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CRISIS RESPONSES OF COMPETING VERSUS NONCOMPETING ORGANIZATIONS

by

Pradip N Khandwalla

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INTRODUCTION

The purpose of the paper is to identify responses of organizations undergoing crisis when they are subjected to either much competition or little competition. In the paper, the literature on organizational crises and responses to them is surveyed to identify main organizational responses to crisis and to differentiate the responses to internal crises, such as induced by sharp intraorganizational conflicts, mismanagement, or noncooperation of personnel, versus responses to externally induced crises such as arising from a credit squeeze, or nonavailability of crucial raw materials, or shifts in government policy or legislation that gravely hurt the organization. The literature on organizational responses to competition is surveyed to identify the principal responses to a competitive environment. Based on the identification of responses to external crises, internal crises, and competition, a series of hypotheses incorporating a large number of predicted organizational responses are developed. These are then tested by a recourse to data gathered from the senior managements of 165 North American companies. Finally the implications of the findings are discussed.

ORGANIZATIONAL RESPONSE TO CRISIS

A crisis exists when no immediate means are available to cope with a threat to a system. As Fink, Beak, and Taddeo(1971, pp. 16-17) point out "A human system(individual, group, organization, or other) is assumed to be in a state of crisis when its repertoire of coping responses is not adequate to bring about the resolution of a problem which poses a threat to the system". Thus, disasters and severe stresses for which the living system has no ready effective response, constitute crisis..

Since strategically placed humans in organizations may vitally affect the organizational response to crisis, it is useful to note the human response to crisis. Endocrinologists like Selye (1956) have studied the response of the organism to severe stress. The general response to severe stress appears to be one of alarm (fight or flight reaction); resistance to stress; and exhaustion, should severe stress continue. Psychologists, such as Wallace(1956), Lazarus (1966), and Fink(1967), have studied the human's response to severe stress or crisis, and this response appears to be characterized successively by shock, defensive retreat from the situation, acknowledgement of the crisis situation, and finally adaptation and change that leads to normalcy.

Since sizeable, complex organizations tend to be managed by a top management group rather than a single individual, the response of groups to crisis has relevance to a study of organizational crisis. Torrance(1958), Shepard(1965), Hare(1962), and Hamblin(1958) have examined stress reactions in small groups. An interesting finding that has relevance for organizations facing crisis is the greater influence attempts by informal leaders in a group faced with a crisis and the greater acceptance of the authority of a leader in such a situation (Torrance, 1958, Hamblin, 1958). Groups tend to reject leaders that do not quickly resolve a crisis (Hamblin, 1958). In addition, Shepard (1965) noted that the group which loses out in intergroup competition tends to seek scapegoats for its failure, gets splintered in the process and its power structure disintegrates. Hare (1962, p.265) noted: "Groups tend to respond to continusouly increasing stress, like all living systems, first by a lag in response, then by an overcompensatory response, and finally by a catastrophic collapse of the system".

There have been several studies of disasters and of communities in crisis (Rayner, 1957; Barton, 1969; Turner, 1976). These are relevant to the crisis response of organizations for the insights they provide into causes of crisis and into spontaneous collective behaviour in the face of crisis. Turner sees avoidable disasters as arising primarily from a failure of intelligence, communication, and preventive action: " ... disaster-provoking events tend to accummulate because they have been overlooked or misinterpreted as a result of false assumptions, poor communications, cultural lag, and misplaced optimism" (1976, p.395). An interesting finding from research on communities suffering from a disaster is the high degree of cohesion and altruism and the spontaneous assumption of leadership by
disaster, when it is perceived as a ∠
non-officials. An organizational ∠ community, is likely to release in its members the same creative concern for others and for the organization as an entity.

∠ collective crisis by the organizational

Coming to organizations, there have been numerous case studies of crisis (Snyder and Paige, 1958; Smith, 1963; Allison, 1969; Torczyner, 1972; Goodstein and Boyer, 1972; Corwin, 1972), some interesting conceptualization (Fink, Beak and Taddeo, 1971; Lippitt and Schmidt, 1967; Hall and Mansfield, 1971; Khandwalla, 1972; Hamermesh, 1977), but little systematic empirical work involving large samples and quantifiable data. Fink, Beak, and Taddeo developed an elaborate model of organizational response to crisis. Their model was developed as an analogy to a model of individual's response to crisis(Fink, 1967). They conceptualise crisis as consisting of the shock phase, the defensive retreat phase, the phase of acknowledgement of crisis, and the adaptation and change phase leading to conditions of normalcy. They predict the nature of interpersonal relations in the organization, inter-group relations, communications, leadership and decision making, problem handling, planning and goal setting, and role relationships(structure) during each of the four phases. The shock phase is characterized by disorganization, paralysis, scapegoating, in-group cohesion, and so on. The defensive retreat phase is marked by an overriding concern for system survival".....It is the period during which long-range organizational purposes are temporarily put aside for the sake of keeping the organization intact"(Fink, Beak and Taddeo, 1971, p.23). During this period, what Fiedler(1967) has termed a coercive - compromise system seems to emerge. During the phase of acknowledgement of crisis there is much self-examination, interpersonal confrontation of a constructive kind, acceptance of joint responsibility, confronting of the underlying issues, focus on each other as resources, and tentative planning, goal setting, and experimentation with new methods and arrangements. The adaptation and change phase is marked by collaborative relations, institution of integrative mechanisms, comprehensive planning, and an organic structure and style of management (for a description of organic style, see Burns and Stalker, 1961).

There may be several limiations to the analysis of Fink, Beak, and Taddeo. Individuals working in organizations, unless they identify themselves with the organization very closely, may not necessarily undergo the states of shock, defensive retreat etc. merely because an organization is faced with a crisis. Certainly, even if they react with shock, etc. the reactions of most individuals in the organization may not be synchronized because of specialization and division of labor. Thus, it is entirely possible that while a part of an organization is experiencing shock, another may be in defensive retreat, a third in the acknowledgement phase, and a fourth in the adjustment phase. Secondly, there may be wide variations in organizational responses to crisis depending upon such factors as size of the organization, its previous inoculation to crises, the nature of the crisis(external in origin versus internal), and so forth. A competing organization, for example, through being inured to crises, may respond to a market crash by having a brief phase of shock and an immediate phase of acknowledgement and adjustment, while the same organization, when faced with an internally generated crisis (strike, machinery breakdown, exodus by key executives, mismanagement), if not accustomed to such crises, may have agonising shock and defensive retreat phases.

Although Hamermash's study(1977) is concerned with the responses of the corporate management of diversified companies to a crisis posed by the poor performance of a division, the responses listed by Hamermash may be relevant to situations in which management is faced with an internal crisis about which it is not too well informed as to causes, a situation typical of sizeable organizations, whether divisionalized, functionally departmentalized, organized as a matrix of temporary teams, or whatever. Hamermash argues that effective top management response to a divisional crisis in a diversified company is impeded by commitment of senior managers to their proteges, commitment to divisional strategies that were formulated with the knowledge and blessings of senior managers, and top management's lack of information with regards to local condititions(divisions's domain or operating field). Hamermash lists several top management responses to divisional crisis: replacement of divisional and other personnel by individuals who are good crisis managers; the institution of new standard operating procedures to handle future crises; delay in acting until crisis gets severe enough to make top management intervention justifiable in a company that lives by the philosophy of decentralization and participative management; institution of an information system that provides top management information on the task environment of the division; greater surveillance by higher management of divisional management; relocation of the unit facing crisis with other units that have similar task environments for more effective supervision; the seeking of a better balance by top management between the alternative stances of seeking committed subordinates and a detached evaluation of their performance; seeking greater consistency between response to crisis and other activities, systems, and values current in the organization. Hamermash seems to be suggesting more centralization, more standardization, more rationalization, more impersonal evaluation of personnel and greater sophistication in the management's information and control system as the primary responses to internal crises that are not well understood by top management.

Hall and Mansfield (1971) studied the reactions of R and D personnel to management's actions following a financial squeeze applied to three R and D departments. They noted: "The literature on stress—both individual and organizational—generally indicates that strong or continued externally applied stress will cause a system to become more structured and task oriented in coping with the stress ... external stress will provoke internal strains which organizational leaders will attempt to alleviate by increasing the degree of structure and control ... During the early stage of coping with stress - that is, resistance—the system will place extreme emphasis upon attaining its goals, generally at the expense of meeting the needs of its members and of maintaining internal integration" (ibid, p. 534). Thus, the predicted response to an external crisis, especially during the early stages, is greater control of operations and personnel, greater task orientation, and lesser employee orientation in the management. They found that following a financial squeeze, the management emphasized applied and short pay-back period rather than basic research, and exercised greater control over the type of research done, costs and schedules etc. The personnel reported lower security, self-esteem, self-actualization in their jobs, lower job satisfaction, reduced identification with the organization, more self-oriented behavior, and a less supportive organizational climate. They did not report lower job involvement or lower job autonomy, however. The study suggests that superordinate goals did not get accentuated in the face of external stress(unlike in Sherif's study(1966)) perhaps because the management did not involve the personnel in the changes it imposed upon them; or also perhaps because the external stress was not severe enough to be a real crisis.

Lippitt and Schmidt(1967) have identified developmental crises, that is, crises attendant upon the growth of the corporation from birth through youth and maturity. These crises may superficially seem external or internal, but actually stem from organizational birth pangs and growing pains. They have identified critical concerns during each of these three stages and the key crises with respect to each critical concern. For example, during the birth stage, creating a new organization and its survival are critical concerns, and the associated key issues are what to risk and what to sacrifice. By way of contrast, in the maturity stage, the critical concerns are how to achieve uniqueness and adaptability, and how to contribute to society, and the critical issues are whether and how to change and whether and how to share surpluses. Lippitt and Schmidt outline the consequences of the correct versus incorrect resolution of these issues, the knowledge, skills, attitudes, key decisions and problems, and actions required to deal with each critical concern. As they have usefully pointed out, different sets of behaviors and actions are required for the crises associated with the three stages of development. For example, to stablize the organization during organization youth the actions required are: take more aggressive action in market place; use systematic plans and objective setting; try to beat competition; begin R and D as appropriate; train personnel for future needs; begin image building in and outside organization. The critical concern of achieveing uniquenes during organizational maturity requires: selection and promotion of one special service or product line; greater decentralization; prevision of more effective communications; increase in advertising and image building activity; consideration of the optimal size of the organization. It is a moot point, however, whether organizations experience critical concerns in the sequence outlined by Lippitt and Schmidt. In a dynamic competitive industry, one suspects that all six concerns listed by them may often be simultaneously critical.

Smith(1963) has described seven different types of crises-some external, some internal-experienced by large U.S.corporations. These are: crisis of growth; crisis stemming from the abdication of responsibility by the chief executive; crisis arising from loss of control over operations; crisis arising from parts of the organization flouting the law; crisis of leadership; crisis of judgment; and finally, crisis precipitated by competition. Smith's conclusions are:

1. Corporate crises build up over time. There are many contributory factors to corporate crises although one or a few may be more central than others.

2. The chief executive is often a critical cause of crisis.

3. Environmental change often precipitates corporate crisis.

4. Sometimes chance factors create a crisis.

5. Corporate crises often arise from a faulty interpretation of management or organizational concepts like decentralization, diversification, or control, or from their excessive or inadequate application, or from a failure to take compensatory actions, such as a more sophisticated information and control system for senior management following structural decentralization (divisionalization).

6. Crises often have beneficial effects by forcing the taking of long overdue actions.

7. Crises could be headed off by keeping the organization competitive, reaching out for opportunities without going overboard, proper supervision of the chief executive by the board of directors and of the company by the chief executive, the ability to distinguish between "real trouble" from normal operating difficulty, and by management having the courage to face upto "real" trouble in time.

Khandwalla (1972) hypothesized that the greater the environmental malevolence, (a) the more rationalized will the productive apparatus of the organization tend to be and the more standardized will tend to be its activities; (b) the greater will be the congruence of the goals of the organization members with the primary goals for which the organization is set up; (c) the more centralized will be the authority structure of the organization; (d) the shorter will be the time perspective with regards to decision making; and (e) the greater will be the compliance of personnel with authority. Extreme environmental malevolence may imply a crisis with origins in the external environment (external crisis). Thus during an external crisis, substantially greater rationalization, standardization, centralization, goal congruence, short term perspective, and compliance with authority may be predicted.

To summarise, the literature survey suggests that crisis of any kind is likely to generate a pressure for greater control of operations through standardization, institution of controls, and/or centralisation of authority. may, however, respond somewhat differently to external versus internal crisis. There may be readier compliance with authority and a sharper accentuation of superordinate goals . during an external crisis than during an internal crisis, and therefore, possibly less coercion and centralization of authority on the part of management. Also, it is likely that the management of an organization may function more participatively and professionally when the crisis is an external one than when it is an internal one especially if the internal crisis has arisen out of mismanagement or sharp intraorganizational conflicts that reach into the ranks of the top management itself. The greater internal cohesion during an external crisis may permit an organization to display greater risk taking in its strategic moves than during an internal crisis-the uncertainty about the organization's response during an internal crisis may generate greater caution on the part of decision makers in moves of a strategic nature. Final while controls are likely to be tightened whether the crisis is an internal or an external one, an external crisis is more likely to impel the organization to institutionalise a sophisticated information and control system-in view of the need for intelligence on external events and the need to respond quickly to external events-than an internal crisis.

ORGANIZATIONAL RESPONSE TO COMPETITION

Organizations are in competition with one another when(a) there is an actual or potential conflict of interest between them; and (b) they are alternative customers or suppliers of products or services that are close substitutes of one another(Khandwalla 1977a). In other words, competing organizations are rival organizations that may stand to gain at the expense of each other.

Clearly, an organization competes with different intensities with other organizations in a society. With respect to a generalized resource like credit it may be competing with every other organization in society, and to that extent no organization is completely immune from competition. But the organization is likely to compete far more intensively with the set of organizations that are its rivals in marketing products or services or the set of organizations that are its rivals in acquiring relatively scarce, specialized resources. Even within these sets of organizations, the intensity of competition is likely to depend upon a number of factors (Phillips, 1962): number of rival organizations; the symmetry of their market shares; the formalization of inter-organizational coordination; heterogeneity in the value systems of the rival organizations; the efficiency of outsidepressure groups(such as the clients of the organizations). If may also depend upon the sophistication of the clientele of the industry (Khandwalla, 1977a). Besides these exogenous forces, the intensity of competition may also depend upon the combativeness of the organization's management and of its rivals (Khandwalla, 1977a); to an extent the intensity of competition is what the competitors choose it to be.

There are various forms of competition, and their variety depends upon the variety of the inputs utilized by an organization and the variety of its outputs. Whether all these different forms have similar organizational consequences is a moot point. Limited evidence indicates some differences in the way different forms of competition affect the organization(Khandwalla, 1973a, 1976). However, generally speaking most forms of competition are likely to make multiple demands on the organization: for quick, well-coordinated adaptation to the competitive moves of rivals, for creative and innovative moves to gain an edge over rivals; for effociency in operations; for protecting the organization from future depredations (Khandwalla, 1977a). The more variegated the arenas of competition and the more intense the competition, the more varied and potent will be the demands on the organization and the more complex and pervasive will be the organization's response.

There is a substantial literature on the organizational response to competition, especially to certain market structures that determine the intensity of competition in an industry. The studies of this genre, generally performed by economists, relate properties of the market structures of industries with pricing, promotion, vertical integration, diversification, and research and development in these industries. The unit of analysis is the industry, not the firm, although inferences are sought to be drawn for the behavior of the firm. Pricing behavior as a response to market structure has been studied by a number of economists. The findings of empirical research have been summerized by Scherer(1970, p.212). Advertising and promotion behavior as a response to competitive market structures has also been studied by economists, such as the studies by Telser,(1964); Elso, (1966); Mann, Henning, and Meehan Jr.,(1967). Gort(1962) has studied diversification as a response to market structure while several economists (e.g. Holton, 1962; Gort 1962; Comanor, 1967a) have studied vertical integration as a consequence of market structure. Khandwalla(1970)has related vertical integration to the competitive pressures on a firm. Research and development activity has been sought to be related to market structure by economists such as Phillips(1966), Scherer(1967), and Comanor(1967b). The relationships between market structure and pricing, promotion, diversification, vertical integration, and research and development, together with the likely administrative consequences of pricing, promotion etc. have been summarized by Khandwalla(1977a, Table 3).

Several other researchers have sought to identify the organizational structural and processual implications of competition. Rose(1955) examined the effects of competition and conflict on 91 voluntary associations. Williamson(1963) studied managerial compensation under conditions of organizational slack arising out of the corporation being in a relatively non-competitive environment. Negandhi and Prasad(1971) sought to relate weakness of competition with organizational structural variables in a cross-cultural study of business firms. Crotty (1968) related inter-party competition to the organizational structures of two political partiesin North Carolina. Pfeffer and Leblebici(1973) sought to relate competitiveness of the organization's environment with the organization's structure in a study of 38 manufacturing firms. Khandwalla (1970, 1973a, 1973b, 1976, 1977a, 1977b, 1977c) has sought to identify relationships between competitive pressure on the firm and style of management, goal salience, organizational strategy, organizational structure, etc. through studies of a U.S. sample of medium sized manufacturing firms and a Canadian sample of manufacturing and non-manufacturing firms. Pennings (1975) reported relationships between number of competitors, knowledge about competition, organizational intelligence, and a number of internal power and influence variables for a smaple of 40 branch offices of a national brokerage company. The findings have been summarized by Khandwalla(1977a, Table 4).

Integrating the findings of the economists and other researchers above, Khandwalla proposed a model of the organizational consequences of competition (1977a, Figur 3). The intensity of rivalry depends upon the perceived conflict of interest with rivals, the sophistication of the common clientele of the competing organizations, the absence of formal or informal mechanisms regulating the competitive conduct of the rivals, and the size of the organization relative to its rivals. The more intense the rivalry with rival organizations, the greater is the magnitude of domain-related activities of the organization like price cutting, advertising and promotion, vertical integration, diversification, research and development, and the innovation of new products or services. The more intense the rivalry with the organization , the greater is the salience of high performance on legitimate organizational goals; the more likely is organizational survival and growth strategy to be complex and comprehensive; the more likely is the style of management to be organic; the more the organization is likely to have an external relations or marketing orientation; the more likely the organization is to have a complex organizational structure marked by elaborate uncertainty reduction mechanisms such as a sophisticated information system, differentiation machanism such as formal decentralization,functional departmentalization and divisionalization, and integration machanisms such as participative decision making at senior management levels and a sophisticated control system; and the more cohesively is the organization likely to funtion. The domain directed activities of promotion, diversification, R and D etc. are likely to reinforce the above administrative consequences and vice versa.

To summarise: competing organizations are likely to have more variagated domain directed activities, a more organic, porticipative, and technocratic style of management, high performance bias on organizational goals, a more complex and comprehensive organizational strategy, greater sensitivity to the environment, a more complex organizational structure, and a more cohesively functioning organization than organizations engaged in little competitive activity or facing little competitive pressure.

COMPETITION, CRISIS, AND ORGANIZATIONAL RESPONSE: SOME HYPOTHESES

From the likely organizational responses to external and internal crisis and to competitive pressures summarized at the ends respectively of the last two sections, it is possible to derive a number of hypotheses concerning the organizational response(a) to external crisis in the presence and absence of strong competitive pressures; (b) to internal crisis in the presence and absence of strong competitive pressures; (c) to competitive pressures in the presence and absence of external crisis and internal crisis respectively.

1. The organizational response to an external crisis in the presence of strong competitive pressures will be marked by:

(a) a greater emphasis on domain-directed activities like promotion, marketing, research and development, and diversification;

(b) a more organic, participative, and comprehensive planning oriented technocrâtic style of management;

(c) a stronger high performance bias (goal salience)with respect to principal organizational goals;

(d) more elaborate uncertainty reduction and integration mechanisms like a control and information system and greater differentiation through decentralization and departmentalization;

(e) greater intra-organizational cohesion and therefore less coercion by management.

as compared to the organizational response to an external crisis in the absence of strong competitive pressures.

2. The organizational response to an internal crisis in the presence of strong competitive pressures will be marked by

(a) a greater emphesis on domain-directed activities;

(b) a more organic, participative, and comprehensive planning oriented technocratic style of management;

(c) stronger goal salience;

(d) more elaborate uncertainty reduction, differentiation, and integration mechanisms;

(e) greater intraorganizational cohesion and therefore less coercion by management

as compared to the organizational response to an internal crisis in the absence of strong competitive pressures.

3. The organizational response to an external crisis in the presence of strong competitive pressures will be marked by

(a) greater goal salience;

(b) a more participative planning and technocracy oriented, and risktaking management style;

(c) a less coercive management style;

(d) a more elaborate information and control system;

(e) greater decentralization of authority

as compared to the organizational response to an internal crisis in the presence of strong competitive pressures.

4. The organizational response to an external crisis in the absence of strong competitive pressures will be marked by

(a) greater goal saliance;

(b) a more participative, planning and technocracy oriented, and risk taking management style;

(c) a less coercive management style;

(d) a more elaborate information and control system;

(e) greater decentralization of authority

as compared to the organizational response to an internal crisis in the absence of strong competitive pressures.

5. The organizational response to strong competitive pressures in the presence of an external crisis will be marked by

(a) greater goal salience;

(b) greater centralization of authority;

(c) a more elaborate information and control system;

(d) greater intraorganizational cohesion and therefore a less coercive management;

(e) greater standardization of operations

as compared to the organizational response to strong competitive pressures in the absence of an external crisis.

6. The organizational response to strong competitive pressures in the presence of an internal crisis will be marked by

(a) lower goal salience;

(b) greater centralization of authority;

(c) a more elaborate information and control system;

(d) lower intraorganizational cohesion and therefore a more coercive management;

(e) greater standardization of operations;

as compared to the organizational response to strong competitive pressures in the absence of an internal crisis.

7. The organizational response to external crisis and strong competitive pressures will be marked by

(a) greater goal salience;

(b) a more participative, planning and technocracy oriented, organic and risk taking management style;

(c) a less coercive management;

(d) greater decentralization of authority;

(e) greater emphasis on domain-directed activities

(f) more elaborate uncertainty reduction, differentiation, and integration structural mechanisms

as compared to the organizational response to internal crisis and weak competitive pressures.

8. The organizational response to external crisis and weak competitive pressures will be marked by

(a) a more risk-taking management

(b) a less organic management

(c) less emphasis on domain-directed activities

as compared to the organizational response to internal crisis and strong competitive pressures.

A TEST OF THE HYPOTHESES

A non-rigorous test of the above hypotheses was possible with data from the author's study of 165 North American companies. The data were secured from the senior executives of these companies through a questionnaire constructed to gather information on the style of top management, corporate goals and performance, facets of organizational structure, the organization's environment and so forth(see Khandwalla (1977b) for the questionnaire). The sample characteristics are shown in Appendix 1. The operational definitions of the variables utilised in testing the hypotheses enumerated in the previous section are shown in Appendix 2. Companies scoring in the top third of the distribution of reported external environmental hostility were deemed to be undergoing an external crisis; those scoring in the bottom third were deemed to be not undergoing an external crisis. The mean environmental hostility score of the external crisis group was 14.7 and its mean profitability(before tax on net worth, averaged for the best and the worst of the 5 years preceding the study) was 10.5%; the mean environmental hostility of the no external crisis group was 9.9 and its mean profitability was 19.9%, the differences between the two groups on both variables being highly significant. Companies scoring in the top third of the distribution of perceived competitive pressure were deemed to be undergoing strong competitive pressures; those in the bottom third were deemed not to be undergoing strong competitive pressures. The mean competitive pressure score of the strong competitive pressure group was 17.9; it was 8.7 for the weak competitive pressure group, the difference being highly significant. The firm's range of profitability for a five year period, indicative of turbulent and competitive business conditions, averaged

17.2% for the strong competitive pressure group while it averaged only 13.3% ($p \leq .05$) for the weak competitive pressure group[2]. Companies scoring in the bottom third of an index of perceived performance <u>relative</u> to industry average on the dimensions of growth rate, profitability, liquidity, public image, and employee morale were deemed to be suffering from an internal crisis, the assumptions being that low performance relative to rivals in the industry implies a crisis and that its causes are more likely to be internal rather than external; those in the top third were deemed not to be suffering from an internal crisis(the average growth rate of the internal crisis group was 28% lower than the average growth rate of its members' industries; the average growth rate of the no internal crisis group was 26% higher). The average score on the relative to industry performance index was 21.1 for the internal crisis group, highly significantly lower than the 30.0 average for the no internal crisis group.

From the above groups, a number of sub-groups were formed:

1. External crisis, strong competitive pressure group(N=21, mean score on environmental hostility 15.3, mean score on competitive pressure 18.1, mean profitability 12.7%, mean range of profitability 17.5%).

2. External crisis, weak competitive pressure group(N=20, mean environmental hostility 14.0, mean competitive pressure 8.7, mean profitability 8.2%, mean range of profitability 10.7%).

3. Internal crisis, strong competitive pressure group(N=15, mean perceived performance relative to industry 20.5, mean competitive pressure 17.5, company growth rate lower than the industry growth rate on an average by 36% of the industry growth rate).

4. Internal crisis, weak competitive pressure group(N=21, mean perceived performance relative to industry 21.6, mean competitive pressure 8.1, company growth rate lower than the industry growth rate by an average of 16% of industry growth rate).

5. Strong competitive pressure, no external crisis group(N=19, mean competitive pressure 17.3, mean environmental hostility 9.9, mean profitability 22.7%, mean range of profitability 16.8%).

6. Strong competitive pressure, no internal crisis groups(N=30, mean competitive pressure 17.5, mean perceived performance relative to industry 30.6, mean range of profitability 10.4%, company growth higher than industry growth rate by an average of 29% of industry growth rate).

Table 1 presents data that constitute a test of the hypotheses listed in the preceding section. Mean scores for relevant pairs of groups are given, along with the signs of the predicted differences, the actual differences found, and the p-value where it is less than or equal to .10(one-tail). The signs match for 53 out of 64 predictions; all of 35 differences with $p \leq .10$ were in the predicted direction, 27 of which had $p \leq .05$. Thus, the results constitute fairly satisfactory preliminary support for the system of hypotheses concerning organizational response to internal and external crisis for competing versus non-competing organizations.

The results shown in Table 1 particularly support Hypothesis 1 concerning the organizational responses to competing versus non-competing organizations in a situation of external crisis. Eight out of 11 predictions were supported at $p \leq .10$, indicating that faced with an external crisis, an organization will tend to get more marketing, promotion, and research and development oriented; its management will tend to become more organic, more comprehensive planning oriented and technocratic, more participative, and less coercive; its goals will tend to be higher and more focussed; and its information and control system will tend to be more sophisticated and elaborate, should the competitive pressure on it grow substantially.

Hypothesis 2 concerning the organizational responses of competing versus non-competing organizations in a situation of internal crisis had more limited support, only four out of 11 results having the predicted signs at $p \leq .10$. Faced with an internal crisis, a competing organization will tend to be more marketing, promotion, and diversification oriented, its management style more organic, and its goals more focused and higher, than a non-competing organization.

Hypothesis 3 concerning the organizational responses to external versus internal crisis of competing organizations had reasonably good support, five out of the 7 differences having the predicted signs at $p \leq .10$. Thus, competing organizations tend to be managed less coercively, more participatively, with a stronger orientation to comprehensive planning and

PREDICTED AND ACTUAL RESULTS PERTAINING TO THE HYPOTHESES

	No. of cos	Domain Related Activities: Markg. & Prom. orntn.	Imp. of R&D	Imp. of divrfcn	Styles of Management: Coercive	Organic	Participative	Plng & Technocratic orntn.	Risk taking	Goal Salience	Sophistication of Infn. & con. system	Del. of authority by chief ex.	Std. orien.	Collaboration between managers
H1 a External crisis competitive pressure group	21	8.2	4.7	4.3	12.3	32.8	46.6	37.7		26.1	94.4	33.8		5.7
b External crisis low competitive pressure group	20	6.0	3.9	4.2	14.2	30.0	43.5	34.5		24.2	82.3	35.2		5.5
Predicted (a-b)		+	+	+	-	+	+	+		+	+	+		+
Results(a-b)		2.2	.8	.1	-1.9	2.8	3.1	3.2		1.9	12.1	-1.4		.2
P value		.001	.05	n.s	.07	.03	.10	.05		.09	.01	n.s		n.s
H2 a Internal crisis competitive pressure group	15	7.9	3.7	4.1	15.0	31.6	40.4	33.3		25.3	88.4	30.0		5.2
b Internal crisis low competitive pressure group	21	6.2	3.6	3.5	13.5	28.4	40.9	33.2		22.1	80.6	32.3		5.0
Predicted (a-b)		+	+	+	-	+	+	+		+	+	+		+
Results (a-b)		1.7	.1	.6	1.5	3.2	-.5	.1		3.2	7.8	-2.3		.2
P Value		.005	n.s	.10	n.s	.05	n.s	n.s		.025	n.s	n.s		n.s
H3 a External crisis competitive pressure group	21				12.3		46.6	37.7	24.4	26.1	94.4	33.8		
b Internal crisis competitive pressure group	15				15.0		40.4	33.3	24.5	25.3	88.4	30.0		
Predicted (a-b)					-		+	+	+	+	+	+		
Results (a-b)					-2.7		6.2	4.4	-.1	.8	6.0	3.8		
P Value					.025		.025	.04	n.s	n.s	.10	.10		

	No. of cos	Domain Related Activities: Markt. & Prcm. orntn.	Imp. of R&D	Imp. of divrfcn	Styles of Management: Coercive	Organic	Participative	Plng & Technocratic orntn.	Risk taking	Goal Salience	Sophistication of Infn.& con. system	Del. of authority by chief ex.	Std. orien.	Collaboration between managers
H4 a Ext. crisis weak comp. pressure group	20				14.2		43.5	34.5	23.7	24.2	82.3	35.2		
b Int. crisis weak comp. pressure group	21				13.5		40.9	33.8	22.6	22.1	80.6	32.3		
Predicted (a-b)					-		+	+	+	+	+	+		
Results (a-b)					.7		2.6	.7	1.1	2.1	1.7	2.9		
P value					n.s		.05	n.s	n.s	.04	n.s	.10		
H5 a Strong comp. pressure and external crisis group	21				12.3					26.1	94.4	33.8	8.8	5.7
b Strong comp. pressure no external crisis group	19				13.0					24.2	84.4	33.0	7.6	5.6
Predicted (a-b)					-					+	+	-	+	+
Results (a-b)					-.7					1.9	10.0	.8	1.2	.1
P value					n.s					n.s	.025	n.s	.05	n.s
H6 a Strong comp. pressure internal crisis group	15				15.0					25.3	88.4	30.0	9.3	5.2
b Strong comp. pressure no internal crisis group	30				12.5					26.7	90.3	35.9	7.8	5.6
Predicted (a-b)					+					-	+	-	+	-
Results (a-b)					2.5					-1.4	-1.9	-5.9	1.5	-.4
P values					.025					n.s	n.s	.01	.05	n.s

	No. of	Domain Related Activities: Mark. & Prom. orntn	Domain Related Activities: Imp. of R&D	Domain Related Activities: Imp. of divrfn	Styles of Management: Coercion	Styles of Management: Organic	Styles of Management: Partocipative	Styles of Management: Plan & Technocratic orntn	Styles of Management: Risk taking	Goal Salience	Sophistn. of I& CS	Del. of authy. by c.e.	Std. oriant.	Collaboration between mgrs.
H7														
a Ext. crisis strong comp. pressure	21	8.2	4.7	4.3	12.3	32.8	46.6	37.7	24.4	26.1	94.4	33.8		
b Internal crisis weak com. pressure	21	6.2	3.6	3.5	13.5	28.4	40.9	33.2	22.6	22.1	80.6	32.3		
Predicted (a-b)		+	+	+	–	+	+	+	+	+	+	+		
Results (a-b)		2.0	1.1	.8	-1.2	4.4	5.7	4.5	1.8	4.0	13.8	.5		
P values		.001	.025	.05	n.s	.001	.001	.025	.08	.001	.001	n.s		
H8														
a Ext. crisis weak comp. press. group	20	6.0	3.9	4.2		30.0			23.7					
b Int. crisis comp. press. group	15	7.9	3.7	4.1		31.6			24.5					
Predicted (a-b)		–	–	–		–			+					
Resutls (a-b)		-1.9	.2	.1		-1.6			-.8					
P values		.001	n.s	n.s		n.s			n.s					

technocracy, and tend to be more decentralized and have a more elaborate and sophisticated control and information system, when faced with an external rather than an internal crisis.

Hypothesis 4 concerning the organizational responses of noncompeting organizations to external versus internal crisis was moderately supported (3 out of 7 differences being in the predicted direction, $p \nleq .10$) Compared to an internal crisis, noncompeting organizations faced with an external crisis tend to be managed more participatively, have higher goal salience, and tend to be more decentralized.

Hypothesis 5 concerning the organizational responses of competing organizations to the presence and absence of external crisis had moderate support (2 out of 5 findings had $p \leq .10$). When faced with an external crisis, competing organizations tend to employ a more sophisticated and elaborate information and control system and tend to standardise their operations more.

Hypothesis 6 concerning the organizational responses of competing organizations to the presence and absence of internal crisis, too, had moderate support, with 2 out of 5 predictions being supported at $p = .10$. In the presence of an internal crisis, competing organizations tend to get more centralized and tend to standardize their operations more.

Hypothesis 7 comparing the organizational responses of competing organizations subjected to an external crisis with the organizational responses of noncompeting organizations subjected to an internal crisis was strongly supported. Of 11 predictions, 9 were supported at $p \leq .10$, and indeed, mostly at $p \leq .05$. Compared to noncompeting organizations suffering from an internal crisis, competing organizations suffering from an external crisis tend to emphasise more strongly domain-directed activities like marketing and promotion, research and development, and diversification; tend to have a more organic, participative, risk taking, and comprehensive planning oriented and technocratic management; tend to have greater goal salience; and tend to employ a more elaborate information and control system.

Hypothesis 8 comparing the organizational responses of noncompeting organizations facing an external crisis with those of competing organizations facing an internal crisis had low support, only 1 prediction out of the five being supported at $p \leq .10$. The former class of organsations tend to emphasize marketing and promotion less than the latter.

SUMMARY AND DISCUSSION

After a survey of the literature on organizational crisis, it was concluded that organizations under crisis tend to get more centralized, standardized, and controlled. There may, however, be important differences between the organizational consequences of external and internal crisis, notably in the evoking of superordinate goals, organizational integration, participative and professional orientations, riks-taking and organizational intelligence activities. Similarly, after a survey of the organizational responses to competition, it was surmised that competing organizations engage more intensively in domain directed activities like marketing and promotion, diversification, and research and development; and they tend to have a more organic, technocratic, and participative management style, a more comprehensive organizational strategy, and a structure marked by more elaborate uncertainty reduction, differentiation, and integration mechanisms than organizations involved in little or no competition. Based on these conclusions a number of hypotheses were developed comparing organizational responses of competing and noncompeting organizations to external as well as internal crises. With the data available from a sample of 165 Canadian and U.S. companies, 64 predictions were tested; all 35 results significant at $p \leq .10$ and all 27 at $p = .05$ were in the expected direction. Predictions concerning the organizational responses to external crisis of competing versus noncompeting organizations and those concerning the responses to external versus internal crisis of competing organizations were more widely supported than predictions concerning the organizational responses to internal crisis of competing organizations, to the presence versus absence of external crisis of competing organizations, and the presence versus absence of internal crisis of competing organizations. The hypothesis comparing the organizational responses of competing organizations undergoing an external crisis with those of noncompeting organizations facing an internal crisis was strongly supported. The hypothesis comparing the organizational responses of non-competing organizations facing an external crisis with those of competing organizations facing an internal crisis was weakly supported. The usual qualifications regarding cross-sectional, self-report data must, of course, be kept in mind while assessing the results. So must the limitations of the somewhat indirect measures of external and internal crisis, and the somewhat restricted range of competitions considered in the measure of competitive pressure.

From the point of management and organizational strength, it is likely that both competition and external crisis have beneficial consequences. The external crisis - high competitive pressure group exhibited significantly greater participative and planning oriented, technocratic management, greater R and D, and marketing orientation, a more elaborate information and control system, greater goal salience, and significantly less coercive and mechanistic management than the external crisis - low competitive pressure group. As compared to the internal crisis - high competitive pressure group, too, the external crisis - high competitive pressure group exhibited a significantly more participative and planning oriented, technocratic management, less coercion, a more R and D orientation, greater decentralization, and a more elaborate information and control system. The implication is not that the external crisis - high competitive pressure organization necessarily shows a higher performance than the other types; it is simply that it is likely, by virtue ofits management strength and by virtue of its structure, to be able to meet future challenges of competition and crises more effectively. If, however, the environment is likely to become or remain benign and non-competitive, the set of management "strengths" may well not come in handy or may even turn into a liability.

One troublesome issue is the direction of causality: do crises create the predicted management style, structure, etc. responses, or do certain management orientations and structural inadequacies give rise to external or internal crises? Several studies indicate that organizational performance varies with the degree of participative orientation of management (e.g. Likert, 1961; Bowers and Seashore, 1966; Pennings, 1975; Khandwalla, 1977b, ch.15) and that organizations that are oriented to planning or do formal long range planning outperform their rivals that do not (e.g. Thune and House, 1970; Ansoff, Avner et al, 1970; Khandwalla, 1977b, ch. 15). Thus, it is possible that organizations whose managements are not participative and/or planning oriented may do much worse than their rivals whose managements are participative and/or planning oriented. Such relatively low performance may amount to a crisis and may be seen either as an external crisis(if the management is minded to attribute low performance to external factors) or an internal one(if the management attributes low performance to internal factors). The evidence as shown in Table 1 is generally contrary to this line of reasoning. If crisis is caused by low participation and low planning orientation and its designation as external or internal is only a matter of random attribution by management, then we should expect no difference between external crisis and internal crisis groups on participation and planning. However, the external crisis-competitive pressure group outscored the internal crisis-competitive pressure group significantly on both the participative and the planning orientations of top management, and the external crisis-weak competitive pressure group outscored the internal crisis-weak competitive pressure group on participation (significantly) and on planning(not significantly). Many behavioral scientists (most notably Likert and his associates) have considered a coercive, authoritarian management orientation as dysfuntional for organizational performance. If so, coercion orientation should be higher in organizations facing external or internal crises as compared to ones that are not. Table 1 indicates that the strong competitive pressure - external crisis group, which had a much lower profitability than the strong competitive pressure-no external crisis group, had lower(but not significantly so) coercion score than the latter group. However, the strong competition-internal crisis group scored significantly higher than the strong competition-no internal crisis group. In the absence, however, of longitudinal data, the issue of whether crisis generates certain organizational responses or vice versa remains open and invites further research. On the whole it seems reasonable to think that certain managerial responses, such as low participation or high coercion, may cause and be caused by internal crises. It is less likely that they cause external crises or result from external crises.

1

This procedure was a response to the "softness" of the data. It decreased the probability that a company really experiencing moderate environmental hostility may be miscategorised as one experiencing high external hostility or low external hostility, and increased the probability that a company actually experiencing high or low environmental hostility will in fact be so categorised. A similar consideration led to the selection of the high competitive pressure and the low competitive pressure groups and the low relative performance and the high relative performance groups.

2

Variable profitability rather than low profitability may be the outcome of competitive pressures. Profit erosion due to lower prices in a competitive market may be offset by greater efficiency, so that profitability need not decline with increase in competition. Also, firms in monopolistic position may choose to earn only "reasonable" profits as an entry-preventive policy. On the other hand, increasing competition will tend to increase the indeterminancy of the outcomes of organizational strategies, and therefore increase the variability of profitability.

APPENDIX 1

CHARACTERISTICS OF THE SAMPLE

One hundred and sixty-five companies participated in the study. These were predominantly independent, public companies; 112 were registered in Canada and 53 in the US. The companies represented all the principal economic regions of North America. Other characteristics of the sample were:

1. Company Size

Average (annual sales or revenues)		$ 221 m.
Very large firms (annual revenues of $500 m. or over)	14%	
Large firms (annual revenues of $100 m. to $499 m.)	28%	
Medium sized firms (annual revenues of $ 50 m. to $ 99 m.)	19%	
Small firms ($10 m. to $19 m. in annual revenues)	24%	
Very small firms (less than $10 m. in annual sales)	15%	

2. Company Age

Average (age since founding)		54 years
Very old (100 years or over)	13%	
Old (50 years to 99 years)	32%	
Middle aged (15 years to 49 years)	45%	
Young (less than 15 years old)	10%	

3. <u>Company Profitability</u>

Average of the highest and the lowest before tax percentage returns on net worth		15% return
Extremely profitable (return of 30% or over)	11%	
Highly profitable (return of 20% to 29.9%)	14%	
Moderately profitable (return of 10% to 19.9%)	42%	
Unprofitable (0% to 9.9%)	29%	
Losing money	4%	

4. <u>Company Growth Rate (over a 5 year period)</u>

Average growth rate		14.7%
Extremely high(30% or over)	10%	
High (20% to 29.9%)	16%	
Moderate (10% to 19.9%)	32%	
Low (0% to 9.9%)	41%	
Decline	1%	

5. <u>Industry Affiliation</u>

<u>Manufacturing</u>		58%
a) Consumer nondurable(food products, drugs, photographic materials,books,textiles,etc.)	18%	
b) Consumer durable(automobile, audio equipment, mobile homes; etc.)	4%	
c) Producer(Steel,metals,building materials, accessories, etc.)	20%	
d) Capital (machinery, planes, ships, etc.)	12%	
e) Other	4%	
<u>Service</u>		42%
f) Merchandising (wholesale and retail)	8%	
g) Finance, investments,bankimg,insurance	10%	
h) Utilities(gas, electricity, telephones, railroads)	12%	
i) Miscellaneous	12%	

APPENDIX II

OPERATIONAL DEFINITIONS OF VARIABLES

1. Environmental hostility (external crisis): Scores on three scales were aggregated to measure this. One scale measured how risky the firm's external environment was; another, how stressful, exacting, and hostile it was; and the third, the extent to which the environment was dominating rather than dominated by the firm. For details see Khandwalla, 1977b, pp.641-643.

2. Competitive pressure on the company: Six scales were utilized to measure this, three for measuring respectively the intensity of price, promotion, and product competitions in the company's industry, and three for scoring the strategic importance given by the top management to each form of competition. The score for intensity was weighted by the score for importance for each form of competition and the three weighted scores were aggregated (see Khandwalla, 1977b, Appendix, for details).

3. Company's performance relative to average for industry (a negative meaure of int[illegible]): [illegible] ratings [illegible] scales concerned with the top management's estimate of how well the firm was doing relative to the industry average (or its competitiors in case it was highly diversified) with respect to long run profitability, growth rate of revenues, employee morale, financial strength, and public image and goodwill were aggregated (for details see Khandwalla, 1977b, pp 656-7).

4. Participative orientation of top management: Ratings on ten scales were aggregated to measure this. Three measured the extent of participative, group or democratic decision making in relation to each of (a) product or service related decisions concerning the level of operations, marketing strategy, R and D etc; (b) capital budget decisions; and (c) strategic decisions concerned with long term plans for growth, diversification, and changes in operating philosophy. Two scales measured the strategic importance to top management respectively of participative decision making at middle and senior management levels, and of management by objectives. One measured the management commitment to an operating philosophy of group or committee oriented, consensual, participative decision making versus a philosophy of individualistic decision making by the formally responsible executives. Two scales measured respectively the extent of human relations training and the use of behavioral science techniques, like the managerial grid and confrontation meetings, to reduce intergroup conflict and to promote collaboration. Two others measured respectively the extent of training of supervisors in human relations skills, and the extent of attempt to involve those affected by an organizational change in each phase of the change process, with respect to the institution of organizational changes. For details, see. Khandwalla, 1977b, pp.646-8.

5. Comprehensive planning and technocracy orientation of top management:

Ratings on eight scales were aggregated to measure this. One measured the extent of use of the planning mode in top level decision making. Four measured the strategic importance to top management respectively of forecasting sales et.; operations research applications; market research; and long term capital budgeting. One measured the commitment to an operating management philosophy of reliance on specialized, technically trained line and staff; another, emphasis on long term planning of goals and strategy; and a third, heavy reliance on formal management training programs. For details see Khandwalla, 1977b, pp 645-6.

6. Organic orientation of top management: Ratings on seven scales were aggregated to measure this. These seven related to operating top management philosophy of open channels of communication; freedom to managers to adopt styles of management of their choice; giving the greatest say to the expert in a given situation; free adaptation by the organization to changing circumstances as opposed to insistence on tried management principles; emphasis on getting things done even if this meant disregard of formal procedures; loose, informal control; and letting situational requirements and the individual's personality define proper on-job behaviour rather than any insistence on making personnel adhere to formal job descriptions. For details see Khandwalla, 1977b, pp. 648-9.

7. Risk-taking orientation of top management: Ratings on six scales were aggregated to measure this. One measured the use of the entrepreneurial mode in top level decision making; another the extent of non-resemblance to the incrementalist, adaptive mode of top level decision making. Four others measured the extent to which the operating top management philosophy emphasized respectively innovations and technological leadership; high risk high return investments; externally financed growth; and a highly competitive stance towards rivals. For details see Khandwalla, 1977b, pp. 644-5.

8. <u>Coercive orientation of top management</u>: Ratings on five scales were aggregated to measure this. The first measured the extent to which senior managers employed force to resolve their disagreements; the second, the extent of use of warnings to personnel to fall in line with organizational changes; the third, the infrequency with which organizational changes were accompanied by detailed explanations to those affected by them; the fourth, procurement of outside experts to investigate organizational problems; and the fifth, the use of arbitration procedures for resolving conflicts. For details see Khandwalla, 1977b, pp. 649-50.

9. <u>Goal salience of top management</u>: Ratings on five scales were aggregated to measure this. These five sought to measure the strategic importance to top management of five common corporate goals: securing above average profits, growth rate, financial strength , employee morale, and public image. For details see Khandwalla, 1977b, pp. 642-3.

10. <u>Delegation of authority by the chief executive</u>: Ratings on eight scales were aggregated to measure this. The scales related to the extent to which the chief executive had actually(rather than merely formally) delegated to subordinates or groups authority formaking decisions in the areas of raising long term finance; development of new products/services; marketing strategy; the hiring and firing of senior personnel; selection of investments; pricing; acquisitions; and bargaining with personnel regarding wages, etc. For details see Khandwalla, 1977b, pp. 651-2.

11. Elaborateness and sophistication of information and control system of the organization: Ratings on fifteen scales were aggregated to measure this. These related to the extent of use of several management controls like quality control; cost control; financial evaluation of investment proposals; inventory control and operations scheduling through operations research techniques; internal auditing; systematic evaluation of staff; profit centers; and cost centers . The remainder related to the use of electronic data processing; research and development; long term forecasting of sales, profits etc; forecasting of technology; systematic searchfor profitable investments and their evaluation; long term capital budgeting; and formal market research. For details see Khandwalla, 1977b, pp 653-5.

12. The extent to which managers collaborate in solving company's problems:

One scale was employed to measure how good the perceived collaboration was between senior personnel in responding to tough problems posed to the organization. See Khandwalla 1977b, p.680 for details.

13. Standardization orientation oftop management: The aggregated ratings on two scales measured this. The two related to the extent to which the operating top management philosophy respectively was one of emphasis on mass production technology, and of standard quality, low or popular price orientation. See Khandwalla, 1977b, p.644 for details.

14. Marketing and promotion orientations: Ratings on two scales were aggregated to measure this. The two measured the extent to which threre was a top management operating philosophy respectively of heavier than industry average advertising and promotion, and a marketing rather than an operating efficiency orientation. For details see Khandwalla, 1977b,p.685 and 682.

15. <u>Strategic importance of R and D:</u> Rating on a scale measuring the strategic importance to top management of R and D was employed. See Khandwalla, 1977b, p.695 for details.

16. <u>Strategic importance of diversification:</u> One scale was employed to measure this. See Khandwalla 1977b, p.696, for details.

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