4. Risk-taking Under Conditions of Uncertainty Within the Australian Disaster Management Network.

An organization that is engaged in constant drills, plans for contingencies, anticipates crisis, and organizes its resources and structural configuration accordingly is better able to avoid the element of surprise which disaster produces, and which precipitates a demand-capacity imbalance ratio. Compared with other organizational types, the structural design and patterned responses of disaster-relevant organizations theoretically enables them to react quickly to sudden environmental changes. In principle at least, and in comparison with other types of organizations, most disaster management agencies have the following ten characteristics (see Britton, 1988):

- They operate on a 24-hour, 365-day year thereby having the opportunity to respond immediately;
- Personnel are rostered on 24-hour shifts and are thus immediately able to respond;[19]
- Personnel have specialised training and are likely to have access to, and have proficiency in operating specialised disaster-mitigating resources;
- The organizations have specific disaster-relevant goals;
- They usually have specific disaster-relevant task domains which are sometimes enshrined in legislation;
- Each organization is connected to a network of other disaster organizations which permits quick access to pertinent information;
- Most have special boundary-spanning positions which enhances inter-organizational relations;[20]
- Most organizations have disaster contingency plans;
- They have systems of forewarning which are designed to minimise the risk of being caught 'off-guard';

and

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[19] This is not a characteristic of all emergency-relevant organizations. The Australian State/Territory Emergency Service organisation, for instance, is an example of an 'expanding emergency organization (see Dynes, 1970 op cit.), in which the majority of its members are volunteers and thus time is required for full mobilisation.

[20] Within the Australian disaster management context these positions are referred to as Emergency Service Liaison Officers (ESLO's).

> During disaster these organizations operate within a period referred to as the 'emergency social system'[21] in which a system of functional priorities is created under which high priority is given to resolving the immediate crisis situation.

Further systematic research relating to the disaster management network is required to discover the extent to which these specific organizational characteristics are taken advantage of in the context of counter-disaster mitigation. The limited studies currently available suggests that full exploitation has yet to be achieved.

The method of organizational adaptation to disaster is dependent on several factors, such as:

1 the nature of the demands as they are perceived by organizational personnel, particularly senior decision-makers;

2 the organization's capability to respond to and operate in collective stress periods;

3 the perceived effectiveness and efficiency of organizational response during collective stress; and

4 the bureaucratic structure of the organization.[22]

Within the Australian scene, organizations with disaster-relevant functions undertake other, non-disaster roles.[23] Typically, disaster-relevant organizations try to concern themselves with activities that are closely related to their routine everyday demands in an attempt to prevent those demands outstripping organizational capacity. Thus, during periods of mass emergency and disaster there is a certain degree of predicability concerning the type and methods of action that occur, and these actions parallel the pre-crisis action, at least in the initial stages. Wettenhall, for example, in his account of the 1967 bushfires in Tasmania notes that the administrative arrangements pursued in that conflagration were based on precedent which, for the most part were unreflective, and were based on events of considerably lesser magnitude than

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[21] See A H Barton (1969), **Communities in Disaster: A Sociological Analysis of Collective Stress Situations.** Garden City, New York: Doubleday.

[22] See Brouillette J R & E L Quarantelli (1971), Types of patterned variation in bureaucratic adaptations to organizational stress. **Sociological Inquiry**, 41: 39-46.

[23] In most cases however, the other roles also have a crisis-relevant function.

those experienced in the 1967 event.[24] That this occurred should not be surprising, given Starbuck's (1985) comments relating to the propensity for consistency of actions by organizational personnel, and which have already been mentioned in an earlier section of this paper. The implication here is that while some organizational responses may be predictable they may not necessarily be appropriate. This leads one to ponder whether or not certain possible strategies for counter-disaster are foreclosed because they do not fit well with the traditional orientations the specific organization pursues in the more routine, non-crisis, context of its organizational work. It also highlights the problem inherent in relying on previous experiences as an action-source 'aide memoire' for future events.

It has been argued that many of the actions within the Australian disaster management system appear to rest on maintaining the status quo of the organizational and network hierarchy rather than on the development of effective community disaster preparedness and response measures. This matter was raised in the context of the 'bureaucratic imperative' (see Britton, 1989), querying organizational activities that were indicative that counter-disaster operations were not a high priority on any government agenda, and that entry into some crucial senior disaster management positions had been made where the individual had little direct knowledge of disaster management. The observation was also made that organizational operatives with disaster-specific skills, expertise, and experience were not in key policy-making positions, and that promotion within the system appeared to be based on administrative skill rather than disaster-specific expertise. The question being asked in the context of the bureaucratic imperative related to choice: What schemata[25] do senior management personnel have with reference to the management of disaster events? Do these schemata differ from those of the operatives, and if so how? Is organizational choice confined to the conditions placed on the system by senior decision-makers who may not be fully conversant with or overly interested in the mission requirements? Are some things 'taboo'[26] in the disaster management organization; and does this hinder organizational learning? What are the implications of these factors on

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[24] See Wettenhall R L (1979), Organization and disaster: The 1967 bushfires in southern Tasmania. In L Heathcote & B Thom (ed), **Natural Hazards in Australia**. Pp. 431-435. Canberra: Australian Academy of Sciences.

R L Wettenhall (1980), The response of government to disaster: A study in fragmentation. Pp. 261-295. In J Oliver (ed), **Response to Disaster**. Townsville, Qld: Centre for Disaster Studies. James Cook University.

[25] See Lee Wilkins, this volume.

[26] See Mike Smithson, this volume.

organizational conduct and efficacy? This leads one to ponder on questions relating to professional autonomy, freedom of choice, and professional ethics. The situation in the disaster management field might be expressed by the following general propositions:[27]

- Within the organization, internal influencers (i.e. those with decision-making roles) possess legitimate power rather than expert power;

- The orientation of these individuals is directed towards the maintenance of the organization's administrative functions, even to the point of maintaining the administrative status quo over the pursuit of effective disaster management capabilities. This position is 'affordable' because of the infrequency of social crisis events of disaster proportions;

- Within this group there is a tendency for a reactive rather than a proactive orientation to management and planning for collective stress episodes;

- They also have little continuing first-hand experience in community disaster management.

- Organizational operatives with disaster-specific skills, expertise and experiences are not in key policy-making positions;

- This group shows more commitment to the organization's stated mission (i.e. the official goals of the organization);

- They are typically the repository of the organization's 'hands-on' knowledge of local hazards and counter-disaster mitigation strategies, and directly and repeatedly liaise with clients (community groups);

- This group makes efforts to regularly maintain and/or upgrade disaster-relevant training and knowledge.

Under these conditions, it would appear that Smart and Vertinsky's comments suggesting that uncertainty and complexity are not constants within an organization, but are rather dependent on the beliefs of individual members (1984:200) takes on renewed significance. These researchers, it will be recalled, suggested that individual tolerances for ambiguity and uncertainty are critical factors in determining organizational response. One difficulty which still hinders the effective development of counter-disaster management relates to the

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[27] For a more thorough discussion of this, see Britton, 1989.

stereotyping mentioned by Janis (1985). Within the overall framework of social crisis management, there is still a failure to appreciate the need to differentiate crisis events on both qualitative and quantitative grounds.[28] Wettenhall's observation in the context of the 1967 Tasmanian bushfires, discussed earlier, illustrates the inherent difficulties of failing to distinguish between types of events.[29] On this particular occasion, it is salutary to note that the organized response of the established agencies was not as effective as that of the emergent organizations which sprang up.[30] Related to this is the previously noted concept of 'requisite variety' (see Weick, 1987). In a nutshell, the problem connected with the Australian DRON is the employment of the 'disaster-as-large-scale-accident' practice ideology. Under the problem of requisite variety within the disaster services,

> organizations may have difficulty in making decisions and directing personnel under unexpected conditions because of unexpected tasks, inadequate leadership, or lack of previously worked out programs. Further, organizations may not define the situation as one that requires them to act (Siegel, 1985:108).

Within the organizational change literature, it is axiomatic to state that change is a continuous process, whether it be incremental or induced. Organizations are assumed to be capable of adjusting, when it is necessary to do so, on the basis of their own internal requirements as well as changes required by external sources. The need for change, the pace and the extent of organizational adjustment however, is often determined by the chief executive and/or the dominant coalition.[31] In terms of the adaptive process, the reactions of organizational decision-makers is significant. In broad terms, decision-maker response to the need for strategic developments could be categorised as avoidance, reactive or proactive. It should be expected that

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[28] See, Britton N R (1987), Towards a reconceptualization of disaster for the enhancement of social preparedness. In, **Sociology of Disasters: Contribution of Sociology to Disaster Research**. Pp. 31-56. Edited by R R Dynes, B de Marchi and C Pelanda. Milan, Italy: Franco Angeli.

[29] This is a problem that has not been resolved at the theoretical level either. At least one recent 'crisis management' text, for instance, which is due for release later this year, strongly leans towards homogenising the collective stress spectrum to the point wherein little distinction is made between a short-term hostage siege which last for a few hours, and large-scale community-wide destructive earthquakes.

[30] See R L Wettenhall (1975), **Bushfire Disaster: An Australian Community in Crisis**. Sydney: Angus & Robertson.

[31] Which Mintzberg (1983) reminds us can be either internal or external to the focal organization.

all three of these response modes will be found within the disaster management system, although one would hope that avoiders and reactors would not outweigh those with an inclination towards proactivity. On the face of it however, it might be stated that the predominating orientation within the senior levels of the disaster-relevant organizational network would place several, perhaps even the majority, in the risk-averse category of 'reactors'. If this was the case, and this assertion is far from being verified, it would explain some of the limitations to organizational learning which characterise many disaster management services. There have been no studies undertaken in the Australian disaster management context which provide us with the type of specific insights that Smart and Vertinsky cited in relation to corporate management variability towards uncertainty. This is not however, to deny the fact that over the past few years there have been some very positive advances within the disaster management network, including the recruitment of some very able and far-sighted individuals who are making considerable impacts on the overall efficacy of their particular organization.

5. Concluding Remarks

The suggestion that decision-making within the disaster management context would best fit into 'reactive' and 'risk-averse' categories is, in most respects, based on inference because there have been no studies undertaken in the Australian context which have specifically focussed on this subject. This is one of the several areas that the disaster research community needs to look at. To conclude this paper it is appropriate to mention four other areas that research in social and collective stress needs to develop:

1 We do not have any systematic and empirically-gathered information that enables us to develop a profile of decision-making actions within a social crisis context. Because of this, we are unable to be confident about how disaster management organizations cope with uncertainty. All we have to go on is data about the **event**, rather than the **process** surrounding organizational and administrative actions relating to the event. It is the **process** however, which is the important component for understanding organizational decision-making in crisis.

2 Developing the first point further, the styles, practices, and strategical rationale adopted by decision-makers within the disaster-relevant organizational context during conditions of crisis and uncertainty have not been methodically studied. Hence, we do not know what the exact conditions are that **precede** crisis-relevant actions. Turner (1978) clearly reminds us that major impact events have an 'incubation period' in which circumstances can, in a sense, conspire to create a malevolent condition. In the same way that many answers surrounding the causes of impact can be determined by reconstructing events leading up to

it, so the premeditated actions of disaster managers ought to be probed in the hope that lessons can be had. Some interesting work has been undertaken in this area in the USA (see for instance, Drabek, 1987), and it needs to be replicated and extended here. One of the problems experienced in Australia however, is the reluctance of organizations to permit research.

3 It has already been mentioned that the Australian DRON is relatively inexperienced in dealing with large-scale technological impact. While there are many reasons why it is appropriate to consider comprehensive emergency management strategies which focus on an all-hazards approach, it needs to be remembered that there are differences involved between types of hazard events, just as there are unique factors within every impact event. In this context, all things being considered, technological mishaps require a more open system of crisis management. For instance, there is a greater propensity to require and rely on external expertise to assist in the cause, identification and location of many technical accidents (e.g. type of toxic gas; source of radiation leakage) and to assist with solutions (for example, the method of chemical fire combat). In addition, in both developed and developing nations there is a propensity for technological impacts to lead the rapid activation of the emergency medical system as a precautionary measure, or alternatively will directly cause mass casualties (mass transit accidents is a case in point). This should raise concern because the medical services, as a whole, are not well-integrated into community disaster contingency planning. The point being made here is that the Australian disaster management system does not have a good track record of being open. We therefore need to investigate this further, as well as aspects relating to how the disaster management network is likely to react to technological impact, and the implication that has for risk management decision-making.

4 A more general question requiring study is that while it is recognised that there are specific factors which distinguish disaster decision-making from the decisions and actions which characterise everyday life events, do we actually need to study disasters in order to develop an understanding of how decision-makers cope under conditions of uncertainty? We need to be more precise in our measurements of, and our understanding of how extreme events differ from the conditions which pertain, for instance, to managing corporate crises. Can disaster researchers learn anything from studying how decision-makers cope with uncertainties resulting from business failures, hostile take-overs, unsettling management successions, or acts of terrorism?

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