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**EFFECTS OF ENVIRONMENTAL CHANGE ON EXECUTIVE
ATTENTION & INITIATIVES: ANALYSIS OF AUTO INDUSTRY
LETTERS TO SHAREHOLDERS 1963-1987**

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Project Introduction and Theoretical Motivation

The ability of organizations to adapt to environmental change has been a central question of organization theory since the origins of the field, but fundamental theoretical confusion remains: Organizational scholars see widely divergent patterns, running the gamut from neo-classical economists who see efficient diffusion of adaptive practices to organizational ecologists who view organizations as unchanging even in the face of environmental change. These and several other apparently contradictory schools of thought – contingency theory, problemistic search, threat rigidity, and strategic choice theories – are supported by extensive bodies of theory and empirical findings.

In this project I explore the possibility that contradictory findings may be reconciled by focus on the *timing* of response. The project, a three-decade study of the automobile industry in periods of both relative calm and severe environmental change, is motivated in part by McKinley's lament "of the static quality of research in this area," and his call "to move toward more dynamic models." (1993:6). I attempt to document the effect of severe environmental change upon various outcomes: executive attention and intention, presented here, and organizational actions and products, to be presented elsewhere.¹

¹ The "project" is really my dissertation proposal, an outline of which I include as Appendix F. This paper maps into the dissertation with the introduction as part of Chapter 1; Section I, *Attention*, is proposed Chapter 5, and Section II, *Intention*, is proposed Chapter 7. I'm sorry if this is presumptuous. I don't mean to be, but I am thinking on these terms, and would appreciate your thoughts if they're not too harsh.

Practical Motivation

Many firms today are facing or will 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 market and society can abruptly deteriorate. In the aftermath of these events, the auto 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 (DeLorean, 1988) for a failure to foresee and respond effectively to these events.² But what should we expect, what can we hope to expect, and what, if anything, can we prescribe?

Paper Introduction

I focus in this paper on executive attention and initiatives because of the central role they play in theories of adversity: problemistic search (March & Simon 1958; Cyert & March 1965), threat-rigidity (Staw, Sandelands, & Dutton 1981), and Ocasio's (1995) attempt to reconcile two apparently paradoxical streams of research which emerged from these theories. Ocasio theorizes that adversity does in fact lead to change as proposed by March, et. al. and other adaptationists, but that, consistent with Staw, et. al., it also narrows attention and thereby leads to *less innovative* change – leading to initiatives which have, in fact, been previously adopted and are based on strongly-held cultural assumptions. Attention, therefore, is the mechanism through which adversity is enacted; the number and nature of new initiatives is the outcome in which adversity is manifested.

² They also did have loyal supporters who, in fact, prevailed and secured the unprecedented governmental assistance that made recovery possible.

Historical Timeline

The independent variable throughout this study is time, and the critical point is late October 1973, the onset of the first Arab Oil embargo.

Lean Production

Japanese advances go back to post-war Japan³ and the development of a new production system which has come to be called “lean production.” (Althuscher, et. al. 1984). This thesis, further developed in a subsequent book (Womack, Jones & Roos 1989) proposes that lean production is a completely new production logic – the third major paradigm of industrial organization, succeeding mass production, which itself replaced “craft production.” The thesis has largely been accepted in auto manufacturing, and American manufacturing in general.⁴ Eventual adoption of these practices by American automakers has created a rough competitive parity; but why did it take so long?

Had American manufacturers been prescient, they would have picked up on these developments *before* 1973. At least one important management scholar was singing praise of Japanese management well before then (e.g. Drucker 1968, 1971)⁵ and some auto company divisions experimented with programs such as quality circles in the late 60s.

October 1973, however, is a key date 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.

Oil Embargo

The oil embargo shattered America’s long, taken-for-granted reliance on cheap, unlimited oil.

³ a superior system born of adversity?

⁴ I don’t actually know this for certain. Attending an IMVP conference, one gets this impression, but I don’t know enough about current thoughts in Operations Management. I know that at least one major book (Kenney & Florida, 1994) questions this interpretation. I probably need to consult with Charlie Fine.

⁵ A 1971 MIT thesis (Fites), however, gives what was probably 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)

Again, had American manufacturers been prescient, they could 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 (DeGues, 1981a, 1981b) 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). Halbertarm (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.

Whether Detroit executives might have been prescient or not, as of October 1973, two important realities appear (at least in retrospect) transparently clear:

- Oil supply instability was a reality; moreover, oil shortages and/or price increases would result in a big, immediate, and unfavorable change in auto consumer purchase preferences;
- Fuel efficiency was not the only advantageous feature of Japanese cars: perhaps fuel efficiency was what sent buyers into a Toyota showroom, but, once there they also found better reliability, suspension, and overall quality – and usually for a lower price.

A Point of Change?

Of course, there were other important events in the auto industry – recessions, inflation, an emerging consumer movement – and no day passes without some event that affects the industry in some way, but this is as dramatic a pair of developments as we are likely to find in a major industry, and thus a good point of reference for study of effects of environmental change. In this study, I examine executive attention and intention for several years prior to and following the event to try to document concrete differences in firm behavior under different environmental conditions and to develop a theory of response time, process and outcome.

I. ATTENTION

THEORY

In theories where adversity plays a central role in change, the proposed causal mechanism is attention. As elaborated first by Simon (1945) and more recently in March (1994: Chapter 1), the theory of bounded rationality and problemistic search presumes that individuals and organizations intend to optimize but optimization is impossible because of cognitive limits on attention, memory, comprehension, and communication. Constraints on attention are particularly severe, and lead to a pattern of satisficing rather than optimization: we maintain reasonable aspiration levels and only attend to problems, that is situations where aspirations are not being met. Attention stimulates search for solutions which will help us attain our aspirations, and we continue to search as long as we believe that search will result in attainment of aspirations.⁶

While the logic and evidence of a satisficing world moderated by attention is strong, the theory provides limited predictive power about *specific* attention cues or the timing of responses. In this section, I question the speed and efficiency with which we do in fact come to attend to problematic situations.

Hypothesized “Denial” of threats

How quickly and efficiently do we attend to problematic situations? Ocasio argues that first adversity must be *enacted*: “Adversity cannot be 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.” (1995: 8-9). In other words, firms will not respond to threats that do not register on their regular performance measures and fall outside their scanning routines.

Elsewhere (Freeman, 1996), I propose a theory of organizational loss fundamentally similar to

⁶ At some point, failure in search will result in lowered aspirations, success will increase aspirations, but that’s another story.

that of individual loss (especially Kubler-Ross, 1969) with a first stage of denial. To Ocasio's account, we may note three additional factors that lead to ignoring atypical problems:

- Cognitive limitations. The "garbage can" simulations of Cohen, March & Olsen (1972) show that decision makers necessarily tend to ignore problems for which solutions are not available, especially under heavy load conditions.

- Agency problems: Numerous studies have documented self serving behavior at the expense of the corporation. Moreover, several studies document active concealment of poor corporate performance by corporate officers (Abrahamson & Park, 1994 provide especially convincing evidence). Throughout the managerial ranks, there may be little incentive to bring attention to distant threats when incentives and job assignments are short-term, as they often are on the corporate fast track.

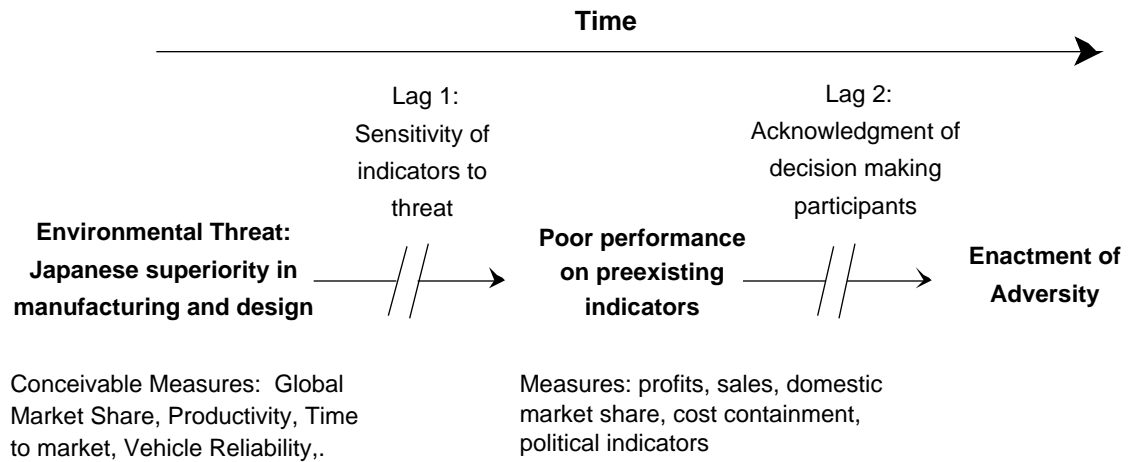
- Defensive norms. Argyris (e.g. 1990, 1995) has found nearly universal norms which promote "protection" of self and others, and which discourage honesty. These norms arise from nearly universal governing variables such as minimizing emotionality and negative feelings. These norms are perhaps the second order effect of individual denial – an inclination long observed (i.e. Freud, 1937) and widely documented (see Homles, 1987) to simply ignore data which is personally threatening.⁷

For an atypical threat, we may expect two time components of this denial: it will take time before such a threat shows up as poor performance on a company's indicators and it will take additional time before decision makers can or choose to interpret these results as threatening. As diagrammed in figure 1, these two conditions must be met before any enactment of adversity can take place, let alone a response to that adversity.

Hypothesis 1: There will be a measurable, perhaps substantial, time between an atypical threat and focusing of attention upon that threat.

⁷ Homles (1987) writes that "Laboratory studies present consistent evidence that people use this defense," explaining that, " it is *effective in reducing* both subjective and physiological *arousal* in the face of threat."

Figure 1. Adversity in firms is not directly experienced as an objective reality, but rather enacted in a two step process based on (1) sensitivity of information & control systems to the threat and (2) acknowledgment by decision making participants.



Alternative Theories

Most managerial and economic theories predict (or at least prescribe) rapid refocusing of attention on salient threats. Industrial organization (e.g. Holmstrom & Tirole, 1991) expects efficient diffusion of adaptive practices. Managerial theories (i.e. almost every popular press business book ever written) argue that managers can (and should) monitor the environment, and properly guide their firm through it, while assuming wide variance in the ability of different executives to do this. Moreover these theories contend that shortcomings are most likely to occur in implementation rather than awareness, and even those most critical of these perspectives tend to accept that resistance to economic adaptation generally lay the bowels of the firm rather than at its head.^{8 9}

Hypothesis 1a: Executive management will quickly focus attention upon a serious threat.

⁸ From comment by JVM. Ask him for citation.

⁹ Marxists and other critics of the economic and managerial perspectives generally criticize executives' *propensity* to change (and layoff workers or expropriate their rents).

METHODS

Despite the theoretical importance of attention in organization theory, I'm aware of no attempt to compile a comprehensive record of organization attention.¹¹ Of course, this is no straightforward task. Like so terms in our field, 'organization attention' is a questionable concept, drawn by analogy with the individual. Despite this, the concept is commonly used both theoretically and in common parlance. Aside from the work of Simon, March, and associates; attention is a central concept in important works such as Barnard (1938) and Weick (1979). Ocasio is attempting to build an "attention based view of the firm" proposing that "explaining how firms behave amounts to explaining the allocation and structuring of attention." (1995a:2) 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).

Organizational Attention and Executive Attention

Perhaps the ideal measure of organizational attention would be the sum what everybody in the company was thinking about at every moment weighted by some individual factor of organizational influence. Practically, I study executive management both because of its central position of authority and power, and because we have an annual summary document – the Letter to Stockholders – which

¹⁰ I might have included at least two different topics in the theory section:

* **Identity** and

* **General Theories of Attention**, followed by these subheaders,

Similarities within Industries? and

Is Attention determined by Internal or External Differences?

The latter might be altogether different articles based strictly on the idea of "organizational attention" and perhaps this methodology.

I did it the way I did because I thought it best to focus here on the organizational dynamics.

¹¹ I add the caveat because I have not yet searched this topic thoroughly although I spoke with John Carroll, Willie Ocasio and Sandy Rothenberg. I've checked the "attention" literature, but I think I need to recheck it and also the "scanning" literature. I'm sorry about this, but I didn't even really realize what domain I was working in until I wrote this up. Work I want to look at includes: Mintzberg (1973); Sproul (1977, 1984). I skimmed Chilingierian (1987), but I'm not sure even why he calls this "attention" rather than "activity" structure. The focus seems to be on what they do, and there seems no distinction between what they do and what they think, but I haven't really read it. One attempt at individual attention sounds interesting – a project in which experimenters called people up every 15 minutes to ask what they were thinking about. (I need to get Kahneman (1973) to get citation).

roughly reflects their attention distribution.¹²

Corporate officers have great legal authority and practical power. Attention to a matter by the Chairman of the Board normally means that others in the corporation attend to it as well. In March & Simon (1958) are correct, executive management will *not* attend to routine operations where aspirations are being attained, but executive attention to non-routine affairs, those deemed sufficiently newsworthy to report to stockholders on, should correlate highly with the total amount of organizational brainpower put to work on it.

Executive Management as a Single Entity

I speak of executive management as a single entity, which is obviously a simplification, but maybe not so great a simplification. Executive management teams tend to adopt a party line which guides action:¹³ they dress similarly, share norms and experiences, 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. The Letter to Stockholders is signed by only the Chairman and the President, but normally the views, attention, and priorities expressed will be those of executive management as a whole. This must generally be the case for one of two reasons: to the degree a leader is dependent on the support of others, she will by necessity (March, 1962) express her views and concerns in an important, public document [March, 1962 #179]; to the degree a leader is dominant, she will surround herself with subordinates who hold similar views or are willing to subordinate their own dissimilar views.

Annual Letter to Stockholder as a Record of Executive Attention

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 those who evaluate them. 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

¹² Executive management attention is useful for studying some aspects of the theory, but limited in other areas: for example, Ocasio's (1995) proposition that threats are first addressed in functional subunits and that executive attention follows.

¹³ there's probably a good citation for this, but I can't think of any.

within and between firms.

On the use of Letters to Shareholders as Research data

For these reasons, Letters to Shareholders have been frequently used in organizational research. Research uses include inference of executive attributions (Bettman & Weitz, 1983; Staw et al. 1983; Salancik & Meindal, 1984) and motives (Abrahamson 1994), tendencies to focus inwardly (D'Aveni & MacMillan, 1990) or toward risky behavior (Bowman, 1982).

I first thought to use this 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 – and in both cases my job, as I understood it, was to communicate important information relevant to company performance and present management's perspective on important events, issues, and priorities. In both cases, the chairman reviewed the text very 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). 77% of respondents report reading the president's letter at least "somewhat thoroughly." (SEC survey cited in Abrahamson, 1994:1311).

Concerns with this Data source

Despite these advantages, there are three areas of concerns with this data source for the purpose of documenting executive attention: the first two concern the documents themselves – that the chairman might not convey priorities honestly, either to look good to shareholders or to avoid divulging strategic information; the third concerns interpretability. In each case, I believe that this is a reasonably good data source – especially in comparison with conceivable alternatives.

Impression management

Among Organization theorists, letters to shareholders are suspect in large part because of the attribution studies cited above. Staw et al. (1983) found (1) strong evidence of self-serving attributions

in the documents, (2) that these attributions were convincing to the investing public as measured by stock price, and (3) that the attributions were a form of impression management, since enhancement was associated with selling stock by corporate officers. The authors, however, generalize these attribution and impression management findings to all organizational communication. (Letters to shareholders, may ironically, be taken less seriously in our field because they are a good data source that allowed these researchers to observe these phenomena clearly.)

Goffman (1957) and a wide variety of work since (summarized in Leary and 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 himself.

If there is greater motivation to manage impressions in the annual report than in other communications, there are also greater checks. To check faulty recollection, the documents are usually written by staff whose job includes responsibility to ensure accuracy and are normally *checked* for accuracy, even circulated to assure concurrence. Executives also have motivation to portray events and policy accurately. Deceit is illegal, even failure to disclose pertinent information is subject to severe penalty (Securities and Exchange Act of 1934); compliance is ensured by highly skilled Security and Exchange Commission investigators, and a large, knowledgeable, readership whose money is on the line and who have legal recourse. Dissimulation short of lawbreaking could have damaging effects on reputation. Finally, executives can earn respect with their publics by candor.

For purposes of demonstrating the ‘denial’ 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 and that the officers are not going to divulge this most important material.

This is an important consideration, but it is subject to empirical test. From this study, I compile a list of executive initiatives. In subsequent studies, I can conduct WSJ archival studies and interviews to find this out, but my guess is that industrial secrecy is probably overestimated as a phenomenon. The industrial intelligence assigned to a public company would probably suffer less from the “black box” problem that long faced the CIA in Soviet Russia and Red China, than the “white noise” problem suffered by their communist counterparts analyzing the West – there is too MUCH data, too much openness, and a cognitive incapacity to make sense of it all.

There are important reasons why openness would generally be favored over secrecy in discussing corporate attention and new initiatives. Even if GM has the world’s greatest strategic move ever, they would probably not be inclined to keep it secret because no other company is similarly situated; it’s unlikely a competitor could or would want to develop or carry out another firm’s strategic plan. On the other hand, it’s generally quite important to accurately communicate intentions to suppliers, customers, and others with whom the firm interacts (including competitors). All plans depend on the actions of others who must at some point be appraised and whose active participation is a necessary condition for a plan to come to fruition.

Qualitative data

Finally, as with any qualitative data, there are problems of coding subjectivity and bias. To address this potential problem, I tried to be as rigorous as possible (discussed below).

Coding the data

My goal is to create an “attention database” which can be analyzed quantitatively. To do this, I decided to work with the paragraph as the basic unit of analysis. I tried to write the key theme of the paragraph. I then categorized this theme on two or sometimes three levels of generality. The first level is a functional breakdown, based on different subject areas in the business school: Operations,

Finance, Sales, General Management, and a second set of more detailed findings. Quickly, it became apparent that the majority of the paragraphs were outside this taxonomy and I had to develop other primary categories such as Social Issues. I also kept more detailed categories which can be used for various theoretical inquiry. One breakdown I track are comments which reflect concerns central to the lean production paradigm.¹⁴ Appendix A presents a full breakdown of the emergent taxonomy; items consistent with lean production are indicated by an asterisk.

Table B is a portion of the spreadsheet used to record the attention structure. 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 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 B: Sample from the Attention Database

<u>Theme</u>	<u>1963</u>	<u>Lines</u>	<u>Category</u>
New High Ground		4	FP/Sales/PR
Worldwide sales		3	Sales
Earnings		5	Fin
Business Expansion		8	MEC
Long Term Growth		5	MEC-Auto
Sales Growth		5	Sales
Market trends		7	Mkt
Non Auto		3	NA
Plant Modernization		6	Mfr CE
Flexibility in mfr		8	Mfr Lean
World Auto Markets		5	Mkt
New 1-liter cars		6	PD
Overseas Expansion		2	Strgy World
Total Car sales		4	Sales
Value of Long term agreements		6	Union
Praise(plea) for labor		4	Emp Praise
Total		81	100%
Category Summaries			
		Lines	%
Mfr/Ops		14	17%
Sales/Marketing/Prod Dvlpmt		32	39%
Financial Performance		7	8%

¹⁴ If I redo this study as proposed, I'd like to try to publish the results and method I describe here as a sociometric of use for a variety of theoretical and practical interests. I believe it can be a useful historical database, indicating interest in different years in any topic of the inquirer's choosing: for example international affairs, union affairs, etc.... For a great variety of criteria (see Appendix A), I have a rough quantitative measure – subject to the limitations of the data source as discussed – of just how much attention is paid to it by executive management of 2 companies over more than two decades.

Human Resources	11	14%
Strategy & Structure	2	2%
Macroeconomic Conditions	13	16%
Non Auto	3	4%
Social Issues		
Total	81	100%
Sales/Marketing/Prod Dvlpmt		
Sales	14	17%
Market Info	12	15%
Marketing	0	0%
Product Development	6	7%
Mfr/Ops		
Capital Expenditures	6	7%
Quality/Lean Prod	8	10%
Human Resources		
Union issues	6	7%
Employee Praise	4	5%
Payroll	1	1%

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). I studied GM and Chrysler rather than Ford mostly because I found the Ford letters particularly poorly written. It was difficult to determine a central theme of each paragraph or even two themes¹⁵, but there are also theoretical reasons:

1. General Motors' case is 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.
2. To obtain more variance, it was best to contrast with Chrysler – the smallest of the three and the firm which came closest to bankruptcy.
3. Ford has traditionally had a far more International presence than the others, and I am studying the American phenomenon first and foremost.

Years Studied

I coded 25 years of GM letters (1963-1987) and 20 years of Chrysler letters (1967-1986). I

¹⁵ Ford reports fared worst on the intercoder reliability test. (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.

started with 1973 and went backwards and forwards until I felt I found something resembling “normalcy,” or absence of adversity on both ends. In GM’s case, I had to go back quite far because of a serious prior shock in 1965. In the aftermath of Nader’s *Unsafe at Any Speed*, and a sharp change in the attention structure was immediately apparent (I discuss this in the findings section). So even going back to 1963, I have only two years “base period.” In redoing the study, I’d like to go back a few years further.¹⁶

In both cases, I’ve had to come forward from 1973 many years because the response took a very long time to play out. In GM’s case, I have not coded far enough out; in fact, the effects of 1973’s events are still being worked out.

Dealing with coder subjectivity

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. In the end, a human solutions seems to be emerging.

Intercoder Reliability

I asked two different undergraduates¹⁷ to also code what I had done, and reliability was quite poor: they chose different categories more often than the ones I chose. This 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) (but 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.

¹⁶ I have letters scanned (but not edited) back to 1958.

¹⁷ I’m not sure why I didn’t get someone else to try. I had asked Willie, but he never got around to it. I also asked Sandy and Greg Scott, but it never happened; I could have been more persistent, but maybe I was too self-doubting, maybe I didn’t feel as though I had sufficient justification for what I was doing.... anyway. I developed categories naturally enough, but I didn’t quite know what I was trying to get at.

In retrospect, I believe this type of project is better done by team than an individual endeavor.

2. the students did not read carefully enough. They frequently picked up on a single point rather than the paragraph context. It became clear that it is 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 correlation¹⁸, 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.

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 disagreement¹⁹, 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.

The disagreements proved quite useful in terms of defining the categories and making more explicit the rules and goals of the task. But two people with theoretical backgrounds and knowledge of the industry would have been better than one, and I think that interpretive coding is better done as a

¹⁸ I'm a little bit concerned that the other student might see this and feel bad. I guess I would not have to include all this in any publication?

¹⁹ I'm not completely sure what we did with these nine paragraphs; this section was done from memory. At the time, I thought it was a preliminary test (a test of a test) partly because I had never done anything like this before and we were only testing the Broad categories. I thought I might do the REAL test with a more qualified co-coder and ALL categories. Now I think that this is the right test, at least if this is what I am primarily going to use in the analysis. Maybe a separate test for each kind of analysis (i.e. Broad Category and Lean Production Categories.) rather than a general test at the level of detail I coded. A problem with the test as presented here was that it was for one company (GM), three consecutive years, the first years of the period (1963-65).

team project than an individual endeavor with some help²⁰, as this project was done.

Intracoder Temporal Reliability

Intertemporal reliability was good. I had begun this project two years earlier when I first got to MIT, and my coding choices were virtually the same, except for changes in categories which occurred as a result of going through two companies for more than twenty years.

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.²¹

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 categories²² that would not be subject to bias, i.e. word and phrase counts, word counts by type of word, etc. ... I did scan in all the documents, and subjected to “analysis” by programs such as the Harvard III inquirer (Stone et. al. 1966)²³, which counts and categorizes words, but could make no use of the results.

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.

²⁰ The student who I worked with is a skilled debater, a skill I valued highly for his ability to challenge my judgments. But despite this, he could offer no alternative frameworks for lack of knowledge in Organization theory or the auto industry. He had only rudimentary business knowledge, but even this was helpful and lack of this may have been the reason the other undergraduate did not come up the same (i.e. correct) codings.

²¹ Artificial Intelligence as intelligence sink rather than source.

²² 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

²³ The software has been updated twice since, hence Harvard III.

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.²⁴ 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.

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 we should be doing. If its something less, its simply not intelligence, something a machine could do, but if it’s not rigorous, we really haven’t documented our interpretations and tested our impressions²⁵, and cannot relay with confidence that they are better interpretations than alternatives which can also be found in the data.

Next steps methodologically.

I want to go through this process again using Nud*ist software.²⁶ This software permits one to easily redesign the hierarchical category structure, and compare categorical entries with previous entries to ensure consistency. Once coded, lines can easily be counted and the numbers can be imported into statistical packages for analysis. I have set everything up to do this and entered several

²⁴ Surprisingly perhaps, Simon’s description of “rational” decision making as procedurally rational rather than outcome rational, has been most comforting to me in this regard.

²⁵ One interesting finding that attests to the value of quantification: at first I was impressed that GM and Chrysler seemed on the ball with respect to small cars, quality circles, etc.... because of early mention of these items, but quantification revealed that these were isolated mentioning of items, no systematic change in the attention structure.

²⁶ Hopefully for my dissertation.

articles, but I've taken time out to write this and prepare for generals.

Using Nud*ist, my basic text unit is the line. I assign each line to one (and only one) attention category. I may also assign other categories such as "action orientation" (see Initiative Methods section) and "geographic location." Each line is also assigned to independent variable categories, COMPANY and YEAR. I believe that this software enables qualitative research of rigor equal to or greater than most quantitative work.

Other Data Sources

Annual reports present, at best, a partial view of the picture and a distinct perspective. Since embarking on this project, I have been reading other accounts of the industry, talking to people about it, and looking at other data sources. These help me put the annual reports in perspective and read them more critically; provide information about other events which may be causal, consequential or some combination of the two; some ideas about interpretation; and triangulation.

The other readings are compiled in Appendix D.

I conducted two informal interviews with people in the auto industry: a pair of European academics who have worked as consultants in the auto industry for a long time, and Robert Froesch, a former director of Research and Development for GM now on the faculty at the Kennedy School.²⁷

Other data sources I've looked at include: 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 Yaichi Aoshima, *Predicast* news reports, and *Wall Street Journal* (WSJ) abstracts. The WSJ abstracts are particularly interesting because they go back to mid 1973, and therefore can provide an alternate perspective for much of this period. In my grand plan, I plan to use these data in Part III of the study - organizational actions - and Aoshima's data in Part IV - product changes.

²⁷ Froesch gave me a contact sheet with addresses and home phone numbers of top executives from all three firms including former CEOs. He told me to use his name and said they'd be interested in talking to me. So if and when I'm ready to speak with them, I have some very good contacts.

PRELIMINARY ATTENTION FINDINGS²⁸

The Excel spreadsheet I used does not permit easy manipulation of numbers and categories or recall, so my presentation here is somewhat limited compared to what I believe I will be able to do once I reanalyze it with my new software. I've only gone through the effort for GM and even here the analysis must end at 1985, because the aggregations of data on the cumulative tables are connected through so many calculations that I can't go back and amend the table to include 1986 and 87 data without a major investment of time. I also cannot easily check the original calculations. I was quite careful when I first set it up, but I'm not certain of anything. Again, with a Nud*ist/Statistics package combination, there will be far less possibility of human error in the aggregations and calculations.

These caveats aside, in this section I present some basic results, evidence regarding denial, and other findings that emerged from this exercise.

Basic Data

N 9000 (lines of text)

The average letter to shareholders for these companies over the years coded has approximately 20 paragraphs and about 200 lines of text. With lines as the basic data unit, I have about 9000 data points, enough to provide statistical power in quantitative analyses. The text lines used in the Excel database are not consistent length from one year to the next so I report strictly percentages. In a Nud*ist database lines will be consistent (up to 72 characters depending on word breaks) thus allowing for length comparisons and reports of absolute numbers.

Attention Structure by Basic Categories

Table 1 presents the average percentage of lines devoted to the basic attention categories for General Motors over 23 years.

²⁸ Teachers and experience have taught me that it's better to present findings as a good story that follows from the theory, but I don't want to do that here. These are preliminary findings. My data is not that good, and I just want to present the things that I thought were interesting or provocative and that bear further investigation rather than risk polishing the wrong stone.

Table 1: GM letters to stockholders 1963 - 85 broken down by functional categories.

Basic Category	Average Line Volume
Manufacturing/ operations	14%
Sales/Marketing/Product Development	19%
Financial	9%
Human Resources	12%
Strategy & Structure	7%
Macroeconomic Conditions	7%
Non Auto	2%
Social Issues	29%

Concern with Social Issues

The striking feature of Table 1 is the amount of attention devoted by GM to social issues - over the entire 23 years nearly *three lines out of every 10* are devoted to social issues, such as pollution control, safety, etc.... While I have not aggregated figures for Chrysler or Ford, I'm certain that the corresponding figure will be far less (although Iacocca does take up the cause of the deficit). Nor have I ever such concern in other firms' reports which I've read casually. I propose two explanations – in sections titled, “An Identity Interpretation,” and “A Force theory of attention”

Changing Attention Structure over Time

The *annual* percentages of lines 1963-85 devoted to each basic category are indicated in Table 2.

Table 2: Annual percentages of lines 1963-85 devoted to each basic category

	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	
Manufacturing/ops	17	25	22	34	6	13	9	25	27	8	22	18	0	7	3	17	11	9	7	17	4	4	10	
Sale/Mktg/Prod Dvlpmt	39	9	18	33	14	30	28	12	14	12	26	28	26	22	20	13	11	22	28	4	10	16	8	
Financial	8	7	5	11	5	5	4	5	2	3	4	2	11	9	3	7	9	2	12	18	28	23	25	
Human Resources	14	38	7	7	19	5	14	15	4	17	18	0	16	4	0	3	7	5	14	29	25	18	8	
Strategy & Structure	2	3	0	0	6	0	0	0	7	4	4	7	5	10	17	6	8	5	0	20	0	34	26	
Macroeconomic Condit	16	0	0	2	5	0	6	4	2	0	3	6	10	7	7	2	25	29	18	0	14	0	6	
Non Auto	4	0	0	6	0	7	8	11	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0
Social Issues	0	17	47	7	46	41	31	28	45	56	22	38	30	41	51	51	28	27	21	12	19	0	17	

Temporal Variance

As shown in Table 2, attention figures by category varied widely in different years and different periods – concern with macroeconomic issues 1979-81, strategy & structure (especially mergers and

acquisitions) in 1982 and the mid-80s.²⁹ Disaggregation of “human relations” would show a dominant concern with union issues in the 1960s. This variance, summarized in Table 3, provides the researcher with material to develop or test theories of long term executive attention and priorities (i.e. “A Force Model of Organizational Attention” proposed below).

Table 3: *Variance in attention lines GM letters to stockholders 1963 - 85*

Basic Category	Average	Standard Deviation	Min	Max
Manufacturing/ operations	14%	9%	0%	34%
Sales/Marketing/Prod Dvlpmt	19%	9%	4%	39%
Financial	9%	8%	2%	28%
Human Resources	12%	10%	0%	38%
Strategy & Structure	7%	9%	0%	34%
Macroeconomic Conditions	7%	8%	0%	29%
Non Auto	2%	3%	0%	11%
Social Issues	29%	16%	0%	56%

Denial

Disconfirming Evidence

In reading through all three company’s reports, but before aggregating the lines, I was ready to modify sharply the “denial” hypothesis. Elsewhere (Freeman, 1996), I present general historical evidence that there was a delayed response from these companies to the Japanese threat, but I was surprised to see in these reports early evidence of concern with these matters:

Both companies discussed early the trend to small cars: GM mentioned in the first year I studied, 1963, that it was developing a new 1-liter cars, and periodically demonstrated concern with “foreign competition.” From the GM 1970 letter:

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.

Chrysler also seemed on top of trends. 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:

²⁹ I believe that this trend continued strongly through the mid-80s.

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%

Both firms also entered into joint ventures with the Japanese early. In 1969 Chrysler signed an agreement with Mitsubishi which turned out to be extremely favorable. It provided Chrysler with full long term US marketing rights for Mitsubishi products in the US under Chrysler monikers, for a time throughout which Mitsubishi was arguably the world's most efficient and best value producer. GM entered into several reasonably successful agreements with Toyota.

My consultant interviewee told me that executives were interested in things like quality circles since the 1960s as well as other Japanese practices, but that mid-level managers were only lukewarm, and workers completely uninterested. The rational seems reasonable: executives are concerned with the overall performance and the bottom line; managers only indirectly through their managers, but their incentive structure is such that there is little reason to worry about the bottom line. Workers are completely insulated, and therefore uninterested unless their jobs are threatened.³⁰ This story seems also consistent with preliminary findings in Part II this paper (Intentions): I was surprised just how strong the problem–explanation–solution formula is. (e.g. poor sales, conditions causing poor sales, what we're going to do about the poor sales). I thought, 'OK, executives observe the problem and try to solve it, but, the corporation is just too big and complex for even prescient managers to change.'

Lean Production and Attention Structure

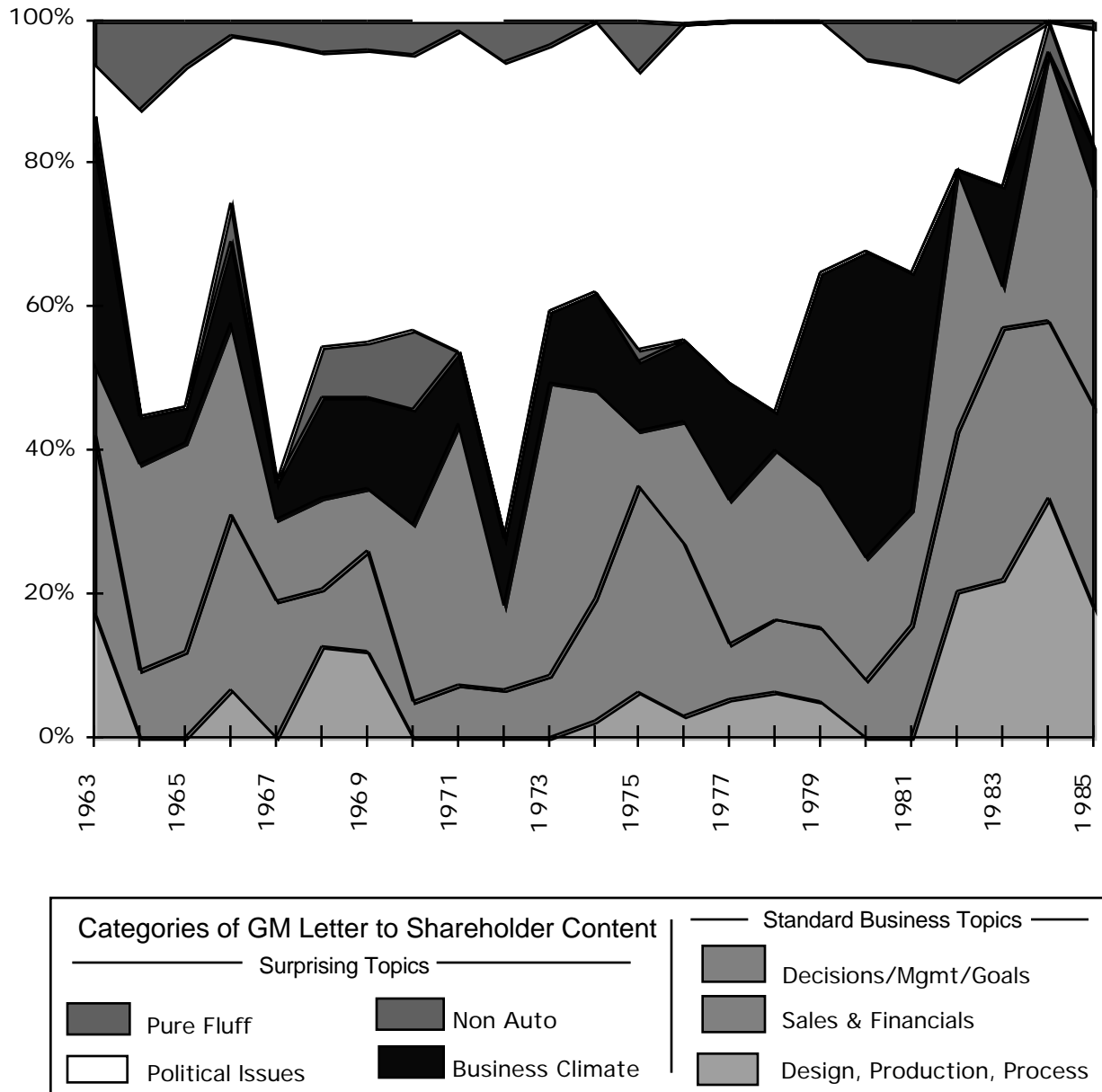
The quantitative data, however, tells a different story. I recombined the categories described above to test the concern with lean production issues and issues closer to and further away from these concerns.³¹ As displayed in figure 2, under 40% of the lines in GM letters to shareholders from 1967 through 1981 are even about standard business concerns. Only about **3%** of the lines from 1970

³⁰ according to these 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 divisions here did.

³¹ These categories are displayed in Appendix A2, from the Nudist printout. I had to do these aggregations manually in Excel and may have made mistakes, although I tried to be careful by making sure at least that the totals were 100%. In Nud.ist switching categories around is very easy. It's easy to have a single category index code automatically entered into other taxonomies.

through 1981 concern issues of design, production, and process – the areas in which Toyota and other Japanese firms had superseded them.³² This allocation did not change substantially until 1982, *nine years after the* first oil embargo; not until the company experienced financial losses and decline in *domestic* market share (1980).

Figure 2: Allocation of subject matter in GM letters to shareholders 1963-1985



³² I think that this analysis shows the strength of this methodology. It's an important way of adjudicating between conflicting qualitative evidence.

Additional Confirming evidence

Subsequent analysis reveals only the few isolated mentions indicated above (“Disconfirming evidence”) of the Japanese competition and the attributes which gave them competitive advantage – lean production, single supplier relations, statistical quality control, or human resource – until the late 1970s.

Supporting Ocasio’s observation about the importance of pre-existing performance measures, neither company even mentions world market share until 1976. Yearly performance is evaluated, instead, on the basis of gross sales and profitability. Until the 1970s there is relatively little discussion even of domestic market share, and that, moreover, is strangely measured: 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.

One might be inclined to dismiss the presentation of these facts in this way as enhancement impression management, 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” it 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, seemed to be *looking* for problems to portray in order to ward off union demands; threat of price controls and anti-trust action; and safety, pollution and affirmative-action regulations. Even looking for problems, they seemed to miss the Japanese.

Checking the Denial Theory (Figure 1)³³

	General Motors	Ford	Chrysler
When was there a problem?			
Unfavorable cost ratio?			
Unfavorable defect ratio?			
Global market share decline?			
When did problems registered on pre-existing measures?			
Income decline?	1974, 1980	1974, 1979	1974, 1979
Income losses?	1980 (Minor)	1979 (Moderate)	1974
Domestic Market Share decline?	1986	1979	1977
Share value decline?	1985	1981	1973
Solutions available			
• Agency problems?	Smith: maintain preeminence		Yes, pay dividends to keep jobs.
Defensive norms?	DeLorean		
Evidence of Change:			
Attention Structure	1982		1974
New Initiatives (Part II)			
Nature of actions.	Technology for processes	New cars,	Deal with union, sell all non-auto, new cars new promotions

General Findings and Further Thoughts on Executive Attention

I think that what I have documented and called the Attention structure may have value far beyond what it can tell us of denial. And so I think it's worthwhile to point out some general findings, and pose some explanations for them.

GM concerns beyond auto manufacturing

As noted previously, GM throughout this period devotes a striking percentage of the letter to social issues – an average of 29% of lines over the 23 years concern issues such as pollution control, safety, etc. ... GM also devotes considerable space to another area, macroeconomic conditions, beyond their domain of control or responsibility. Of course, there were major macroeconomic concerns – the second oil embargo and interest rates which rose briefly to over 20% did affect car sales, but this is a letter to stockholders, not a party platform, and for three years, 1979-81, an

³³ I think I need to revisit all the points I made in the theory section, but I'm not yet able to do this. I need to define my terms better and get additional data.

average 24% of the lines are devoted to concerns about inflation, stagnation, etc.... . All told for *fifteen years from 1967-1981*, an average of 45% of the lines in the letters are devoted to social issues and macroeconomic conditions; for six of these fifteen years more than half the lines are.

An Identity Interpretation: Concern for Social Issues by A Tarnished American Institution

I pose two explanations for this surprising attention to concerns beyond the auto industry:

1. GM viewed itself³⁴ 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, but especially during recessions); being a world good citizen (when America was being criticized as imperialistic); promoting safety, clean air, etc....; but also to protect capitalism, opportunity, and freedom in the face of anti-business zealotry.

2. On the other hand, Table 2 suggests³⁵ that this concern with social issues is primarily a time limited phenomenon (an average of 40% of the lines over the 12 years from 1967-1978) – a period throughout which the company was criticized harshly and unceasingly by all sorts of public interest groups.

My best explanation is both – that is GM viewed itself as an American institution, but one under great threat. In much the same way that people in the NY-NJ Port Authority acted on the issue of homelessness when it's internal identity as a preeminent engineering institution came into conflict with public image increasingly associated with shabbiness, danger, and homelessness (Dutton & Dukerlich, 1991), so the discrepancy between an internal identity of “Hot dogs, baseball, Apple Pie, and Chevrolet.” and public image as Baby Killer and Public Polluter #1 focused executive attention and instilled a strong motivation for action.³⁶

³⁴ Sorry for the anthropomorphizing, but I do believe this is a corporate phenomenon – by “viewed” I do not mean something simply from the vantage point of the executives, but rather a generally shared image, and held by individuals who identify with the firm.

³⁵ To increase confidence in this assertion, I'll need to code back and forward some more.

³⁶ Bring Identity into the theory section?

Rational Actor or Corporate Citizen?

Likewise, it would appear that executives, and, perhaps workers as well (based on 1980 election results), were deeply unsettled by the Carter administration: runaway inflation, dishonor abroad, and vigorous environmentalism. In a sense the letter *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.³⁷

Post-recovery Chrysler under Iacocca shows similar tendencies: At about the same time that GM becomes an auto manufacturer again (1983), Iacocca begins to express concern, deep regrets, and harsh criticism about the increasing deficits, and continues each year. This is a bit surprising, not only in that it is a national concern far beyond their immediate narrow interest, but it is also quite America-centric, for a company trying very hard to be international.

Rational Actor and Corporate Citizen

It may well be that competition is far from the mind of GM executives in this period because competition for a long time really was *not* an important concern. Neither Ford nor Chrysler posed a threat; if anything, GM needed to protect them as would-be-competitors in order to ward off the kind of anti-trust actions to which AT&T and IBM were subjected (the reports not and reject consumer group challenges of lack of competition in the industry). But there were real threats from government action and inaction, consumer groups, and labor.

Generals fighting the previous war

At least in retrospect, it appears clear that, by the 1970s, these threats were less important than Japanese competition. But the data from the auto industry suggests that its leaders acted as _____ observed of generals, they “are always fighting the previous war.”³⁸ Probably for the same reasons: limited understanding of the situation and the tendency to see things from a learned perspective; a desire to do what one knows how to do well rather than stumble along with something new, Zajonc’s

³⁷ Is it reasonable to speak of GM’s behavior in this sense as structuration?

³⁸ who said this? I think I heard Shelby Foote quote somebody in the PBS series “The Civil War.”

(1968) dominant response may compound these tendencies – stress makes it that much more difficult look at the situation fresh; overemphasis on limited experience (March 1994); selection and retention processes which favor those adept at the old system (); and other reasons dealing with moral biases and prejudices.

Field Theory and Executive Attention

Basically, the March-Simon selective attention model seems to hold quite well. There is a strike in 1964 and attention focuses on union problems; congressional hearings on safety in 1967 focus attention on safety and social issues, but another model also comes to my mind – the clean force models of physics (i.e. mechanics or electromagnetism) and the one analog of which I'm aware in social science – Kurt Lewin's field theory (Duetsch, 1968; Lewin, 1951). It seems that one can reasonably think of executive attention as a reaction to forces in a field, and that LETTER TO SHAREHOLDER LINES is a direct function of force exerted by competing stakeholders – unions, Wall Street, consumer groups, government, etc.... – moderated only mildly by idiosyncrasies of people who inhabit the office.³⁹

In the earliest years of Table 2, at a time of union strength and antagonism, the report contains lots of lines about union matters; during the long period in the center of the study, a staggering percentage of the letter addresses concerns about government and consumer groups, powerful antagonists throughout the period; once the strength of consumer groups and antagonism of Washington subsides, and GM goes to capital markets (1982-85)⁴⁰ concern shifts to Wall Street interests. Despite good financial performance in the years, 24% of the lines are devoted to financial matters as opposed to less than 8% in the preceding 19 years.

³⁹ In fact, thinking of things in this way helps explain a lot of features of business life. Ideally, attention would be *free* of personal idiosyncrasies – that would maximize potential sensitivity to various forces and thus maximize the likelihood of retaining office (or climbing the corporate ladder). Few aspects of business life are more apparent than the attempt to eliminate personal idiosyncrasy: suits and ties, strong norms, long hours in office and with others, etc. ...

⁴⁰ for massive investment in technology including the acquisition of Ross Perot's Electronic Data Systems and Hughes Aircraft.

I know too little about this theory⁴¹ to invest a great deal of time and effort on a set of constructs – but it strikes me that one could develop a predictive theory of executive attention based on the set of external and internal forces acting upon it. External forces upon executive attention include:

Attention to:	is a function of:	which can be predicted by:
Social Issues	Government activism	Democratic power in Washington and key states
Unions issues	Union strength	Union membership (absolute numbers and % of workers) in firm, industry, and nation.
Financial issues	Wall Street activism	percentage of executive turnover
	Potential shareholder dissatisfaction	subpar stock price and/or dividend performance.

In the absence of these strong external forces, executive attention is determined by internal forces: growth (e.g. mergers and acquisitions, non-auto, financial matters) and perhaps social issues close to the heart or personal ambition of the CEO (e.g. Iacocca's concern with the deficit). In the absence of both, attention continues as it were or (in the stable good years of the 60s, the letter is often virtually copied from the year before with a few detail changes: e.g. Chrysler 1967 and 1968 – an acquisition in Spain one year, in Chile the next).

DISCUSSION⁴²

⁴¹ In particular, why did it die? I was quite amazed when I came across it accidentally (in an encyclopedia of Sociology while looking up something else), but these are exactly the terms I had been thinking in. I wonder if it's a coincidence that Lewin was here at MIT, and that I'm thinking about it studying here, albeit 50 years later; are there residues of what the Center for the Study of Group Dynamics had done upon what I am exposed to.

The theory has extensive specialized jargon, which may be folly to dig into if there's good reason why this path was not followed. On the other hand many important insights seem to have emerged: on Group dynamics, cognitive dissonance, action research, gatekeepers, etc.... Even March & Simon's thoughts on aspiration levels seem to have come from this school of research. I suppose that Ed Schein and perhaps others should know something about this line of thinking first hand.

⁴² Papers always have discussion sections, but I've already said everything I want to say. I guess I could say again what I said in the introduction or summarize or tell a cleaner story in the findings section and bring what's left to discussion? Maybe I wait until the end of the whole paper.

II. INTENTION: ADVERSITY AS STIMULUS OR INHIBITOR OF ADAPTATION?

THEORY: NEW INITIATIVES

Probably the fundamental question of science is what causes change. Two streams of research offer precisely opposite answers to the role of adversity. Interestingly, precisely the same controversy occurs on several levels of analysis. March & Simon (1958) propose that change for both individuals and organizations is a goal driven process based on search, which is a function of satisfaction which is a differential between outcomes and aspirations.⁴³

Adversity fits into the picture as one way in which dissatisfaction arises (through a drop in outcomes). The effect then would be to stimulate attention, which initiates a search for solutions to overcome the adversity. This theory has found widespread support and application. Extensive empirical support is summarized in Cameron, Kim et al. (1987); McKinley (1993); and Ocasio (1995).⁴⁴

Another stream of thought, however, predicts an apparently opposite effect. Threat rigidity theory developed at the organizational level by Staw, Sandilands, and Dutton (1981) observe that adversity leads to restriction in information and constriction in control in organizations and groups (as it does physiologically in individuals) which leads to not innovation and change at all, but rather rigidity. This theory has also found empirical support.

Three works have acknowledged this discrepancy: Using poor financial performance as a measure of adversity in a careful cross sectional study of large corporations, Singh (1986) found both a direct effect consistent with March & Simon – poorly performing firms are more inclined to risk taking (reliance on innovation, debt, R&D and high risk-return investments) – and an indirect direct consistent with Staw, et. al.. of centralization, which was *negatively* correlated with risk taking.

⁴³ Look at the section. Add their diagram or equations?

⁴⁴ these actually summarize support for both sides. Maybe I should just do a summary myself here?

Boeker and Goodstein (1991) suggested that the two might operate in different domains, but did not specify. Ocasio (1995) reconciled the two theories by theorizing that organizations do in fact engage in problematic search leading to focused attention, but that this focus of attention leads to solutions that are not really new. Focus means a narrowing of attention. Along with constriction of information, the result is adoption of initiatives which had been previously adopted (1995: Proposition 6) or are consistent with “Western core cultural assumptions” (1995: Proposition 5).

Adversity and New Initiatives

These theories imply a set of competing hypotheses about the relationship between adversity and number and nature of new initiatives: The first hypothesis in each set is consistent with a strict interpretation of problemistic search (March & Simon 1958) and identified with the suffix “PS”; the second hypothesis in each set is consistent with a strict interpretation of with threat rigidity theory (Staw, et. al. 1981) and identified with the suffix “TR”; the hypotheses consistent with Ocasio’s (1995) reconciliation is identified with an asterisk.

Number of new initiatives:

The most straightforward adjudication of these alternate theories is to find out how many new initiatives occur under “normal” and adverse conditions. Problemistic search theory predicts that, under adversity, the number of new initiatives go up. Threat rigidity theory suggests that the number will decline.

*** H2 - PS: New initiatives go up during adversity**

H2- TR: New initiatives go down during adversity

“Newness” of new initiatives: Prior adoption

Ocasio, however argues that number is not enough; the more important issue is the nature of new initiatives. Consistent with the threat-rigidity thesis that threat leads to constriction in control and restriction in information, Ocasio proposes that both of these processes lead to less “new” new initiatives. Constriction in control leads to cognitive overload which leads to increased reliance on

available solutions. Restriction in information leads to fewer choices which also leads to increased reliance on available solutions. The most directly available solutions are those which a firm has already used.

On the other hand, strategic reasoning suggest that it's unlikely that *good* solutions to problems faced under adversity will be those previously adopted. If the adversity was caused by organizational shortcomings then they should want to fundamentally change their strategy. If the adversity, however, is the result of environmental changes and no fault of their own, they should also want to fundamentally change strategy to adapt to the environmental changes. Problemistic search theory, based as it is, on intended rationality, would seem to support the hypothesis of "new" new initiatives in the wake of adversity.⁴⁵

H3 PS: New initiatives undertaken during periods of adversity are more likely to have been previously used by the company.

*** H3- TR: New initiatives undertaken during periods of adversity are less likely to have been previously used by the company.**

The next most readily available solutions previously adopted by others in the organization's institutional field. The institutional field for the American auto companies would be other American auto companies.⁴⁶ The same logic applies as for Hypotheses 3.

⁴⁵ There's a problem with this formulation. March & Simon and problemistic search are based on cognitive limits, a point which Ocasio uses to develop his thesis. The alternative is really a rational choice argument rather than a careful interpretation based on March & Simon.

⁴⁶ I need to get a good reference on how to identify an organizational field.

What I'd really like to say here, but it doesn't quite fit the format is that I'm going to see who does what first, and whose initiatives they follow. Do I need a hypothesis?

H5- PS: New initiatives undertaken during periods of adversity are more likely to have been previously undertaken by other American auto companies.

*** H5- TR: New initiatives undertaken during periods of adversity are less likely to have been previously undertaken by other American auto companies.**

Potential adaptive value of new initiatives

Finally, we want to know just how adaptive the initiatives are. Such an assessment probably requires more assumptions than are prudent, but one indication may lie in the functional areas wherein the initiative fall. Similar to the arguments presented above, Ocasio proposes that new initiatives undertaken during adversity will rely more heavily on core cultural assumptions. This leads to the hypothesis that they will concentrate more heavily in dominant functional areas.

Again, strategic logic suggests that *good* solutions to problems faced under adversity will likely come in new functional areas. If the adversity was caused by organizational shortcomings then they probably have previously unattended to functional shortcomings. If the adversity is the result of environmental changes, then new functional areas must take on new strategic importance.

H4- PS: New initiatives during adversity are likely to be in functionally different areas than past initiatives.

*** H4- TR: New initiatives during adversity will concentrate in dominant functional areas.**

METHODS

Annual Letter to Stockholder as a Record of Executive Intention

In addition to providing an attention structure, the letter to shareholders also documents initiatives executive management deems worthy to report.

Admittedly, these are not all the new initiatives a firm undertakes, and the letter may report initiatives which are never implemented. The new initiatives may be a very biased sample, but this is subject to empirical investigation, and that, in fact is the proposed next phase of the project. Despite

these cautionary considerations, the public executive intentions are communicated in the letter; whether honest or not, these publicly-stated intentions are an important part of the story.

Coding the data: What I did

While coding Chrysler's attention structure (which I did after completing GM's), I also noted new initiatives. I thought that this was a fairly straightforward notation, although it did not fare well on subsequent intercoder tests (see below). Despite this very serious problem, I'll report my preliminary findings as well as what I intend to do to improve reliability. Table 5 shows a sample of the Chrysler database with new initiatives noted.

Table 5: A sample of the Chrysler database (1967-1968) with new initiatives noted.

1967	Chrysler	Lines	Cat	N.I.	1968	Chrysler	Lines	Cat	N.I.
Record sales		8	sales		7th year record sales		8	sales	
Record 4th Q		6	fin		Record 4th Q		6	fin	
Int'l sales		7	sales		Int'l sales		7	sales	
Ind sales		7	AI		Int'l sales		7	sales	
mkt share incr		14	mkt shr		mkt share incr		14	mkt shr	
Int'l sales		8	sales		Int'l sales		8	sales	
* buy Barreiros (spain)		3	MA	#	*Buy Nun y German(Chile)		3	MA	#
Brit sales		6	sales		Gen progress				
Chyrlser Realty		9	NA -u	#	Chrys financial great yr		8	na - f	
other divs		8	NA -u		Chyrlser Realty		7	NA -u	#
defesne/space		7	NA -u		Chyrlser leasing		7	auto rel	
strike settle		7	union		Parts sales		5	auto rel	
enthusiasic recption		10	ca		New preparation program		9	service	#
data		6	fin		Defense-space		6	na - u	
Foreign bond offereing		10	ofi	#	Diversified products		9.5	na - u	
completion of fac expansion		7	ce		* C-Nissan distr agree		3.5	alliance	#
Sales & productivity incr.		8	costs		New construction, expansion		13	fac	#
							3	ce	
Graph on Net Sales, Net Earnings, Shareholdr investment							17	fin	
					Strat objectives achieved		12	strat	

I also put the new initiatives in a separate sheet and tried to say whether it was adopted before, consistent with Western core cultural assumptions (a category I've since abandoned) and their motive. I did not finish this because of time and the need to first try to resolve the intercoder reliability problem.

Table 6: Sample new initiatives analysis.

1967	Major Initiatives	Adopted Before?	Consistent with Western Core Cultural Assumptions?
	Buy Barreiros (spain)	Yes, by company	Yes, Growth by foreign acquisition
	Chrysler Realty	Yes, by company	Yes, Growth by Diversification
	Foreign bond offering	Yes, by GM	Yes, Growth by foreign acquisition

(Lack of) Intercoder Reliability and What I intend to do about it.

Intracoder Temporal Reliability

Intertemporal reliability was good, but only a few months separated the trials.

(Lack of) Intercoder Reliability

I asked one undergraduate⁴⁷ to also code what I had done, and reliability was terrible. He found a very different mix of initiatives over two years than I did. I think that the biggest problem was that I did not explain the construct of “new initiative” adequately. To do so, I must also define what is *not* a new initiative. For reasons I feel confident about, but cannot explain, I believe a big part of the success of the attention coding is due to *comprehensive* coding. I’m going to try the same with the new initiatives.

A Proposed Complimentary Comprehensive Coding Scheme: Key Nouns and Verbs

In addition to a functional orientation, I believe that all paragraphs have also an “action” orientation, one of the categories indicated below in Table 6:⁴⁸

Table 6: *Proposed new coding categories to improve intercoder reliability on new Initiatives.*

- Informing –
 - Data, Condition, Events
- Projecting
- Evaluating
- Reacting
 - Response to others’ actions (e.g. unions, government)
- Acting -
 - “Genuinely New” Initiative,
 - Initiatives previously adopted by others “outside industrial field” (whom?)
 - Initiatives previously adopted by others inside industrial field” (whom?)
 - Initiatives previously adopted by company
 - Ongoing routine activities

⁴⁷ A different one, a complete rookie.

⁴⁸ On the other hand, I can also check again to see how Chen and McMillian handled this problem

I'm thinking that for each paragraph there is a key noun – the functional area – and a key verb – the type of activity. I think that if I work a little while with my co-coder, we'll come up with good reliability on this also. Until we do that, I don't want to invest too much time on this analysis, but here are the preliminary results.

PRELIMINARY FINDINGS: NEW INITIATIVES

Both cases provide support for the March-Simon thesis of problemistic search and show **no** support for Rigidity-threat theory, not even Ocasio's reconciled version. Poor performance correlates with both number of initiatives reported and how new the initiatives were. Beyond that, the CEOs seem to *outperform* nearly all academic expectations in that they at least report actions taken regarding major environmental changes – globalization, small cars – well before any crises developed, and before it was completely apparent that such steps needed to be taken.

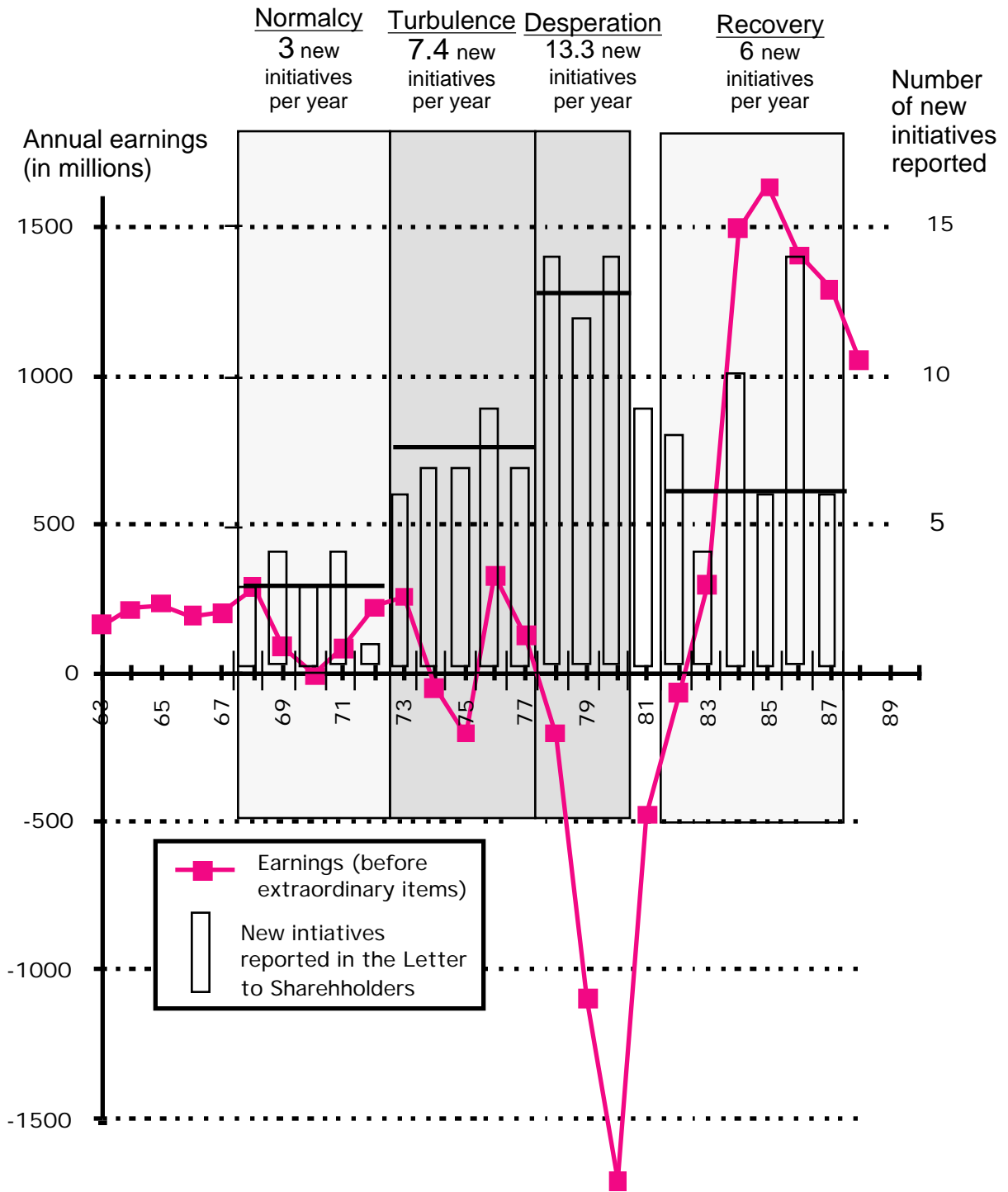
Adversity and the Number of new initiatives:

Evidence of Problemistic Search

Chrysler –

For Chrysler, poor financial performance correlates with number of initiatives reported. As figure 1 illustrates, prior to 1972 there were few initiatives reported in the annual letter, an average of only **three** per year. In the turbulent period following the first oil embargo, from 1973-1976 there were an average of **7.5** new initiatives per year. When the bottom began to fall out for Chrysler until they stabilized in late 1981, they were doing anything and everything – an average of 12.25 new initiatives were reported per year.

Figure 4: New Initiatives as a function of financial performance⁴⁹



49 correct 1983, Should be 10 new initiatives

Once Chrysler began to move back into the black in 1982 the pace of new initiatives slowed. From 1982 until the end of the study (1986), there were an average of only 6 per year, and even that number may overstate new activity reported. Of the thirty new initiatives in this period, sixteen⁵⁰ (56%) were financial moves that restored conditions prior to the financial crisis (e.g. retire or consolidate debt, stock splits and options, dividend reinstatements and increases). Prior to the crisis, financial actions accounted for only 12% of new initiatives. ⁵¹

Statistical Analysis

The correlation between number of new initiatives and income is -.1 for Chrysler, significant to the _____ level.⁵² The relationship between poor performance and new initiatives is probably higher in reality, because the events of two years erroneously deflate this finding. In 1983, the company had its first profit in years and promptly embarked on several financial initiatives to pay off debt incurred as a result of previous insolvency. In 1985, the company paid off on other debts – giving big bonuses to the union, perks to distributions, and added dividends to stockholders. If we leave out these two years, the correlation grows to -.41 ($p < .001$).

GM: A variety of threats and new initiatives to address them.

For GM, adversity is less indicated by financial performance than specific challenges it faces and discusses. GM never suffered really poor financial performance throughout the ‘crisis,’ losing money only one year, but they did face a great variety of threats.

In response to social threats, it adopted a wide variety of social programs. Once it finally responded to the Japanese threat in 1982, it began to take on all sorts of new initiatives. Like Chrysler, GM seemed to be trying anything and everything – new joint ventures with Toyota, massive investment in technology and technological acquisitions, plant closings, overseas investment,

50 go back and check.

51 correlation would be greater with 4th Q. earnings (and perhaps 1st Q of following year – they are written in Feb. or March). Another variable which could contribute to R-squared would be change in fin. performance. ‘81 for example was an “up” year.

52 Check for significance. Need to review how to do this and best present this data.

etc.....

How new are the new initiatives?

I'd like to do a chart as indicated below, but that will have to wait.

Table 7: *Proposed chart on how new the new Initiatives are*

Period	Number of New Initiatives	Number of Non-financial new Initiatives	% Adopted before		Functional area distribution
			In co.	In industry	
<hr/>					
<hr/>					

My sense of the data on a first go through is that they do *not* support Ocasio's thesis. There is very little variation prior to adversity, but wide variety with the onset of adversity, and increasing innovation as things get worse.

In good years 1967-68, the new initiatives are almost identical. Buy a Spanish carmaker in 1967, a Chilean carmaker in 1968; an investment in Chrysler realty in both years.

As adversity set in, 1973-78, the new initiatives become more varied and more "new": divestment programs, major new product development (4 major new products in 1978), hiring Maserati to design the cars.

When things became desperate, they made unprecedented moves: taking on as partners the government, union, and dealer network. The company focused fully on automotive operations with an emphasis on altogether new cars, quality, and marketing. In particular its promotions were something altogether new in industry with the CEO direct appeal, money for simply taking a test ride, and everything-covered, and seven-year warranties.

DISCUSSION⁵³

54

⁵³ As before, I've already said everything I want to say. I guess I could say again what I said in the introduction or summarize or tell a cleaner story in the findings section and bring what's left to discussion?

⁵⁴ I thought I might say something about Emotions: that there is no evidence of anger or emotions in the text.

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¹ before extraordinary items

Appendix A: Attention Categories

* Items in *Italics* (and with *) are categories consistent with "lean production" innovations

Mfr/Ops

<i>Manufacturing Processes</i>	<i>mfr</i> *
Capital Expenditures	CE
Facilities	fac
Sites	Sites
Costs/Efficiency	Ops/cost
<i>Manufacturing Quality</i>	<i>Q</i> *
<i>Lean Prod</i>	<i>LP</i> *
Productivity	prdtvt
Production Mix:	Prod Mix

Sales/Marketing/Prod Dvlpmnt

Sales data/evaluation	Sales
Market Info/Competition	MI/Compet
Customer Acceptance/Demand	CA/CD
Market position	Mkt pos
Market share	Mkt shr
North America	NA
Worldwide	WW
Marketing	Mkt
Service	Service
<i>Product Development/Design</i>	<i>PD</i> *
<i>Product Quality</i>	<i>PQ</i> *

Financial

Financial Performance	FP/Fin
Other Financial information	OFI

Human Resources

Union issues	Union
Labor Costs	Lab Cst
Employment/Payroll	Emp
<i>Human Relations Stuff</i>	<i>HR</i> *
Motivational	Mot
Pure Fluff	Fluff

Strategy & Structure

General Strategic moves	Strat
Statement of Goals	Goals
Statement of Identity	Id
Mgmt Changes	M
Reorganization	Reorg
Mergers, Acquisition,	MA
Alliance	Alliance

Macroeconomics

Auto Industry conditions	AI
Auto industry projections	AI proj
Macroeconomic Conditions	MEC
Projections	MEC proj

Non Auto

NA

Financial Services
Realty
Leasing
Parts
Defense
Diversified

Public Issues

Affirmative Action	AA
Consumer Issues	Cons
Economic Benefits	EB
Energy issues	nrg
Industrial Policy	IP
Pollution Control	Poll
Regulation (General)	Reg
Safety (of autos)	Safety
Social Responsibility	SR
Workplace Safety	WS

Other

Intro	
Close	
Confidence	Conf
Gratitude	Grat

APPENDIX C1

GM LETTERS TO STOCKHOLDERS COMMENTARY

Done: Fall 1993 and Spring 1994 (1st year in the Ph.D. program)

1963 and 64: Labor & the World

In 1963 and 64, GM executive attention was on labor and the world – labor as it's thorniest problem, and global expansion as it's most exciting opportunity.

In '63, prior to negotiations, they are gentle with labor:

Results have continued to demonstrate the value of long term agreements...The achievements of 1963 stand as a tribute to ... men and women who are employed ... by GM ... We know their continued energies and loyalty can be counted on ...

In '64, they devote 27% of the letter to explaining their position on the strike. The image it conjures up in me is a helpless giant fighting to do (what it believes) right in the face of an unyielding Lilliputian onslaught.

Since 1958, we have maintained our price levels in spite of an increase in employment costs that has amounted to 34%.

Again they finish conciliatory, although the UAW would surely have questioned their sincerity.

We do all we can to make working for GM a worthwhile occupation. We believe we have the basis for a continuing, satisfying relationship... employee turnover is at the lowest level it has ever been, and we aim to keep it that way.

Foreign expansion is the company's most exciting opportunity:

We are continuing to expand our facilities overseas. By the end of 1966 we will have a total manufacturing capacity about double what it was in 1962 before we started producing one liter cars...

Is there a message between the lines to the UAW that 'we're building overseas'?

Also, is Is this for real?

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.

1965 & 66: The Good Corporate Citizen

Reading these pages, one can get the impression one is a shareholder in Motherhood and Apple pie. Managers may think that's who they work for, and executives may really think that's who they are. The '65 report includes:

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 ¹...

What follows is a similar statement about emissions control.

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

Exports are framed as:

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.

In '66 they state that

... challenges we face in the years ahead ... include the search to find more efficient and more effective ways to reduce air and water pollution, reduce traffic congestion and improve traffic safety... We will continue our long-standing policy of cooperation with all levels of government toward improving traffic safety, reducing traffic congestion and eliminating air and water pollution.

Meanwhile the company is phenomenally successful. Market share of domestically produced cars is 51.8%, although I'm not sure why they discuss market share this way. It's interesting that they do not say US market share is 48% or whatever it is.

They are running into problems of grand scale success: How to be all things for all people--not only shareholders, employees, customers, but also for the nation and the world. Rather than admit that is impossible, they claim to actually be doing it all.

A strange phrase used repeatedly is *customer acceptance* rather than *customer demand* or *satisfaction*. *Acceptance* implies that their products are acceptable, nothing more.

¹ Although nowhere mentioned in the pages of the annual report, this (65 & 66) was the time of Ralph Nader and Rachel Carson. GM is, at best, responding to criticisms. Other evidence indicates that they were actively resisting safety and anti-pollution measures. One should keep in mind the lesson many car people learned in the 50's. At that time, GM built an enormous lead over Ford by offering chrome and power when Ford was trying to sell safety. (There is a good quote from *Car Wars* which I could dig up if you want.)

In retrospect all this "good citizen" talk is quite wearisome. Perhaps this type of talk, at the first evidence of hypocrisy, bred the disillusionment and backlash of the late 1960s against the establishment. It's one thing to say customers don't want to pay for safety, another to portray themselves as fighting for it. This is the kind of document that destroys credibility.

1967

Most phrasing in this document, justifies corporate activity in terms of the larger community:

Higher labor and material costs are exerting severe pressure on the general price level. At the same time, the government has urged price restraint by all businessmen. In this connection, the record of stability of new car prices ... is noteworthy.

They go on to justify current year price increases as primarily due to new safety and anti-pollution features.

39% of the letter is devoted to concern and performance on what I've called community issues: safety, pollution, and national economic interests. I believe this concern with community interest is based on appealing to a public sentiment that pursuit of profits and meeting customer demand is not a fully legitimate activity. GM by framing its actions in terms of community good gives support to this sentiment. It also implies that GM has a lot of justifying to do. Their concern year-in/year-out with justifying prices seems more appropriate to a utility arguing before a rate commission and, therefore, implies that there is a public perception that GM essentially controls the market and is not subject to market forces.

Another 16% of the '67 letter is devoted to union issues. This at a time when Toyota was making its first significant international advances based on new management-labor relations.

On vendor relations, it is interesting to note GM's concerns while Japan was developing its supplier quality system:

At the beginning of 1967, because of a possibility of strikes, GM initiated an inventory accumulation program for copper... A similar inventory accumulation program was initiated at the beginning of 1968 with respect to steel.

A new odd way of stating market share: "54.7% of North-American type passenger cars."

1968

In 1968, we find GM's first acknowledgment of public criticism:

Public attention is currently being focused on two other matters: competition and the consumer aspects of the automobile industry.

As with safety and pollution, they admit no wrong shortcomings. Quite the contrary:

GM presented ... to the [US] Senate ... a study [of] the history and intensity of competition in the automobile industry.

Our records show that about nine out of ten complaints received ... are resolved to the customer's satisfaction... By and large our industry has done an excellent job of providing the finest system of personal transportation in the world.

While Toyota is refining a new mode of production, GM's only references to operations are to the new sites around the world.

Every letter since 19__ ends with a similar paragraph:

Our success could not have been achieved without the efforts of our employees, dealers and suppliers and the loyalty of our customers. We want to express our sincere appreciation to all. With their continued dedication to the job at hand, the competitive challenge of the future can be met with confidence.

This and union confrontations are the only entries under the "human relations" category. Again, while Japan breaks new ground in the workplace, GM's human relations is praise for loyalty. It makes me think of the family Christmas letter with an obligatory last paragraph mention of the loyal family schnauzer. The format in general is extremely formulaic almost rigid. Is this true for the company as well? The message seems to hold less content each year. For example, a duplicated paragraph about looking forward to a good year.

Note on coding: Recall discussion was included in "Operations" in '67, but a similar discussion on consumer complaints was included in "Community Issues" because of the context of government involvement. Similarly, a paragraph on Value has evolved from a discussion on operations efficiency to one of public service. In '64, it follows a discussion of record earnings; in '67, it follows a discussion of higher costs that price increases did not cover (65 and 66 should probably be reclassified).

1969

Note on writing: The balance required to defuse activist sentiment against the company while still portraying itself as a vibrant business is taking it's toll on the writing. The '69 message is filled with non-sequitur sentences²:

In the automobile industry we can look forward to more keen competition. The introduction of the new Chevrolet Camaro and Pontiac Firebird should provide a strong stimulus to sales.

This immediately follows a national problem paragraph:

To establish a firm foundation for further [national] growth, the current inflationary spiral must be checked. To accomplish this, we must all redouble our efforts to increase the productivity of the country. Also, there is an urgency to find the means to revitalize and rebuild our cities.

² This makes it difficult to specify a theme.

1970

A very bad strike. Maybe GM didn't internationalize fast enough. They are no longer acting the hero in absorbing costs and increased public demands. For the first time, they are taking a public stand in this forum:

The problem of inflation continues to impair the ability of US industry to ... maintain a sound competitive posture... Also, we must find ways to prevent the long strikes which plague our economy so much more than in most other nations which compete with us.

They're very aware of the foreign 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.

Note: I awarded 3 lines each to items covered in the special section (Safety, Pollution control, Consumer issues, and general economic benefits) for a total of 12 lines rather than the 3 given in the message to reference the special section. Perhaps this is not enough, but taking it off the message page indicates that perhaps these issues were for the year a delegated function rather than an area of direct CEO attention.

1971

GM is in a socialist bind: Do too well, and they'll be asked to meet more social goals; do poorly and they can get the helping hand. They make me think of Ayn Rand's political insiders at this point rather than a vibrant economic enterprise both in their tone – stating at length their lack of profitability – and implied political machinations. It surprises me to see the nation's largest company as active supporters of industrial policy. After railing about lack of profitability despite record sales due to increased costs, they state:

... higher costs were announced ten days before the President's announcement of the price freeze. In the spirit of the program, GM's immediate response was to rescind the increase...

Despite its impact on GM's earnings, the Corporation maintains its steadfast support of the President's program.

GM was not entirely altruistic in all this: Nixon's program included a repeal of the excise tax on new cars and light trucks and a temporary import surcharge increase from 3.5% to 10%.

If one were to read nothing outside of these reports, it would seem unbelievable that GM is seen as an *adversary* of safety, consumerism, environmentalism. In the annual report, year after year, they present themselves more as the Save the World Foundation than a private industrial concern.

This preoccupation with political issues affects attention on traditional corporate areas. Discussion of human resources is, except for the obligatory last paragraph, exclusively on labor negotiations. Discussion of operations is (1) primarily on costs--the need to restrain and justify them, and (2) secondarily on new sites, the implication being that location, rather than features, of sites is important.

1972

This is not a company out to present performance in the best light:

... 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 paragraph is designed to hide record earnings rather than proudly display it. Maybe they should have broken up the company to get the public off their backs so they could get back to business.

They have gone beyond discussion of political issues to being a political entity:

The nation's interest and the continued threat of inflation impose a special responsibility upon GM. We have publicly endorsed and are supporting the President's program even though cost inflation is still affecting GM.

Perhaps this is central to their labor strategy. They express the hope that labor leadership will

regard the [upcoming contract negotiation] as a timely opportunity to encourage the nation's economic growth by achieving an equitable and non-inflationary agreement without any loss of production.

Until now, every discussion of public issue portrayed GM as in the forefront of safety, pollution. In '72, for the first time, they complain:

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...

Yet, still, discussion of operations and design are framed by public issues:

We are also hard at work on the problems presented by the much-discussed national energy crisis. GM...is now installing in our Cleveland Chevrolet plant, a system which we think will enable us to burn coal – our most abundant energy resource – with few of the polluting effects....

Because our cars and trucks are significant users of the nation's fuel supplies, our long range product planning must consider ...

1973

The impact of the energy shortage on car sales was immediate and measurable.

So, too, on GM executive attention, at least as measured in this study. Until now, public issues such as regulation and price controls were gaining continually more space in the message rising from nothing in 1963 to 45% in 1971 and 56% in 1973. This year we see a significant drop to 22%.³

First, the report has changed format for the first time in years. It is twice as long, and is written much more sharply with much more information about expansion plans, explicit market considerations, and an honest appraisal of the agreement with the UAW. Still, apparently for political reasons, there is no acknowledgment of just how good a year 1973 was (record sales; record earnings). It's not until I read the '74 report that I realize this.

1974

Back to politics! Discussion of the energy shortage takes up a remarkable 38% of the message.

This year, however, there is an unmistakable fighting tone to the letter:

Conservation is simply the wise use of our resources.

...it is discouraging to note that, more than a year after the oil embargo began, the US was importing more oil than before – and producing less domestic oil. In this irony lies the clear lesson that two centuries of free enterprise should have taught: that we must rely upon the market mechanism ...

Our national energy policy must aim at balancing all the needs of society, from ecological to economic, while fostering prospects for further growth and progress for everyone.

They take for granted their prominence in national politics:

We have assured the Administration we will make an all-out effort to achieve the national objective of a 40% improvement in gas mileage by 1980.

They finally got rid of that hokey last paragraph.

³ Check once actual lines are counted.

The concern in Manufacturing is almost exclusively with costs.

There is no mention at all of market share or of the Japanese **ever**. I have no idea whether it is steady or declining or what percentage of sales they have around the world or in the US. No use of even the term "market share" since '67.

1975

Strange that they talk about end of '74 in '75 report.

There is an aspect of self-congratulations I hadn't observed before:

Yet even when 1975 was darkest, GM was ... planning for better days ahead... we forecast a steady strengthening of car sales ... GM scheduled its production to match to its prediction.

The thanks they traditionally extend to others this time includes themselves:

1975 represents a triumph of confidence... Most gratifying was the teamwork demonstrated by the entire GM organization.

"Cadillac Seville was enthusiastically received" contrasts sharply with comments in *Rude Awakening* (Keller, 1983)⁴

Year in-year out, the sole concern in operations is with costs, and price restraint – and it's not to gain competitive advantage, but rather to help fight inflation:

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.

There is the most direct discussion of import competition to date:

... the Chevette symbolized the readiness of GM to change quickly and to compete strongly ... the percentage of foreign car sales in the US, which had averaged more than 20% for the first nine months of the year, declined to 13% in the fourth quarter.

They seem to finally begin to acknowledge their own role in conflict resolution:

[In 1976] cooperation will be the key. A more cooperative relationship must be achieved with the unions ... [and with] government, whose laws and regulations will materially alter the design, the performance, and the cost of our future products.

But, even more than before, they seem to insist on their own terms for cooperation:

... massive disruption of free-market choice would be caused by the Energy Policy and Conservation Act, and we are seeking its amendment...

⁴What are the actual sales figures?

1976

There is lots of numbers talk, including clearer numbers of US and WW market share (47.7% – up 4% – and 25%).

They repeat the '74 editorial concerning national energy policy:

That the US must develop an energy policy ... is no longer debatable ... the clear lesson that two centuries of free enterprise should have taught: that we must rely upon the market mechanism ... to lessen dependence on foreign oil.

One must wonder about the proclivity for editorializing on national policy in this message – but the decision to run this twice is particularly questionable. It's a confused editorial: Market mechanisms would not necessarily lessen dependence; they would more likely increase it. Advocates of free markets scoff at the concern with "foreign dependence" and any sort of industrial policy. More than just editorializing, this year's report includes a call for direct action:

We ask that you join us in urging your representatives in Congress to vote for ... [a relaxation of emission standards].

1977

This preoccupation with external affairs is problematic not just because it takes up so large a portion of their attention structure; it may take up an even greater amount of psychic space. Methods for making and selling of cars appears unchanging and secondary. All the emphasis is on public issues on which they seem to be inconsistent or dragged. Rather than begin in control of the situation, they are responding to legislation on every issue.

Do the Japanese have all these problems with safety and emission control?

1978 & 79

Criticism of GM with respect to failing to anticipate the energy crisis seems unfair. The company seems to have *foreseen and prepared for the upcoming energy crisis*. They tried to prevent it with long harangues for development of domestic energy sources, and most discussion of product design – outside of mandates for safety and emission control – concerns fuel-efficiency.

Their market projection, a closing paragraph each year, is meaningless, always a bit higher than the current year.

They speak of the Auto Industry as the big three or GM only.

1980

A big focus this year on gov'n't policy with a lot of editorializing.

I've changed policy with respect to projections; each year they project sales a few percentage points higher than current year.⁵ The only variation (a spread of a few percentage points) is a due to February (date of letter) macroeconomic conditions. Because of this I put it as a subcategory under macroeconomics rather than sales.⁶

1981

This is the kind of letter that will mobilize the environmentalists and probably alienate anyone with environmental proclivities. The usual social responsibility paragraph is followed by two misleading paragraphs suggesting that GM is favoring environmental legislation.

... we are maintaining our commitment to our social responsibilities in such areas as equal employment opportunity and environmental protection... With respect to the latter, GM⁷ and others – including the EPA – urge changes in the Clean Air Act...

We are disappointed that the U.S. Congress did not act in time ... we applaud President Reagan's call ... for prompt enactment of a responsible Clean Air Act. It is what the country needs.

An even more explicit statement of the role of Macroeconomic conditions:

... improvement in GM sales and earnings will essentially depend on the solution of economic problems.

Finally, the first mention of Japan, and it's an important one:

... In 1980 for the first time, and again in 1981, Japan led the U.S. as the world's largest producer of motor vehicles – in both years by wide margins.

The only specific response is a rebate. This is the first use of this concept.

⁵ A particularly simple version of "anchor and adjust."

⁶ These projections should probably be recoded from the beginning.

⁷ All abbreviations are mine. GM never abbreviates in letter resulting in more space for less meaning.

1982

Are these guys playing games with the numbers? Two years decline in sales (5% and 8%), but they claim profits are up and that it was “a year of progress.”

There is always an enormous capital investment program going on. It sounds like the Soviets’ constant five-year plans.

A return to some pure fluff unseen in several years outside of the intro and close.

We will continue to be ... untiring in building on a new spirit of cooperation among all GM people.

Including intro and close, 42 out of 169 lines are fluff of this sort. Nearly 25% compared to usual 5%. A lot of talk of cooperation, 3 paragraphs 28 lines 20% of text (excepting intro and close):

... enhancing the quality of work life and fostering the new climate of cooperation in the workplace are part of the even more important human investment which remains one of our biggest competitive assets.

This is something quite new. Discussion about labor has been much more confrontational for some time. Prior to that it was formal and paternalistic.

There is always an enormous capital investment program going on. It sounds like the Soviets’ constant five-year plans.

A return to some pure fluff unseen in several years outside of the intro and close.

1983

A lot more talk of cooperation, two paragraphs on cooperation with labor and another section praising the new spirit of cooperation in presenting financial data. Again, nearly 20% of the text.

One puzzling sentence opens the third from last paragraph:

We were disappointed at the apparently small number of vehicles our Japanese associates may be allowed to export to us under the Japanese government's allocation made in extending voluntary restraints on shipments to the United States.

...But weren't they pushing for export restraints? They never did mention it, except here to say how it's hurting them. But what should Japanese government do? They never wanted restraints to begin with, and GM expects them to use their quota for GM's benefit?

1984

For the first time since 1963 there has been a mention of manufacturing process. One of the most shocking aspects of this study is that they went 20 years without mentioning it! Occasionally, there was a line about how many billions were going into capital expenditures, but absolutely nothing about the process per se. As much as any other piece of evidence, this may have been the source of the company's decline.)

In apparent conflict with the threat-rigidity hypothesis, GM is trying things, lots of things and earlier than one might have anticipated. It is formenting an alliance with Toyota and buying up a leading information technology firm, EDS, and a quality consulting firm, Crosby.

Over the past two years, there has been a big change in focus: A big continued emphasis on human resource issues: profit sharing, cooperation, and on product design (four paragraphs).

There has been **no space allotted to macroeconomic conditions or public issues.** GM is getting back to business and doing so in a progressive way, even leading the trend.

They seem to be celebrating with very big bonuses and profit sharing a bit prematurely

1985

Continued attention on manufacturing process with a big story in the Hughes purchase. But is the Hughes purchase really something to help the auto business or does it reflect a fascination with high-tech? Also a lot of non-improvement stuff coming back in. A new big element of the report is other financial information, including a lot of information about different classes of stock. This wasn't even a category until a few years ago; now it is 14 % the past two years.

APPENDIX C2

CHRYSLER LETTERS TO STOCKHOLDERS CODING NOTES

Done: Summer, Fall 1995 (2nd summer and 3rd year in the Ph.D. program)

1967:

Strike much more mild for Chrysler?

Interesting v. little Social Issues - big contrast with Ford & GM

Int'l. Chrysler Realty.

unrealized expansion too

Better written than Ford: Not so much fluff; clearer paragraphs

Defense-space as unrelated: It is a judgement call. There is a technological imperative and also a social imperative in participating.

1968:

First two thirds almost copied from prior year

Proud to be in space.

The whole report is written with seemingly genuine pride (a company I'd like to work for)

1969

First six entries represent combined first four paragraphs

Early on Japanese Joint venture

Interesting realty project : Planned community. I thought these were anti-car - I wonder how it went.)

Last p. v. HOPEFUL

No mention of new President. What happened to Boyd?

1970

LIFO material perhaps overstates fin emphasis

On top of trends (no denial): "Trend to small cars continued strongly"

"resulting in a less profitable product mix"

They feel they must make a move in response to poor news.

profit for 8-mo period: that's a stretch to say something +

- i. A need to present the good with the bad. Perhaps not just for presentation purposes. Sino, a psychological need, a leveling strategy which allows us to set realistic goals, but keep working without despondency.
- ii. standard format: poor sales, conditions causing poor sales, what we're going to do about the poor sales. When there is a problem, it needs to be explained, and then

solved.

iii. A foresighted move.

last 2 p. not included

1971

First two entries represent combined first 3 p.

i. big complaints despite good results: knee-jerk reaction vs. gov'n't intervention?

ii. new name. For 2% of the co. NA gets a lot of coverage

last 2 p. not included

essentially no new initiatives. Support for Problemistic search continues, although perhaps a better term is problemistic "action."

1972

First two entries represent combined first 3 p.

i. 2 entries represent combined 3 p.

ii. C financial expanding beyond automotive financing into commercial and industrial.

The exploration involved in good times has tended NOT to be in autos, but in DIVERSE operations. This happened both before the Crisis, and once the Crisis seemed resolved.

1973

Not caught off guard: Trend to small cars has been evident for some time. Prod incr. began in 1970 50% now will be 60%.

They say its not a crisis. Is it? We'll see.

Projection in P.10 more a hope than a projection

Last P only 1 line of meaning

1974

i. Blaming regs for what seems like a reasonable thing, dropping truck models.

Reactive explanations: Drop trucks because of regs, cut costs because of MEC

Canda separate p so there is something good to say.

They're going into Jan 1975 so they have something good to say, and even that ...

The Good Results of Car Clearance Carnival promotion are not so good, once you consider what will happen once they stop. Hoping?

Strange lobbying request.

No mention of Japanese still

1975

These big losses are a surprise. Things sounded so rosy.

i. Problem-cause-solution-statement of expectations (of success)

No mention of new chairman. What happened to Townsend? Ricardo deposed both

Boyd and Townsend?

1976

A lot of activity in response to losses

- i. a lot of finance talk because of vulnerable position? A need to calm investors' fears?
- ii. They've been renewing their product line for a long time. They try to do all these things, but don't necessarily succeed. That's why it looks like they're sleeping. They're not, but ...
- iii. an interesting, honest paragraph about the difficulty of maintaining continuity in the face of conflicting demands.

Last 2 p. dropped. Cheerleading.

1977

SO LONG. 3 x normal length. Perhaps length neg corr with performance.

Finally, they begin with total sales

- i. Due to 74-75 R&D cutbacks. A dig at predecessor?

US & Canada 4p combined into 2 entreis

- ii. several ps recombined

still America-centric language: "overseas"

- iii. 3 sections combined into 4 entries

Lots of complaints about fuel economy standards (and safety) regs which will prove helpful.

More serious effects on Chrysler than bigger competitors

new products and high cap expenditures response to [unreasonable] govnt regs

- iv. all these discussed from the view of reducing costs, not improving Q or anything else.

all this complaining and financial danger. They really should have suspended dividends.

1978

They really want to begin with good news. Was the 4Q results contrived?

- i. A long term preoccupation still not acheived. perhaps a niche strategy would have served them better. Reacting to GM sucessful strategy of an earlier era?
- ii. first mention of specifics of ad campaign. Something new in th industry in this forum. Th ad campaign really is new (engineering excellence rather than performance or styling or image) building on space expertise and what seems a true co. strength
- iv. They claim regs hurt them especially. What do others say?

They claim "small" size is a terrible disadvantage. Was this a predominant view of the day? An excuse or reality? How has the market changed?

- v. Identity: resilient and creative? Strat as necessary because of poor returns?

1979

Acutally, doing this project, I think I changed my mind on "bailout." The gov'n't helped cause the problem with regs, and they really were/are partners. It made/makes sense to help.

- i. An outstanding series of promotions. Truly innovative, brilliant strategic move when all hope for recovery would seem to be dwindling. I think this was the time of Iacocca's personal pitch.

In a sense, this was NOT simply an adaptation, but a genuine innovation as a result of crisis conditions. That "Necessity is the mother of invention" implies that things were never so technically isomorphic to begin with. f

Sino, failure allows for those with new ideas (Iacocca) to maybe proceed to a new high, rather than sit at a local maximum.

Seems like a focus on Engineering excellence. Forced to focus in wake of retrenchment (Whetten's comment about results of decline?)

What happened to Ricardo? There's a good story here I suppose.

1980

Focus on fixed costs, rather than GM's variable (labor) costs

One yr complain about fuel efficiency regs, the next they boast about best fuel efficiency.

.5's to account for headers

Blg plea for policy changes, including credit for US-made car.

First Supercompetitive response, except markdowns which seemed driven by desperation.

1981

Iacocca alone signed the letter (Where's Bergmosser?)

- i. Quite a + spin on a \$475M loss.
- ii. Despite agreement (and i think appmt of UAW head to board) no mention of HR policies or even Union harmony.

"Mkt shr" a problematic category: Combined with sales in almost every case.

Perhaps just systematically leave out last paragraph. Check past codes

1982

- i. perhaps breakeven s/b coded "mfr" rather than "fin"
- ii. Central aspect of new product dev is "unmatched warantee": an integration of mktg and pd!
- iii. First direct comment on Japanese trade advantage. Comes in wake of recovery. Does not precede change; perhaps it accompanies the pain. When are the auto worker stories?

critizing deficits (and thereby Reagan) even though it has supported them. Courage or perhaps political ambition (or both).

ballsy last p.: "A blueprint for recov of econ as a whole"

1983

Some pd is product development. This is "product launch."

4 dramatic fin actions driven by desire and ability to clear up the aftermath of gov'n't-guarenteed borrowing

i. Three cost cutting initiatives perviously undertaken (79-83) account for success.

ii. Important terms: crisis planning.

i,ii. Attribution of success: lean, tough

Strike indicates no "era of good feeling" that I expected. Recovery is ascribed to traditional initiatives, cost cutting, technology, engineering, financial acumen, marketing, NOT to HR harmony, process, mfr, alliances

iii. V. personal note.

In asking for "import restraint", says "not advcating protectionist policy", sino "level playing field."

1st legal action mentioned. GM engaged in Super Competitive behavior

All "ip" have an editorial quality

1984

Probably s/ recode earlier intros as intro

i. a nicely written Letter. Picks up Ackoff's theme of "Controlling Our Future"; Iacocca (or an aide) probably read Ackoff's book (1981)

ii. sounds like they gave money to ees and customers, but it's not entirely clear.

1985

Stock info has a place in this report distinct from expression of corporate attention. This is, after all a report. Perhaps this "stock" category s/b subtracted from the total (I'd have to recode everything else)

Categories and words resemble more GM

They talk about things (Quality, productivity) when they have something good to say. Conversely, they talk about new initiatives when they have a problem.

Talking about Japanese more now that they're on solid footing.

They never really mentioned the "Voluntary Restraint Agreement" until now that it's expiring.

ii.If things are well they report what they've done. If things not well, they report what they're going to do, although this is Preactive

iii.Diversifying in response to past downturn as protection against future contraction

They sold their defense unit during the crisis and buy a new one when they've got the dough.

Lots of moves still. Trying to be proactive I think. Maybe a change of public expectations. Actions are good!

iv. I misread "enterprise" as 'empire'. My reading was what was probably in Iacocca's

mind.

I must say that I am sympathetic with their national concerns and am glad to see them express it. A bit Americo-centric, but a legitimate concern.

1986

In a good year, they "Stick to strategy"

In good years, they stick with format