles, we change not only our behavior but also our goals. My goal as warrior or hunter may be to kill; as a father it is to bring life forth. Inconsistency in goals, behavior, or thinking patterns, is, I propose, not a cognitive limitation, but rather a cognitive adaptation that allows us not only to play the different
roles life demands of us, but also to understand others and their positions.13

3. ALTERNATIVE DECISION-MAKING MODELS

Part of the lure of rational choice theory is the lack of alternative accessible worldviews. One fairly inaccessible alternative is Kantian moral reasoning. The reader probably would expect a descriptive model to precede a prescriptive one both in the organization of this chapter and in our common epistemology, but I begin with prescriptive framework because that is where the only well-developed alternatives exist. If today there are one hundred scholars ready to tell us how to make a decision for each observer of the process, over history the comparative ratio has been probably more like 10,000:1. The decision-advice business has always enjoyed strong demand across the entire human spectrum. How we actually make decisions has never had the same exigency. So it's not so surprising that we find a usable alternative prescriptive model off the shelf (3.1), whereas we will have to cobble together a descriptive model from more basic elements (3.2).

3.1. A prescriptive alternative to rational choice: Kantian moral reasoning

Utility theory seems to offer a prescriptive model that's hard to argue with -- a path to better achieve our ends -- but the best minds from the past three millennia have worked out quite different prescriptive models. The original field of prescriptive decision-making is ethics -- as a field it has far more and far longer collective experience than decision science at prescribing what choices we should make.

3.1.1. Ethics, utility, and influence

Ethicists, however, have little influence in strategy or management theory. Ethics do not seem to help us get what we want; sometimes they get in the way. The only apparent way one can derive utility from ethics is if other people follow certain rules. An individual seeking to maximize his utility would say, "Perhaps if everybody followed Kant's categorical imperative or the Golden Rule, the world would be a better place, but why should I follow it?" The same is true even for utilitarian

13 I believe it is to facilitate this shift that hunting parties, war parties, and sports teams have elaborate pre-hunt/battle/game rituals. Prescriptively, this theory implies that the perpetual incidents of violent criminal conduct by professional and school athletes might be ameliorated if those engaged in sanctioned violence were to hold post-event rituals as well to smooth the transition back to normal life.
prescription. We see ourselves as trapped in an unending series of prisoners' dilemmas dependent on the behavior of others. But perhaps this bondage is an unfortunate illusion of utility preeminence. An individual has ethical intuitions about what he himself should do. Presumably these served some survival/reproductive function; otherwise it's unlikely we would have them – they almost certainly add to the complexity of the human brain.

3.1.2. What ethicists and ethics do

One problem with ethical intuitions as a guide is that they are often hazy, conflicting, and highly contextual. Part of what ethicists do is collect and refine intuition. Ethicists have been thinking for millennia about identities, rules, roles, and situations: what functions they serve, what to do when they conflict, and what to do when they conflict with utility. To the degree people do follow prescriptive models, it is far more likely to be an ethical code than a utility-based decision aid. Perhaps the central proposition of this essay is that normal ethical intuition and ethical reasoning allow individual human beings to function as part of a community and continuum, which is the most essential condition of individual survival and propagation.

Relatively few ethicists subscribe to utility theories, and of these most are utilitarians; virtually no philosopher argues for self-interest as an ethical basis for life. 14 Many more are deontologists – prescribing that one should act in accord with duty regardless of consequences. Probably the most highly regarded deontologist, and perhaps the most highly regarded figure in western ethical thought, is Immanuel Kant (1724-1804). It is not my intention to argue for the truth of Kantian ethics or its superiority to other systems, deontological, utilitarian or otherwise but merely to show that viable alternatives to utility theory can and do exist. In particular, I propose that, as a prescriptive decision-making model, deontological ethics may aid in intergenerational survival and human fulfillment and that Kantian thoughts on human reasoning propensities are consistent both with evolutionary analysis and “anomalous” findings of behavioral decision research.

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14 This is a position held by Ayn Rand who has a remarkable almost cult-like following, but Rand is not considered a serious philosopher. Even her best works, Atlas shrugged and The fountainhead, although arguably compelling fiction, seem riddled with critical contradiction: Why, for example, do her heroes endure such sacrifice and pain to save the world for self-interest? The whole notion of such heroes contradicts her narrow self-interest argument.
3.1.3. Kant on the purpose of reason

In *Grounding for the Metaphysics of Morals*, Kant (1795) asks, “What purpose does reason serve?” He concludes that rather than acting in the service of self-interest, reason must serve to *overcome self-interest*:¹⁵

1a. Happiness, “by which we mean self-preservation and welfare,” cannot be the goal of reason because if that were the case, “nature would have hit upon a very poor purpose for reason ... this purpose could be attained much more certainly by instinct.” People are most happy doing what comes naturally. In fact, this is almost what we mean by happiness.

1b. Yet reason rather than instinct controls the will.

1c. The true purpose of reason must be to overcome instinctual inclinations for happiness, i.e., to perform one’s duty.

2. Moral worth (duty) is based on intent, not result. People are extremely limited both in ability to achieve effects and capacity to divine them, but we do possess a reasoning faculty capable of understanding duty. To act morally is to act on the basis of law or principle; moral worth, therefore, is based on these principles and our adherence to them, not on results, which are often the product of chance and beyond our capacity to control.

3. Duty is the necessity of action done out of respect for moral law.

4. From these three propositions, we can derive the law that identifies duty. There is only one principle that satisfies the condition of universality demanded by pure reason: Before choosing a course of action in any circumstance, we may ask ourselves, “What would happen if this action were formulated as a general rule?”

The Categorical Imperative: *I should never act except in such a way that I can also will that my maxim would become a Universal Law.*

Example: Consider the case of breaking a promise under duress: Were we to claim it is acceptable that one break a promise under duress, then what does “promise” mean? We could no longer count on anyone for anything. Thus it becomes clear that there is no way that we may break our promise while still acting morally.

This is a test ideally suited to human reasoning ability: To be morally good requires no far reaching acuteness to comprehend all the variables in a given situation and divine future consequences. As human beings, however, we can readily understand and apply this principle. The difficulty lies in accepting it, when it is more pleasant to ignore.

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¹⁵ I’ve taken considerable liberties in simplifying and paraphrasing key points from a long, dense, very complex argument (from Kant standard reference pages 387-405).

Relevant to this chapter, it’s interesting to note that well before Darwin there was a working theory of functionality: that God created everything for a purpose.
To summarize Kant's view, reason is not in the service of self interest, but rather serves to overcome self-interest. This faculty allows one to function as part of a social system by providing the ability to understand and fulfill various roles (duty). Reason also permits a person to understand and fulfill the responsibilities demanded to bring forth progeny, guide them to maturity, and, if necessary, help lead the group.

3.1.4. Empirical research on how good decisions are made

A prescriptive model of decision-making requires that one distinguish between good and less-good decisions, but how to define "good" is precisely what's at issue in most debates. I have put it forth as an empirical question, but aside from an unpublished study by Jones & Frisch (1992) no one has yet analyzed it as such (see Section 4.2).

Anderson (1983) studied the Kennedy administration's decision-making during the Cuban Missile Crisis in part because of the unusual degree of consensus among historians that these decisions were exemplary both in outcome and process. In his analysis, Anderson found several deviations from the standard prescriptive model. First, there was no attempt to optimize: Rather than attempting to choose the one best alternative from a set of competing courses of action, the decision makers considered a series of yes-no choices. Second, they were loss averse: Rather than try to solve a problem, their first priority at each decision point was to not make matters worse. Finally, goals, rather than being identified from the beginning, emerged as participants discussed the issues. Consistent with the demands of a logic of appropriateness, their discussion presumably helped them to better understand the nature of the crisis, as well as their own roles and responsibilities in its resolution.

3.2. Toward a (propagative) descriptive model of decision-making

The considerations of Sections 2 and 3.1 lead to a search for characteristics quite different from the classical perspective. Over the past forty years, behavioral decision theorists (e.g., March & Simon 1958; Cyert & March 1965; Tversky & Kahneman 1974; Nelson & Winter 1982; Kahneman, Slovic & Tversky 1982) have searched for heuristics that allow decision makers to roughly approximate optimal utility in the face of cognitive limits. While this has been an important and
fruitful endeavor, it is only part of the story. Entities and ideas must not only survive, but also propagate. The search I propose is for characteristics that (1) would have supported propagation in the settings in which we evolved, and (2) are conducive to the maintenance and propagation of modern identities. These include motivations that correlate with propagative success, behavior removed from the domain of reason, special competencies in working together, and – most contrary to received wisdom – *malleable* goals.

### 3.2.1. Malleable goals (Goals as artificial)

I have argued that people are not motivated primarily to maximize utility – however vaguely the term is defined. Earlier I claimed that if maximizing utility really were of central import, we’d have built-in calculators. Indeed, nature periodically runs an experiment producing people with fantastic calculating abilities, but no ability to empathize or consider others’ feelings – they are the idiot savants made famous by Oliver Sacks (1985, 1995) and the movie *Rain Man*. In natural settings it’s unlikely such individuals would survive or reproduce; conversely, people who can barely count and commit every one of the decision defects listed in Appendix D manage to survive (often quite happily) and reproduce. Sometimes they even become rich, famous, and idolized.

The expectation of Von Neumann & Morgenstern that utility would become measurable and mathematically operable has not come to pass and never will. Nor will any other first principle of motivation ever be discovered. Rather, we are motivated by a wide variety of ends that correlated with reproductive success in our ancestors, and especially important among these sources of motivation is need for group belonging. As such we necessarily have what Bion (1952, 1975) referred to as a social valence: we adopt certain goals that allow us to fit into a group.

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16 Indeed, utility theory has probably remained an unnecessarily abstract and empty concept. For all the work of economics, it does not really explain much: mostly that people prefer more than less of unambiguous goods such as money – but even then psychologists find many cases where they voluntarily accept less. Utility is potentially much more concrete. An evolutionary approach can posit goods and values that should be reasonably consistent even across cultures because they correlate with reproduction in the environment in which humanity evolved: security, survival goods (food, shelter, clothing), spouse(s), children, knowledge, friends, goods that make one more sexually attractive, status-providing goods, etc....
3.2.2. The role of reason

Until now, I have primarily considered a theory of behavior rather than decision-making per se. Here I consider the implications of this theory for decision-making proper. One need not agree with all of Kant’s views to accept that happiness and pleasure, the ends most commonly associated with utility, tend to obtain more readily from instinctual behavior than from reason.¹⁷ Likewise, important survival and reproductive mechanisms such as fear, anger, hunger, and sexual desire are largely decoupled from the reasoning process.

Reason, in contrast, seems to be a tool uniquely suited to understanding, in particular understanding people. It provides us with insight into motivations (both our own and others’) and a sense of justice and propriety. If the calculus of optimization seems unnatural, a calculus of fairness and reciprocity seems almost too natural. Jackall (1988) observes that managers who systematically try to ignore and push down all the details of operations in their business can never get enough details about other people with whom they interact. My guess is that other people – what they think and how they might react – play a big part in most reasoning processes.

3.2.3. Why this section is unsatisfying

This section (3.2) is both the most important and the least satisfying part of this chapter. It’s most important because we can hardly explain a process, let alone prescribe how to do it better, if we don’t have an adequate description of it. Yet that is the situation as it stands. It’s the least satisfying because it is little more than speculation – the work which is prelude to writing it well has yet to be done. In the final section (especially 4.4) I consider what some of the work might be.

¹⁷ This is not to say that reason is never used in the service of self interest. For example, the more reasonable among us occasionally refrain from sugar consumption, despite a proclivity to indulge. My point is that reason is also used, indeed more likely to be used, in the service of duty and appropriateness. Even in the case of reason as used to resist temptation, self interest alone seems an insufficient motivator; for example, it’s often only when it’s clear that others are dependent on them, that addicts give up their addictions – Xxxx (199x) documents that impending motherhood is one of the few successful motivators that help young women overcome drug and alcohol addictions.
4. SUMMARY AND IMPLICATIONS FOR RESEARCH

4.1. Summary

In this essay, I explain the utility basis of decision-making, noting a serious gap between theory and findings. I ascribe this gap to an overextension of utility theory and show that it rests upon an evolutionary argument that is seriously incomplete. A more complete analysis of evolutionary process mitigates an expectation that people should have well developed consequential reasoning abilities and proclivities. Rather, we would expect important advantage in being able to reason about roles, interpersonal rules, and situations – the kind of logic of appropriateness that is consistent with empirical findings in decision-making. I propose also that this evolutionary process applies to our identities as well as our biological proclivities. In Section 3, I offer Kantian moral reasoning as an alternative to utility-based consequential reasoning for consideration as the basis of a prescriptive decision-making model, and lay out some characteristics of what we would expect to find in a descriptive decision-making model cognizant of the fundamental importance of propagation. I conclude with implications for research.

4.2. Context and goals

The purpose of this chapter is not to reject utility theory, but to point out that goals – and therefore utility – are artificial, that goals are necessarily vague and malleable and part of a larger social context and process. There is nothing new about the idea that context shapes goals – much of anthropology and sociology is about how context shapes goals, but this insight has not been incorporated into most psychological and economic theories of behavior. This chapter helps lay the micro-foundations for a wide range of social theory which documents the importance of social relations and influence, but has seemed inconsistent with economic reality and individual competitive exigencies. A proposition that emanates from this analysis is that the various roles a person takes on shape choice and goals as different standards of appropriateness come to the fore.

One way to begin to empirically research the relationship between frames, roles, and goals would be to explore “implicit” frames. This theory suggests that setting (e.g., home, office, vacation) and the people one is with will affect goals and decisions.
4.3. Good decisions

What most people want to know from research on decision-making is how to make good decisions. Consistent with the two strategies put forward in this chapter, there are two ways to approach this question: If we look first at consequences, we ask, “What decision processes produce good outcomes?” (4.3.1) If we look first at appropriateness, we ask, “What are the processes that good decision-makers employ?” (4.3.2)

4.3.1. What is (empirically) a good decision?

Prevailing wisdom is that good decisions are either those which emanate from a goal-based decision-making process such as decision analysis (e.g., Keeney 1982, Hogarth 1987) or which best meet pre-defined goals. Here I have proposed otherwise: that good decisions may flow from a deontological decision process such as that proposed by Kant. The question has largely remained in the realm of philosophy as both utilitarians and deontologists claim that their assumptions flow from philosophical principles, but the question can also be approached empirically: What do people mean when they say something was a good decision? Even a subjective ex-post evaluation of different decisions and decision-making processes would be valuable. What’s behind the everpresent notions of "good" and "bad" decisions? Everyone wants to know how to make better decisions. Isn't there anything experience or science can tell us? If not, why do these notions of "good" and "bad" persist? Why do we try to learn?

One possibility might be to study decisions of consequence and conflict – e.g., who and whether to marry; or choice of jobs, careers, homes, and schools – and see which decisions, when we look back with experience, we judge to have been wise versus those we feel were foolish. Is there any pattern or process that prevails? In this essay, I suggest that decisions emanating from a logic of appropriateness may be viewed subsequently as favorable to those based on expected consequences.

---

18 I'm aware of no such work in the literature, but in a yet-unpublished study, Jones & Frisch (1992) asked subjects to describe good or bad outcomes that occurred in their lives and to describe the thinking that led to the outcome. They found good outcomes were associated with rational deliberation, but didn't tease out the different kinds of rationality that I have considered here.
4.3.2. Comparing good and not-so-good decision makers

The question of who is a good decision maker is as problematic as the question of what is a good decision, but there are people we look to as models—e.g., mature professionals whom we go to for advice (physicians, consultants), elected representatives whom we entrust with power (at least we trust them more than we do the losing candidates), and those whom we seek to emulate. We also have anti-models, individuals from whom we learn by example what not to do—e.g., villains and failures. Within given domains, we can often consensually identify models and anti-models. One could then compare either the process or “defect” level. In this essay I have suggested that, contrary to intuition, some framing effects, loss aversion, and other presumed decision flaws may be more pronounced for people we consider good decision makers.

In Section 2, I argued that it is useful to frame matters differently under different contexts, that it is “valuable” to change one’s values as necessary and practicable. Goleman (1995) observes that cognitive reframing is also the only consistently successful method for pulling oneself out of sadness, depression, or regret. Weick (1993) and Sto-rn (1997) note that an ability to see from different frames is almost what we mean by “wisdom.”

4.4. Decision process analysis: Humanities and science

Since the earliest preserved writings, the learned have been telling us how to make decisions, but I have emphasized in this essay the importance of understanding actual decision processes. Owing in part to the methodological difficulty of documenting thought (even one’s own), few rigorous studies have been conducted on how decisions are actually made. Rather, such endeavor has been left in the speculative realms of psychiatry, literature, and existential philosophy. At the opposite pole of the methodological spectrum, the scientific enterprise of judgment/decision-making research has generally consisted of narrow laboratory studies. Starting with the presumption that the purpose of decision-making is to maximize utility, social scientists have tested how subjects estimate expected outcomes of alternatives. Studies often consist of undergraduates making probabilistic guesses or hypothetical choices in laboratories.
4.4.1. A middle way methodologically

Both approaches are somewhat less than satisfying. Humanistic accounts can hardly be taken as more than speculation. How can one make inferences from single, often fictitious, case studies? On the other hand, social science seems to be missing the essence of decision and judgment – the sense of conflict, weightiness, responsibility, and even pain that accompanies important choices. Interview and observation processes that draw out subjects' thoughts and emotions, but are conducted with rigorously qualitative methods, could serve as a middle way methodologically to begin to answer important descriptive questions.

4.4.2. What causes a decision?

For all the presumed importance of decisions, we have little systematic understanding of the function deliberation serves. As Kant asked, wouldn't instinct serve us just as well were welfare our goal? Certainly some choices central to life such as breathing and circulating blood are removed from the realm of decision-making. Over others such as hunger and thirst, we have but little control. Maximizing utility seems a reasonable hypothesis, but evidence indicates a sharp asymmetry. Archival (Freeman 1997) and questionnaire (Jackson & Dutton 1988) studies have shown that managers attend more to threats than opportunities, just as Kahneman & Tversky (1979) showed we more actively seek to avoid losses than win gains. Perhaps this is not a bias, but rather evidence that decision-making is not about maximizing utility. A systematic study of the causes or sources of decision may provide insight into motivation, behavior, and the role of deliberation. My argument of a deontological function of reason suggests that decision processes will often, if not usually, arise from ambiguity or ambivalence concerning responsibilities rather than involve strategies to better realize desires.

4.4.3. What do we mean (empirically) by decision?

By "decision," I mean the process and product of deliberation, but the term is often used as reflecting any choice even when choice alternatives are never made explicit. A current trend among some decision-making scholars (Langley, et. al. 1994; Klein 1995; Zsambok 1996) takes the deliberation presumption as problematic, suggesting that choices are usually made without deliberation, at least without present deliberation by the supposed decision maker. One way to get a
better definition is to find out empirically how the term is used – what kinds of processes people describe when they describe a decision.

4.4.4. What kind of mental process occurs?

In following March (1994), I have posited two types of decision-making processes – a logic of consequence and a logic of appropriateness. Does one or the other better represent actual mental processes? Do we have goals in mind that we are trying to attain or do we have an identity we are trying to fulfill? It's also possible that both or neither fit. Perhaps there are yet other decision processes and other "logics," each with a dominant domain, and original adaptive function. Perhaps each of these reasoning processes even has separate, potentially identifiable modules in the brain.

4.5. Liberation from utility and what decision process might tell us

Simon wrote on the weak relation between choice and outcome, but by limiting his empirical domain to chess games and technical experts, he almost certainly overstates this relation. I suspect the Arabian night's tale Appointment in Samarra (O'Hara 1934) expresses the relation more faithfully (or fatefulfully). The story goes of a servant who cried that Death had threatened him and beseeched his master a fast horse upon which he could flee to Samarra. The master consented; later that evening when he met Death he asked, "Why did you terrify my servant?" Death replied, "I did not mean to frighten him. I was just surprised to see him here, when I planned to meet him tonight in Samarra." Even the relation between desired outcomes and underlying interests is problematic. In The Ideal Husband, playwright Oscar Wilde (1895) observed, "When the Gods want to punish us, they answer our prayers." Such warnings are ubiquitous across literary and religious traditions from Seneca to Pogo. (Ainslie, 1994:xi, begins his book on intra-personal economics with a list of such quotations.)

In the face of such tenuous links, human beings may find forever unsatisfying and disappointing the quest for achieving goals that are beyond their ability to control or adequately anticipate. Rather the choices we do have are those of particular actions. Sartre (1943) said "One is what one does," and Frankl (1946) illustrated this compellingly in his remembrances of life in a concentration camp. He recollects how, while what was to become of him was not in his hands, "... every day, every
hour offered the opportunity to make a decision ..." Some inmates were co-opted into service by their oppressors, and many renounced dignity and values in the struggle of personal survival, but Frankl felt the most important aspect of each decision was,

whether you would or would not submit to those powers which threatened to rob you of your ... inner freedom; which determined whether or not you would become the plaything of circumstance (Frankl 1946/1984:86-87).

Social science and philosophy have long distinguished between instrumental goods associated with instrumental acts and goods-in-themselves associated with expressive acts, but in practice, the distinction is less clear: even the most apparently instrumental of acts is unavoidably expressive. Goffman (1974:9) observes that when hanging out the wash we are not merely drying it, but hanging it out for others to see. In the end, Frankl suggests that concern with dignity and meaning is precisely what allowed many to survive the camps.

... most men in a concentration camp believed that the real opportunities of life had passed. Yet, in reality there was an opportunity and a challenge. One could make a victory of those experiences turning life into an inner triumph ...(Frankl 1946/1984:93)

This is an ambitious essay, taking on a large domain and linking many disparate topics, but at its core, I make a modest point: Utility is not the only star in the sky; there are other points of light which illuminate human behavior and which we use as navigational beacons our journeys through life. But this modest point has huge implications. If we accept it, we no longer see human reasoning process as a defective approximation of a utility maximizing ideal, but rather a process that reveals a different, possibly more satisfying ideal. Unhitching our theoretical wagon from this star will allow us to find guidance from other sources of illumination, and to begin to chart these underexplored sectors of the human firmament.

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APPENDICES

Appendix A. Simon’s legacy

The Simon challenge to rationality has had an enormous impact throughout social science. Simon created the field of organization theory with his claim that organizations are a solution to psychological limitations: by bounding responsibility, directing goals, coordinating choices, and providing resources and specialized training, the organization makes rational choice possible within a limited context. This theory remains the foundation for much of organization theory today.

Decision techniques, aids, and algorithms are designed to overcome or push back Simon’s limits to rationality. But this vision reaches far beyond decision aids; the major thrust of applied social science over the past half-century has been to attempt to reduce inefficiencies attributable to human limitations. Much if not most of the work in the business school and applied psychology is about pushing back the limits of knowledge and consequence, Simon’s first limitation. More far reaching yet, the entire enterprise of science and education is widely understood and even more widely justified in terms of this challenge to rationality: Scientists endeavor to push back the frontiers of collective knowledge; educators endeavor to push back the frontiers of individuals’ knowledge. Together, scientists and educators endeavor to more parsimoniously express knowledge, that is make it more comprehensible to human beings limited by time and ability. Economists, mathematicians, and philosophers endeavor to push back the frontiers of analytical reasoning. Statisticians endeavor to better estimate consequences of given actions based on empirical methods. Most scientists endeavor to develop models with the explicit aim to predict or project consequences. A whole industry of computing technology endeavors to supplement inherently weak human computational abilities.

More recently, we have also come to focus on Simon’s third limitation. Tremendous investment is being made in trying to expand awareness of choices and alternatives. Communications, networks, information and database technologies largely serve to expand awareness of possibilities. Innovation research and ideas such as skunk works (Peters 1983) are designed to further expand our choices.

Interestingly, much less has been done toward better predicting future preferences (Simon’s second limitation). If Simon’s analysis is sound, this area may represent an important research opportunity. On the other hand, the lack of findings in this area may provide evidence of a problem with Simon’s premise of intended rationality.
Appendix B. Allais’ Paradox and the Cancellation Principle

Imagine the following two decision situations – each involving a pair of gambles:

<table>
<thead>
<tr>
<th>Situation X</th>
<th>Probability of winning</th>
<th>Amount to win</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamble 1</td>
<td>100%</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Gamble 2</td>
<td>10%</td>
<td>$5,000,000</td>
</tr>
<tr>
<td></td>
<td>89%</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>$0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Situation Y</th>
<th>Probability of winning</th>
<th>Amount to win</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamble 3</td>
<td>11%</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>89%</td>
<td>$0</td>
</tr>
<tr>
<td>Gamble 4</td>
<td>10%</td>
<td>$5,000,000</td>
</tr>
<tr>
<td></td>
<td>90%</td>
<td>$0</td>
</tr>
</tbody>
</table>

Results of Allais’ experiments reveal that although nearly everyone chooses gamble 4 to gamble 3 in Situation Y, most people would prefer gamble 1 to gamble 2 in Situation X. This violates the cancellation principle because 89% of the probability in both cases can be canceled out; focusing on the remaining 11% results in a parallel situation. Slovic & Tversky (1974:370) provide a utility argument to try to convince subjects of the logical inconsistency of this pair of choices:

Suppose we had 100 numbered tickets in bowl where one ticket would be selected at random to determine the outcome. The four gambles can thus be represented as in the table below. The payoffs are the amounts that would be won if a ticket whose number appears at the top of the column is drawn.

<table>
<thead>
<tr>
<th>Ticket number</th>
<th>1</th>
<th>2-11</th>
<th>12-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation X</td>
<td>Gamble 1</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Gamble 2</td>
<td>$0</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Situation Y</td>
<td>Gamble 3</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Gamble 4</td>
<td>$0</td>
<td>$5,000,000</td>
</tr>
</tbody>
</table>

Now if one of the tickets numbered from 12 to 100 is drawn, it will not matter, in either situation, which Gamble I choose. I therefore focus on the possibility that one of the tickets numbered 1-11 will be drawn in which case situations X and Y are exactly parallel. My decision in both situations depends on whether I would rather have an outright gift of $1M or gamble to win $5M.

(a) If I prefer the gift of $1M I should choose Gamble 1 over Gamble 2 and Gamble 3 over Gamble 4.
(b) If I prefer the gamble for $5M I should choose Gamble 2 over Gamble 1 and Gamble 4 over Gamble 3. No other pairs of choices are logical.

But results from Slovic & Tversky’s (1974) experimental tests show that subjects’ choices are not swayed by even the clearest and most compelling arguments utility advocates can muster. In fact, they are far more likely to be swayed away in the other direction – away from the utility-based position – by Allais’ simple argument (from Slovic & Tversky 1974:370):

In Situation X, I have a choice between $1M for certain and a gamble where I might end up with nothing. Why gamble? The small probability of missing the chance of a lifetime to become rich seems very unattractive to me.

In Situation Y, there is a good chance that I will end with nothing no matter what I do. The chance of getting $5M is almost as good as getting $1M so I might as well go for the $5M and choose Gamble 4 over Gamble 3.

Klein asked firefighting commanders to describe their “hardest cases.” Classifying 156 decision points they faced in these cases, Klein found the following frequencies:

<table>
<thead>
<tr>
<th>Type of Strategy</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choosing from Preselected Options</td>
<td>0</td>
</tr>
<tr>
<td>Concurrent evaluation</td>
<td>18</td>
</tr>
<tr>
<td>Novel option</td>
<td>11</td>
</tr>
<tr>
<td>Recognitional decision</td>
<td>127</td>
</tr>
</tbody>
</table>

The recognitional strategy is exemplified by the following incident of a laundry chute fire:

... [He] sees that there are flames spreading up the laundry chute. That's simple, a vertical fire that's going to spread straight up. Since there are no external signs of smoke it must just be starting.

The way to fight a vertical fire is to get above it and spray water down. He sends one crew up to the first floor and another to the second. Both report that the fire has gotten past them. The commander goes outside and walks around to the front of the building. He can see smoke coming out from under the eaves of the roof. It is obvious what has happened. The fire has gone straight up to the top floor, and is pushing smoke down the hall. Since there was no smoke when he arrived just a minute earlier, this must have just happened.

It is obvious to him how to proceed... (40-41)

Appendix D. A partial list of human decision-making “biases.”

Conservatism: underestimation of extreme probabilities (Edwards 1968)
Gambler's fallacy: belief in streaks of good and bad luck (Tversky & Kahneman 1971)
Small numbers fallacy: overconfidence in inferences made from small samples (Tversky & Kahneman 1971)
Availability: probability estimates based on the ease with which instances can be brought to mind (Tversky & Kahneman 1973)
Hindsight: overestimating the predictability of an event after it has occurred (Fischhoff 1975)
Overconfidence: overestimation of test results and associated probabilities (Einhorn & Hogarth, 1978)
Loss aversion: losses treated differently from gains even when the reference point is arbitrary (Tversky & Kahneman 1979, 1984)
Base-rate neglect: prior probability ignored in making probabilistic inference (Tversky & Kahneman 1980)
Endowment effect: price people demand to give up an object is more than they would be willing to pay to acquire it (Thaler 1980)
Framing effects: equivalent representations of a decision problem evaluated differently (Tversky & Kahneman 1981: McNeil et al,1982; a wide variety of others summarized in Dunnegan 1993)
Conjunction fallacy: the probability of a conjunction judged more likely than either of its constituents. (Tversky & Kahneman 1983)
"Hot hands" fallacy: belief that basketball players get "hot" and "cold" – unsupported by statistical data analysis (Gilovich, et al 1985)
Sunk-cost effect: current investment based on irrelevant past investments (Arkes & Blumer 1985)

* For a more extensive list of 100 articles documenting 20 “human information-processing biases” see Hogarth (1987: Appendix E).
CHAPTER I. THE PROBLEM OF "IDENTITY":
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Identity and Standard Behavioral Theory

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(1) Adolescent Identity Formation (Erikson 1968)

Identities as Determined
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Variable selves
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(8) Symbolic Interactionism: Self as Social Object

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Creative versus deterministic explanations

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   Organizational Attention
   Annual Letter to Stockholders as a Record of Organizational Attention
   Impression management ... Secrecy ... Executive Management as a Single Entity ... Executive Attention and Organizational Attention
   Coding the data
   Reliability ... Companies Studied: GM and Chrysler ... Years Studied ... Other Data Sources
   Basic Data
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