

The institutionalization of crisis response: From theory to business school to business practice

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Abstract

The following paper focuses on academics who made contributions to strategy and management theory with respect to response to external crisis. It is a working paper that reflects research begun and in progress, but by no means completed.

The period covered is 1945 to 2015. The seventy-year stretch includes multiple periods of turbulence for balance of payments inflation, employment and productivity, including the financial crisis of the 1960s and early 1970s, the stagflation crisis of the mid 1970s and mid-1980s, and the financial crisis of 2007-2009. Contributions to theory were coming from diverse fields, including economics, history, psychology, government, politics, finance, sociology and management. At the same time, management education and accreditation were becoming institutionalized (including the systematic ranking of business schools according to number of publications in highly ranked journals, e.g. the Financial Times 45). The paper will address how crisis in the external environment figures in strategy and management theory over time; how business schools teach companies to handle external crisis; how academic theorists shape business response to external crisis. The methodology applied is predominantly qualitative content analysis based on a universe of 1470 articles published in the Financial Times 45 from 1945 to 2015.

Introduction

I am a strategist and something of an anomaly: I have a PhD in Strategic Management from the University of Glasgow. Most strategists in practice are high potentials, assuming a planning role as a next step in a career as a line manager and drawn from every possible function and academic discipline. The nature of strategy practice mimics the nature of strategy in academia: contributors to strategy (and management) theory are drawn from economics, sociology, behavioral science, philosophy, mathematics, computer science

and law. And there is a flaw in the contributions of so many disciplines to a body of knowledge that goes by the name of strategy or management theory – a Babel of languages, a mad array of approaches that ride off in all directions at once.

In 2013 King's College Professor Sir Lawrence Freedman closed a gaping hole in strategy studies, producing a longitudinal study of the discipline from ancient times to the present. There is a chapter on the rise of economics to 'an almost hegemonic position in strategic management' in the 1950s with the influence of RAND and the Ford Foundation on the adoption of economics as the locus of a new science of decision-making, who 'encouraged its embrace by business schools'.

It is the aim of this research to examine written contributions to strategy and management theory made by academics from 1945 to 2015, specifically in the area of planning for crisis in the external environment, a focus area that has not yet been studied. The seventy-year period includes multiple periods of crisis for balance of payments, inflation, employment and productivity, including the financial crisis of the 1960s and early 1970s, the stagflation crisis of the mid 1970s and mid-1980s, and the financial crises of the 1990s-2000s. The basis of my research is 1470 articles that appeared in high ranking academic journals from 1945-2015. See section 3 for details of these journals.

In this paper, the concentration is on my research questions and hypotheses, methodology and very early findings. In my conclusion I address some implications of the research for institutions, history and theory.

1. Research Questions & Preliminary Hypotheses

This is a working paper, and an early presentation of my plan for a large study of strategy and management theory based on 1470 articles focused on crisis in the external environment and its impact on organizations, published between 1945 and 2015.

The aim of this paper is to ask the academics included here: did they use their experience of crisis in the external environment during this seventy-year period to suggest how strategy and management decisions should take account of crisis when discussing growth, organization, measurement and leadership of organizations? I think the current paper addresses that question. The larger study will address a wider range of questions and offer significant consolidated data:

- In each crisis period, who were the theorists publishing about the impact of crisis on management decisions and strategy?
- For each theorist, what was their background, field of study, school; who was their mentor, who did they teach? Did they play a public policy role?
- In what journal(s) did they publish about this crisis? Did they write any books about this crisis?
- What schools of strategy/management (e.g. industrial organization, resource-based theory, institutional theory, interdependence theory and stakeholder theory) appear to have made the largest contribution to thinking about crisis? Does school of thinking matter to writers of the articles studied?
- What universities appear to have made the largest contribution to thinking about crisis?

- What are the implications for future research into planning for crisis drawn from economics?
- What are the implications for future research into planning for crisis drawn from management and strategy?
- Have theorists suggested a “theory gap” and do we need a new theory? What would a new theory look like?

Perhaps more importantly, this study (and to a very limited extent this paper) is a history of a profession that trains future professors, practitioners and policy makers. Finally, in a world in crisis, how relevant to management and growth are theorists, fields, journals and schools? Is the profession relevant to a world in crisis?

For each crisis included in this study there are specific research questions and one question common to all: What does strategy and management theory have to say about the impact of this external crisis on business?

Preliminary Hypotheses

Based on the general questions above, I have some preliminary hypotheses to test:

Hypothesis 1: Contributions to an analysis of crisis and prescriptions for dealing with crisis comes from the many disciplines that have contributed to the knowledge-base that is strategy and management theory

Hypothesis 2: Contributions to an analysis of how crises affect firm performance are as likely to come from economics, sociology, marketing and accounting as they are from management and strategy

Hypothesis 3: Crises are event specific and lend themselves to discussion within an historical context.

Hypothesis 4: Theories of firm or schools of thought that emphasize uncertainty are more likely to model crisis

Hypothesis 5: Theories of firm or schools of thought that emphasize uncertainty are more likely to model crisis decision-making assuming more than one actor and a range of outcomes.

Hypothesis 6: Analysis that seeks to model an historical process whereby crises events are linked - or crisis solutions give rise to new crises - is a starting point for a new approach to planning for crisis.

Hypothesis 7: A new approach to planning for crisis that includes multiple actors, multiple actions and multiple possible outcomes would combine the best of several existing theoretical approaches, bringing to bear resources, institutions, position and politics.

Hypotheses will be tested using qualitative content analysis described in section 3.

2. Crisis: Definition, Limitations, Approach

In this study, a crisis has two parts: a triggering event and public sector inadequacy, the latter part based on Bryson (1981) in *Strategic Management Journal*. One might say by building public sector inadequacy into the definition, I am setting up my exploration to include government and the “routines and institutions” that make government work or not. I can see that.

A crisis event is defined as a change in the environment that negatively affects the economy and/or industry structure, including employment and the growth of firms. ‘The crisis occurs when a system is required or expected to handle a situation for which

existing resources, laws, structures and/or mechanisms are inadequate' (Bryson, 1981: 181). Hence, journal articles were included in the study if they explicitly address the impact of uncertainty, crisis, turbulence or change in the external environment on an organization's plans for growth. Of special interest to this study were articles that specifically addressed the impact on firm growth of productivity, balance of payments/monetary issues, inflation/stagflation, serious recession or depression, financial or economic crisis, but articles were also included with annotation if they addressed the impact on growth of negative change in the external environment without identifying a specific event.

Having performed crisis management for a Fortune 500 company -- once almost saving a buzzed group of Young Presidents lost on a vineyard tour in Napa, California from the vantage point of my metro New York location -- I am aware that internal crises are a far more frequent topic of concern to professional management and strategy journals.

A major limitation of this work is its focus on what strategy and management theorists make of the relevance of crises in the external environment to the decisions and outcomes of firms or industries.

My approach was to allow the full corpus of 1470 articles to identify the crises covered here, not to begin with a set of crises. A deep dive into the articles produced a set of issue clusters, relating crises to their causes and most interestingly to each other, not least because relating events to their precedents requires some attention to history. Since the articles were published in journals ranked by business schools there is an embedded historical approach to strategy and analysis that some will find heartening, if not entirely believable at first gasp.

3. Methodology

My research is based on qualitative content analysis (Krippendorff 2012, Neuendorf 2002) of journal articles, published between 1945 and 2015. Some 1470 of these articles appeared in the journals comprising the Financial Times (FT) 45. Journal articles were included in the study if they explicitly address the impact of uncertainty, crisis, turbulence or change in the external environment on an organization's plans for growth. Of special interest to this study were articles that specifically addressed the impact on firm growth of productivity, balance of payments/monetary issues, stagflation, serious recession or depression, financial or economic crisis, but articles were also included with annotation if they addressed the impact on growth of negative change in the external environment without identifying a specific event.

The FT 45 is used in business school research ratings and calculated according to the number of faculty publications published in 45 academic and practitioner journals. Points are awarded to the business school at which the author is currently employed; the total is then weighted for faculty size. Whether or not journal rankings are flawed, or business school rankings are flawed, both PhD candidates and tenure track academics are required to publish in these journals to achieve promotion and tenure. Hence, it is important to know what journals are or are not making a contribution to an understanding of how the external environment affects the organization and, ultimately, through the academics who wrote the articles and teach in the business schools, the decisions organizations make in crisis.

Table 1 lists the FT 45 journals as well as their origination year, subject area and publisher and 5-year impact factor. These were indexed in Thomson Reuters' Social Science Citation Index and available through Business Source Complete or JSTOR. It does more than that though. Note that the FT 45 includes journals across nearly all disciplines taught in business schools. The second from right column identifies the number of articles on external crisis contributed by each journal. *American Economic Review*, *Harvard Business Review*, *Journal of Business Ethics* and *Journal of Financial Economics* are the largest contributors to the crisis literature. The contributions of the FT45 represent 6% of all articles on external crisis published in the 615 journals included in the Social Science Citation Index.

Table 1 Financial Times Top 45, Subject Area, Publisher, 5 Year Impact Factor, Crisis Coverage

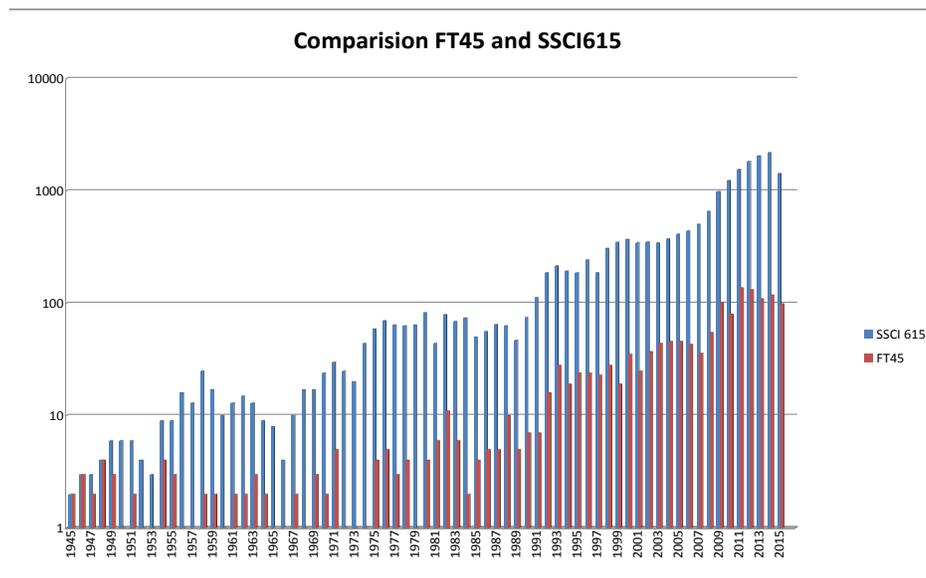
	Publication Title (Year Founded)	Subject Area	Publisher	Articles on crisis 1945-2015*	5-year Impact Factor 2009-2014
1	Academy of Management Journal (1958)	Management	Academy of Management	28	9.812
2	Academy of Management Perspectives (1987)	Management	Academy of Management	7	5.427
3	Academy of Management Review (1976)	Management	Academy of Management	9	10.736
4	Accounting, Organizations and Society (1975)	Accounting	Elsevier	32	3.588
5	Accounting Review (1926)	Accounting	American Accounting Association	16	3.028
6	Administrative Science Quarterly (1956)	Management	Cornell University	19	7.313
7	American Economic Review (1911)	Economics	American Economic Association	202	4.951
8	California Management Review (1958)	Management	University of California, Berkeley	20	2.636
9	Contemporary Accounting Research (1984)	Accounting	Wiley / Canadian Academic Accounting Association	8	2.180
10	Econometrica (1933)	Economics	Wiley / Econometric Society	17	5.758
11	Entrepreneurship Theory and Practice (1976)	Entrepreneurship	Wiley / United States Association for Small	1	5.073

			Business and Entrepreneurship		
12	Harvard Business Review (1922)	Management	Harvard Business School Publishing	135	2.087
13	Human Resource Management (1972; previously Management of Personnel Quarterly)	Human Resources	Wiley	10	2.738
14	Information Systems Research (1990)	Operations & Information Systems	INFORMS (Institute for Operations Research and the Management Sciences)		3.756
15	Journal of Accounting and Economics (1979)	Accounting	Elsevier	14	4.679
16	Journal of Accounting Research (1963)	Accounting	Wiley / University of Chicago	14	3.387
17	Journal of Applied Psychology (1917)	Organizational Behaviour	American Psychological Association	34	7.753
18	Journal of Business Ethics (1982)	Ethics	Springer	141	1.915
19	Journal of Business Venturing (1985)	Entrepreneurship	Elsevier	11	5.305
20	Journal of Consumer Psychology (1974)	Marketing	Elsevier	3	2.561
21	Journal of Consumer Research (1974)	Marketing	University of Chicago Press	9	5.003
22	Journal of Finance (1946)	Finance	Wiley / American Finance Association	96	7.546
23	Journal of Financial and Quantitative Analysis (1968)	Finance	Cambridge University Press	26	2.698
24	Journal of Financial Economics (1974)	Finance	Elsevier	135	5.876
25	Journal of International Business Studies (1970)	International Business	Palgrave Macmillan / Academy of International Business	19	6.067
26	Journal of Management Studies (1963)	Management	Wiley / Society for the Advancement of Management Studies	38	5.883
27	Journal of Marketing (1936)	Marketing	American Marketing Association	21	7.421
28	Journal of Marketing Research (1964)	Marketing	American Marketing Association	10	3.771
29	Journal of Operations Management (1980)	Operations & Information Systems	Elsevier	7	7.692
30	Journal of Political Economy (1892)	Economics	University of Chicago Press	51	5.687
31	Journal of the American Statistical Association (1922)	Statistics	American Statistical Association	20	3.052
32	Management Science (1954)	Operations & Information Systems	INFORMS (Institute for Operations Research and the Management Sciences)	30	3.399
33	Marketing Science (1982)	Marketing	INFORMS (Institute for Operations Research and the Management Sciences)	8	3.035

34	MIS Quarterly (1977)	Operations & Information Systems	Management Information Systems Research Centre, University of Minnesota	15	8.490
35	MIT Sloan Management Review (1959)	Management	MIT Press (Massachusetts Institute of Technology)	23	3.320
36	Operations Research (1952)	Operations & Information Systems	INFORMS (Institute for Operations Research and the Management Sciences)	10	2.824
37	Organization Science (1990)	Organizational Behaviour	INFORMS (Institute for Operations Research and the Management Sciences)	27	6.309
38	Organization Studies (1980)	Organizational Behaviour	Sage	30	3.856
39	Organizational Behavior and Human Decision Processes (1966)	Organizational Behaviour	Elsevier	12	3.938
40	Production and Operations Management (1992)	Operations & Information Systems	Wiley / POMS (Production and Operations Management Society)		2.32
41	Quarterly Journal of Economics (1886)	Economics	Oxford University Press	55	9.794
42	RAND Journal of Economics (1970)	Economics	Wiley / RAND Corporation	5	2.287
43	Review of Accounting Studies (1996)	Accounting	Springer	7	2.007
44	Review of Financial Studies (1988)	Finance	Oxford University Press	73	6.192
45	Strategic Management Journal (1980)	Management	Wiley	22	6.061

Source: FT 45 (2015), *Financial Times*, accessed September 12, 2015 from <http://www.ft.com/intl/cms/s/2/3405a512-5cbb-11e1-8f1f-00144feabdc0.html#axzz3IY3ueFhc>; 5 year impact factor: Thomson Reuters' Social-Science Citation Index® (2014); article counts: Thomson

Figure 1 Comparison of FT 45 and SSCI 615, 1945-2015



4. Theory Schools

Another focus area for comparison is school of thought. Both management and strategy are considered processes and their associated theories are process theories, whatever the particular school we choose to talk about, if we talk about schools at all. Theorists have identified 11 management schools (Koontz 1961, 1980) and 10 strategy schools (Mintzberg, Ahlstrand, Lampel 1998, 2008), their leading proponents, the year the first important journal article appeared in print, among other features. The large numbers of schools and fanciful names (e.g. Cultural School for resource-based theory or Environmental School for Institutional Theory) point to many competitive viewpoints as well as very different terminology as well as approaches. Most assume the correct strategy can be deduced. Uncertainty and failure rarely enter into the theory except in the case of Edith Penrose's version of the resource-based view. Theories that focus on the firm or competitive environment ignore government, politics and the multitude of stakeholders that influence an organization's decisions. Again, Penrose is the exception as well as her mentor Fritz Machlup, both economists created theories of international business (Penrose) and of monetary reform (Machlup) that included government as a stakeholder.

I have chosen to examine the attention paid in the literature (the 1470 FT 45 articles) to the big five --- the industrial organization model (Porter/IO) ; the resource based view; institutional theory; interdependence theory and stakeholder/transaction cost theory.

While Porter/IO and resource-based views focus on strategy, institutional theory focuses on the execution of strategy through organizations, their structure, norms, processes, habits and rules (Hodgson, 1998:167). There are no market results without an

organization to embody strategy, to ensure its critical tasks are accomplished, to hire, train, evaluate, compensate and reward employees, to socialize employees in the rules and the norms of the organization, to structure reporting relationships so that employees are trained and evaluated by managers in the same discipline with greater responsibility. Firms, non-profit organizations, government agencies, NGOs are a few of the organizations in the purview of institutional theory.

Institutions exist in a neighborhood of institutions and in a city, a state, a country, a region where government and self-government institutions make decisions, impose requirements that affect *their* decisions. Power and politics enter the picture. Keohane and Nye define dependence as ‘a state of being determined or significantly affected by external forces’ and interdependence as ‘mutual dependence. Interdependence in world politics refers to situations characterized by reciprocal effects among countries or among actors in different countries. These effects often result from international transactions – flows of money, goods, people, and messages across international boundaries.’ Finally stakeholder theory considers the larger (than the industry environment of Porter/IO) community of which the organization is a part and attempts to understand the relative costs of strategic choices.

An intended output of this research will be a new theory, the advocacy of an existing theory, or the jerry-rigging of an existing theory (ies) to include crisis and consider the opportunity costs of organizational choices made when the organization is in crisis.

5. Early Findings -- Issue Clusters

While Mintzberg has described theory contributions as descriptive or prescriptive, and I would largely agree with his characterization and would add preventive to account for largely coming out of finance. I would add a further categorization – single issue or issue cluster.

At this my stage in the research, across the 70 year period, there appear to be nearly a dozen recurrent families or clusters of issues related to crisis in the external environment, many clusters related to larger clusters. This is akin to finding that there are galaxies within galaxies stretching across many billions of light years – who knew? In most of these clusters, theorists are building a set of links to describe the many unintended consequences of change that extend far beyond a single crisis event. These issue clusters are:

- *The Great Depression and Recessions in Light of the Great Depression*
- *Industry Structure Change and Industry Environment*
- *Liquidity Crisis and Confidence*
- *Stagflation and Productivity Crisis*
- *Technology Investment and Productivity*
- *Stagflation and Urban Crisis*
- *Inflation, Deficits, Interest Rates and the Savings and Loan Crisis*
- *Confidence and Contagion*
- *Strategy and Institutional Traditions During Crisis – How Firms Responded to Asian and Latin American Crises*
- *Inequality and the Global Financial Crisis*
- *How Organizations (Should) Respond to Crisis*
- *Modeling Crisis*

Analyzing the issue clusters is an ongoing area of my research. Because they are very specifically related to the theme of this paper, I will focus on just 2 clusters here - how organizations (should) respond to crisis and modeling crisis, which are addressed to practitioners and academics respectively.

How Organizations (Should) Respond to Crisis

This issue cluster specifically addresses issues of concern to practitioners – what do organizations do and what should they do in the event of an external crisis?

Charles F. Hermann, a doctoral candidate at Northwestern University who would become a member of the National Security Council and later a professor at the Woodrow Wilson School at Princeton and a professor of international public policy studies at Texas A&M, addressed how consequences of crisis might limit organizational viability. His article appeared in the June 1963 issue of *Administrative Science Quarterly* (1963:61-82).

According to Hermann, ‘Studying crisis phenomena provides an opportunity to examine an instrument of both organization and societal change, highlights some of the essential features of organizational and decisional processes, and differentiates them from less vital factors under the extreme conditions associated with a crisis. Crises seem to appear frequently enough to permit systematic study and are of such a nature that they not only permit but also warrant investigation. As noted, crises are devices of change-change that may be associated with extreme behavior’. Hermann’s definition of crisis has three dimensions: An organizational crisis (1) threatens high-priority values of the organization, (2) presents a restricted amount of time in which a response can be made, and (3) is unexpected or unanticipated by the organization. The examples he uses range from NASA to the National Security Council and US President to the US Patent Office

and the outbreak of WWI in Germany. Hermann was the author of simulation-experiment design. He was the author of *Crises in Foreign Policy: A Simulation Analysis* (1969).

Thriving in Stagflation

To be clear, writing in the Harvard Business Review in 1977, Donald Clifford, Jr. a director of McKinsey and Company specializing in strategy and organizational development, called his article ‘Thriving in Recession.’ The period of raw material price hikes, high inflation and capital costs, declining growth rates, ‘government and social intervention that plagued the private sector in 1974 and 1975’ (Clifford 1977: 57), was only 4 years old at the time. His thesis was that mid-size companies with sales between \$30 million and \$300 million – there were 1220 such companies in his survey – outperformed large companies – there were 629 in the same survey – because of flexibility and responsiveness. He called the midsize companies ‘threshold companies.’ While he initially thought the fasted growing of these companies would prove more vulnerable to stagflation, he was surprised to find their overall growth rate to be 33%. How did these firms outperform other ‘threshold’ companies and large firms? Besides a collection of disciplines that can be recast as sound management, Clifford argues that filling a market niche despite recession distinguishes the companies he cites – Bandag, tire recapping; Echlin Manufacturing, automotive aftermarket; Pizza Hut – fast food; Rival Manufacturing Company, crockpots; Crouse-Hinds, electrical equipment with high safety factor. All of these ‘winners’ as Clifford calls them survived into 2016 in one form or another. Bandag was bought by Bridgestone and is still operating. Echlin was bought by Dana. Rival Manufacturing is owned by Newell Brands. Crouse-Hinds was

purchased Eaton. Only Pizza Hut is a universal brand name in 2016 and is owned by Yum! Brands, to which Taco Bell and KFC all belong.

How Organizations Respond to Environmental Turbulence

In 'Strategy and the Environment' Smart and Vertinsky (1984) produce an empirical study that examines the relationship between the type of external environment in which a firm operates and its repertoire of strategic responses to crises, based on a survey of 94 executives in the Fortune 500 and Business Canada. The authors find firms that are successful in predicting their environments tend to have executives who prefer more adaptive strategies. If the environment can be predicted, lead time to develop optimal responses to a crisis is available (contingency planning), and there is less pressure to attempt to change and control the environment. As environments become more predictable there also is a tendency to employ short term responses in combating a threatening discontinuity rather than to respond with a long term orientation.

Organizations that rely on other organizations in their environment for growth and survival need to consider the long term impact of their decisions on other organizations; it slows them down.

In 'Organizational Effects of Decline and Turbulence', published in 1987 by *Administrative Science Quarterly* authors Kim Cameron and Myung Kim of the University of Michigan and David Whetten, University of Illinois try to distinguish between the outcomes of environmental turbulence and organizational decline for 334 institutions of higher education over a six year period. Previous studies and existing literature had not differentiated between the two. The authors acknowledge that environmental turbulence has often been identified as the major challenge facing modern

organizations. ‘Turbulence exists when changes faced by an organization are nontrivial, rapid, and discontinuous’ (Cameron et al, 1987: 225).

Comprehensive Strategic Control in a Crisis

Writing in the *Journal of Management Studies* in 1992, John Preble tackles the high impact surprises - natural disasters, hostile takeovers, terrorism, and other external as well as internal events as industrial technologies become progressively more complex and potentially more harmful to society and as organizations increase in sale and scope. ‘The challenge facing organizations is to understand better their susceptibility to such crises and to improve their readiness and skills for responding in ways that reduce rather than magnify a corporate crisis. Performing a crisis audit can help a firm to identify areas of vulnerability and proactive crisis management can improve an organization's ability to respond quickly and appropriately to a crisis event that could otherwise threaten a firm's strategy and even its existence’ (Preble 1992: 403).

Strategic Planning among the Oil Majors – Environmental Turbulence as a Way of Planning

According to Robert Grant of the McDonough School of Business at Georgetown, ‘Changes in the business environment have reinforced the case against formal strategic planning. In the last 25 years, macro disequilibrium, exchange rate volatility, the microelectronics revolution and the emergence of newly industrializing countries marked the end of postwar economic stability. Since economic and market forecasts provided the foundation for strategic planning, inability to predict demand, prices, exchange rates and interest rates represented a fundamental challenge to companies' ability to plan’ (Grant 2003: 493). In his *Strategic Management Journal* article ‘Strategic Planning in a

Turbulent Environment: Evidence from the Oil Majors', Grant surveyed 8 of the oil majors to discern how their strategic planning has changed. While as of 2003 it still followed an annual calendar, changes in the oil majors' strategic planning practices pointed to a different role for strategic planning within the companies. The strategic planning systems of the 1960s and 1970s were mechanisms for formulating strategy — they planned growth and allocated resources. By the late 1990s, strategy formulation was occurring, for the most part, outside of the companies' strategic planning systems -- strategic decisions were now made in response to the opportunities and threats that appeared, and were subsequently incorporated into strategic plans. The role of the corporate center was creation and dissemination of new methodologies and techniques across the organization and creating new channels for knowledge sharing.

The Impact of 9/11 on Planning for Crisis

In 'Preparing for Evil', published by the Harvard Business Review (2003) Ian Mitroff and Murat Alpaslan argue: 'If they are to cope with abnormal crises, companies must learn to see -- as their enemies do—skyscrapers as vertical coffins and aircraft as flying bombs, ugly and horrifying though the prospect may be.' (Mitroff and Alpaslan 2003: 110). Mitroff, a professor at the Marshall School of Business, University of Southern California at Los Angeles and Alpaslan, then a recent graduate, offer a tool kit for crisis preparedness. The authors write, 'A carefully orchestrated use of the random selection technique shifts their reference points and forces them out of their mental straitjackets' (Mitroff and Alpaslan 2003: 112).

Seizing Advantage in Downturn

In 2009 David Rhodes and Daniel Stelter, both of Boston Consulting Group, published 'Seizing Advantage in a Downturn' in the *Harvard Business Review*. This was followed in 2010 by the publication of their book *Accelerating out of the Great Recession: How to Win in a Slow-Growth Economy*.

The authors argue that many companies fail to see the opportunities hidden in economic downturns. To take advantage of opportunities requires a thorough but rapid assessment of own vulnerabilities and then a decisive move to minimize them. This will position the firm to seize future sources of competitive advantage, whether from bold investments in product development or transformative acquisitions. Their recommendations largely focus on cleaning up financing, reining in investments and selling off assets, as well as rethinking the product mix.

Learning from Crisis

Claus Rerup, Ivey School of Business at the University of Northwestern Ontario, published 'Attentional Triangulation: Learning from Unexpected Rare Crises' in *Organization Science* in 2009', Claus Rerup, Ivey School of Business at the University of Northwestern Ontario, focuses on (1) the link between weak cues and threats and (2) why organizations ignore weak cues and experience unexpected, rare events. His job in this paper is to advance an attention-based framework of how organizations learn from an unexpected, rare crisis.

Building Resilience in the Face of Crisis

Martin Seligman is the Zellerbach Family Professor of Psychology and director of the Positive Psychology Center at the University of Pennsylvania. His article 'Building

Resilience' appeared in the *Harvard Business Review* in 2011 when the financial crisis of 2008-2009 was still much more than a memory. Seligman argues that failure is one of life's most common traumas, yet people's responses to it vary widely. Some bounce back after a brief period of malaise; others descend into depression and a paralyzing fear of the future. Thirty years of research suggested to Seligman that resilience can be measured and taught—and the U.S. Army is putting that idea to the test with a program called Comprehensive Soldier Fitness. The aim of CSF is to make soldiers as fit psychologically as they are physically. A key component of CSF is “master resilience training” for drill sergeants—a form of management training that teaches leaders how to embrace resilience and then pass it on, by building mental toughness, signature strengths, and strong relationships (Seligman 2011: 103).

How to Avoid Catastrophe

Catherine H. Tinsley, management, and Robin L. Dillon, operations research, both of Georgetown University and Peter M. Madsen, organizational learning, of Brigham Young published 'How to Avoid Catastrophe' in 2011 in the *Harvard Business Review*. Their argument is: Failures happen. But if you pay attention to near misses, you can predict and prevent crises. While the term 'near misses' is largely about internal crises, there is another angle here: failing to read the signs in the environment that were providing information relevant to organizational decisions, for example productivity increases and falling median wages.

A Framework for Managing Risks – Including Those from the External Environment In 'Managing Risks: A New Framework' Robert S. Kaplan, co-creator of the balanced scorecard system and Anette Mikes, both of Harvard Business School, 'present a new

categorization of risk that allows executives to tell which risks can be managed through a rules-based model and which require alternative approaches' (Kaplan and Mikes 2012: 50). Of the three categories of risk discussed here, external risks is relevant to this study. In considering this category, the authors identify reducing the impact cost effectively should the risk event occur. The control model (e.g. planning for crisis) for envisioning risks before they occur includes tail-risk (how likely are the least likely events) assessments and stress testing, scenario planning and war gaming.

Modeling Crisis

Simulating US Vulnerability to Recession

James Duesenberry, Otto Eckstein and Garry Fromm, all of Harvard, developed a model of the United States economy to test its stability in the post war period. Their model was presented at the Chicago meetings of the Econometric Society and appeared in a paper of 1960 in *Econometrica* (1960: 749-809).

Simulations in International Trade and Foreign Policy

Harold Guetzkow created InterNation as a research tool to pick up patterns of international interaction. Urs Luterbacher, T. Michael Clarke, Pierre Allan and Nicholas Kessler of the Center for Empirical Research in International Relations, Graduate Institute of International Studies, University of Geneva, apply simulation and optimization techniques to a study of Switzerland. SIMSWISS was developed to analyze the impact of various external shocks on Swiss security and welfare, including the most important sectors of the Swiss politico-economic system, with special emphasis on their connections to the outside.

In both the InterNation and SIMSWISS models all these sectors interact within a nation: The government allocates resources and makes certain political decisions on the basis of the demands from the polity and the possibilities given by the economy. Several such nation-states can be constructed in parallel and their interactions modeled by providing for links among the various sectors of each of them. Relations among the economic sectors describe trade links, relations among the governmental sectors can (for example) describe arms races, and relations across different sectors of countries imply politico-economic aspects of international relations. SIMSWISS models interactions between the United States, the Soviet Union, and the People's Republic of China and their implications for Europe.

In 1980 Billings, Millburn and Schaalnnan published 'A Model of Crisis Perception: A Theoretical and Empirical Analysis' in the June 1980 *Administrative Science Quarterly* (1980: 300-316). Their model includes a triggering event, which is compared to some standard. The resulting discrepancy is assessed as a crisis based on the probability of loss, the value of loss, and the extent of time pressure.

Urban Crisis -- Macroeconomics of Unbalanced Growth

In the *American Economic Review* of June 1967, William Baumol, then at Princeton, presented a macroeconomic model for understanding the increasing cost structure of urban services, no matter how successful a temporary cost reduction may appear to be. His basic premise is that economic activities can be grouped into two types – technologically progressive in which innovations, capital accumulation, and economies of large scale all make for a cumulative rise in output per man-hour, and activities which, by their very nature, permit only sporadic increases in productivity. Baumol asserts, 'the

place of any particular activity in this classification' is not coincidental but 'a manifestation of the activity's technological structure which determines quite definitely whether the productivity of its labor inputs will grow rapidly or slowly' (Baumol 1967: 416). The basic source of differentiation is the use to which labor is put. Sometimes labor is but an instrument to get to the final product. In other cases labor is itself the end product. When city government provides social services to its citizenry or jobs to underemployed youth, the labor is an end in itself. If productivity per man hour rises cumulatively in one sector relative to its rate of growth elsewhere in the economy, while wages rise commensurately in all areas, then relative costs in the non-progressive sectors must rise and they will rise cumulatively and without limit.

Baumol's model tells us something about the shape of the economy of the future --- Manufactures are likely to continue to decline in cost and they may absorb an ever diminishing proportion of the labor force (Baumol was writing before the offshore outsourcing of manufacturing or the use of robotics), which may make it difficult for our economy to maintain its output growth. The analysis also suggests that the real cost of the nonprogressive sectors may be expected to go on increasing.

Planning for Crisis in Public Service

John M. Bryson is today McKnight Presidential Professor of Planning and Public Affairs at the Hubert H. Humphrey School of Public Affairs at the University of Minnesota. His work on planning in the public sector appeared in 1981 in the *Strategic Management Journal*. His basic theme is that when key governmental and environmental actors have deeply and widely felt perceptions of danger, the normal constraints on their relationships with one another are altered. This altering of constraints broadens 'opportunity space' for

governmental planning and actions, a thought that is reflected in interdependence theory. One of the reasons for this opportunity space, Bryson argues, is that crises facilitate the making of decisions at higher levels in governmental systems than otherwise is the case and the financial burdens associated with these decisions are shifted to higher levels (Bryson 1981: 181).

A Model of Self-fulfilling Pessimistic Expectations in Balance of Payments Crises

The collapse of a fixed exchange rate is typically marked by one or more balance-of-payments crises in which speculators acquire a large portion of the central bank's foreign reserves as the bank attempts in vain to support its currency. Maurice Obstfeld, currently professor of economics at the University of California, Berkeley and currently Chief Economist at the International Monetary Fund, was at Columbia University when his paper 'Rational and Self-Fulfilling Balance-of-Payments Crises' was published in *The American Economic Review* in 1986. His paper demonstrates the existence of circumstances in which balance-of-payments crises may indeed be purely self-fulfilling events rather than the inevitable result of unsustainable macroeconomic policies. Such crises are apparently unnecessary and collapse an exchange rate that would otherwise have been viable. They reflect not irrational private behavior, but an indeterminacy of equilibrium that may arise when agents expect a speculative attack to cause a sharp change in government macroeconomic policies (Obstfeld 1986: 72). Balance-of-payments crises, unlike bank runs, need not be self-ratifying. The stability of a pegged-rate regime hinges on the anticipated response of the authorities (Obstfeld 1986: 79).

Crisis as a Special Kind of Strategic Issue Resolution Problem

It is not too much to say that all strategy is continuous issue resolution. The grand plan may play a role in the official documentation of strategy, but on an everyday basis, strategic issue resolution is what strategists do. Jane Dutton, now at the University of Michigan's Ross School of Business, works at the intersection of strategy, management, organization and psychology. Dutton's 'Processing of Crisis and Non-Crisis Strategic Issues' in the *Journal of Management Studies* models how organizations process different types of strategic issues in systematically different ways, proposing that organizational decision-makers expend greater resources, centralize authority and generate a greater volume of causal explanations during the processing of crisis versus non-crisis strategic issues. Dutton presents the results of an intensive study of five strategic issues processed by a single organization over a 5-year time period. The results of this exploratory study underline the importance of the crisis v. non-crisis distinction, as well as provide support for a contingency approach to strategic decision processes.

In *Strategic Management Journal* (1987) Dutton and Robert Duncan model how decisionmakers interpret strategic issues. Their model identifies three critical events: activation, assessments of urgency and assessments of feasibility. Together these events contribute to a momentum for change and allow the researchers to predict if and how organizations will respond to a changed decision environment (Dutton and Duncan 1987: 279).

Strategy, Institutional Theory and Interdependence Theory Applied to a Speculative Bubble

Because crisis tends to be event driven, analyses of crisis and models of crisis tend to take as their starting point a specific episode. Abolafia and Kilduff offer a model of a speculative bubble, using a case study the 1980 crisis in the silver futures market, when prices soared from \$10 per ounce to \$50 per ounce and fell back to \$10 per ounce in seven months.

The authors argue that this crisis is not produced by the disorganized behavior of an atomized mass of speculators; rather, it is the outcome of a struggle between competing coalitions, each seeking to promote its own parochial interest. The crisis is resolved by the carefully orchestrated actions of institutional actors concerned with preventing further damage to specific participants in this market and related markets. The three-stage model of market process developed here (action – attribution, sensemaking or blame laying as the case may be – regulation) reflects economic behavior that is strategic, political, and embedded in institutional structure. Important is the process perspective the authors bring to their interpretation of the social organization of speculative markets.

Modeling a Crisis Where Those Who Created the Mayhem are Trying to Fix It

Even in external crisis, organizational actors create their own context in the sense that they impose their own thinking on what is wrong, what can be done to fix it. Adding context to context, the organizational actors may also have the responsibility for ending the crisis. This is the model that authors Raymond-Alain Thietart and Bernard Forgues confront in ‘Action Structure Chaos’, *Organizational Studies* (1997). The paper is clearly indebted to Karl Weick but also to Pettigrew, among others. The specific crisis

event they model is the Iran Hostage Crisis, ‘an example of a situation in which a succession of actions and reactions, decisions and counter decisions, led to a complex situation, which actors had difficulty in untangling. Most actors wanted to find a solution to the crisis, but under their own terms. Several forces were simultaneously at play: political, economic, humanitarian, religious and military...tightly intertwined and hardly recognizable’ (Thietart and Forgues 1997: 123).

Game Theory Applied to Regime Change Crisis

Angeletos, Hellwig and Pavan (2007) examine global games of regime change—coordination games of incomplete information in which a status quo is abandoned once a sufficiently large fraction of agents attack it -- such as currency attacks, bank runs, debt crises, and political change. The authors extend the static benchmark examined in the literature by allowing agents to take actions in many periods and to learn about the underlying fundamentals over time. Instead of a single dominant equilibrium, information sharing aka learning from past outcomes produces multiple equilibria.

Angeletos, George-Marios, Christian Hellwig, and Alessandro Pavan also co-wrote the article ‘Signaling in a Global Game: Coordination and Policy Traps’, *Journal of Political Economy*, 114(2006): 452–84.

Changing Capabilities in Response to Change – A Dynamic Approach at the Level of the Firm

In ‘A theory of change in turbulent environments: the sequence of dynamic capabilities following industry deregulation’ (2009) , Pettus, Kor and Mahoney seek to integrate the resource-based and dynamic capabilities viewpoints (and their literatures) to examine how firms draw on different capabilities when confronted with environmental change or,

in the case of industry deregulation, market shock. ‘Deregulation provides a type of “Schumpeterian shock” that confronts firms with a drastically different environment, which may require new business models (Meyer 1980, Silverman, Nickerson and Freeman 1997). Having lost their insulation from competitive market forces, firms need to develop dynamic capabilities to survive and adapt to deregulated environmental conditions’ (Pettus et al. 2009: 186).

6. Conclusions

If there is a very clear message that comes out of such a large-scale investigation of significant academic writing it is that history and institutions are very much a part of crisis study as it is presented by academics to their students in business schools. While crisis is largely event driven, crisis is not a one-off event; there are links to the past that must be found to understand the sequence of action and inaction that caused the crisis and influence the future.

The Business School

The work reported on here takes place in the highly structured organizational field (DiMaggio and Powell 1983) of the top tier business school with its rigorous research and publication myths and routines, and its focus on theory and the practical application of theory to benefit its student/academic and practitioner audiences.

The Academics

Who were the academics whose work is the crux of this research: where were they educated, where did they teach, did they also have public policy impact? Because of the FT45 focus, we can construe that these were the academics who published in the top tier

journals. Their long-term academic career in top tier universities reflects that attention to the requirements of the homogeneous professional clan (Bartley and Tolbert 1997; Meyer and Rowan 1977). These details have been identified for every author in this study, some 1400 of them, and will be charted and the charts available in a subsequent iteration of his research.

This is the study of a profession. It includes some very well-known theorists but hundreds of others who made their contribution to an understanding of crisis or to the modeling of crisis and continued to play a long-lived role in their university and as consultants to business.

The Journals

The journals themselves are part of the institutional environment, with myths and routines of their own. Whereas the Great Depression, industry structure and the monetary crisis of the late 1950s to early 1960s were topics for economics journals, increasingly, beginning with stagflation, which was covered heavily by Peter Drucker and the *Strategic Management Journal* (1980), how organizations respond and how the crisis/response is modeled have become a domain of management and strategy journals. From the onset of the financial crisis of 2007-2009 to 2015, some 700 articles on crisis were published in the FT45, including many in ethics and finance journals.

Government, Firms and Other Organizations

Government is in some way involved in every external crisis by definition (at least in the definition of external used here). It must respond to the crisis. It fails to respond to the crisis. It caused the crises. Organizations opt out at their peril – it's your business

continuity or your profits or your freedom and your customer list. The issue cluster ‘How Organizations (Should) Respond to Crisis’ supports the view that theorists (and their business schools) believe that organizations have a necessary role in self-protection.

It is no surprise that discussions of organization response and modeling are fundamentally institutionalist, although it is surprisingly rare that theorists explicitly argue a case for institutional theory or resource-based theory or TCE (It is rare but you have seen a few in these pages.) Existing theories that do not include government as an actor (and do not address the multiple stakeholders in the organization’s environment) are inadequate to advise on strategy.

Next Steps in My Research

The next phase of the research is the completion of the categorization and analysis of issues found in the articles. I have already begun work on a new theoretical framework.

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