Communities and their Experience of Emergencies

"Every step forward is made at the cost of mental and physical pain to someone."

Fredrich Nietzsche (1844–1900) German philosopher

By Mark Sullivan

When the Great Flood of 1993 impacted the North American Midwest, it was said that the heartland rediscovered its heart (Guillory, 1996). Midwesterners united to bring the community back from its knees and collectively engaged in the long process of recovery. On the other side of the World, in 1998, the East Gippsland region on Victoria in Southeastern Australia was also impacted by flood. However, a report prepared by the Victorian Department of Natural Resources (DNRE), et al. (1999) suggests that the residents of East Gippsland showed less evidence of the united and self-sustained approach to recovery exemplified by the American Midwesterners in 1993. These two examples serve to highlight the difference in the ways that communities can react to emergencies, particularly in terms of recovery. Indeed, the very nature of what comprises a community and its pre-emergency functioning can have significant implications in terms of the predicted reaction of communities to emergencies. Accordingly, in order to gain a realistic understanding of communities' experiences of emergencies and their recovery from emergencies, it is important to agree upon what it is that actually defines a community. Moreover, such a definition of communities should be along lines of a number of criteria. Not only would this form the basis of categorising communities but could serve as the basis of a description of the interaction between emergencies and communities. This paper will provide such a description.

To this end, a working definition of community is explored, along with a number of defining criteria. From there, the experience of emergencies in terms of recovery, and from the perspective of communities, is explored and described.

A definition of community

As alluded to earlier, the pursuit of an accepted definition of community has entertained social scientists for almost as long as there has been societies to study. Notwithstanding, it is important that community, in the context of this paper, is clarified. Rudimentary definitions of community focus on geographically defined social groups that interact and share interests (see, for example Robertson, 1987). Hillery (1955) refines this further by ranking each of these factors into the order given above, with interaction ranking the highest in terms of relevance to the definition of community.

In terms of geographic classification, the scale can vary dramatically. Moreover, this geographical taxonomy of society can be further influenced by non-geographic factors. For example, Gray (1999) describes the notion of social areas. These are geographically bounded segments of a wider community, which exhibit inequality in comparison to the broader community. These in themselves could indeed be described as communities in their own right. Nevertheless, geography, whilst a popular method of defining communities is by no means the only method, nor the most useful. In fact, the field of emergency management has devoted a substantial amount of academic rigour to the study of communities and, in so doing, has advanced several means of defining communities. Emergency Management Australia (2000) advances four means of community classification. These include geographically based groupings, shared-experience-based groupings, sector based groupings (for example, manufacturing, education, etc.) and function based groupings (for example, health service providers, telecommunication providers, etc.). Each of these are reasonably self explanatory and therefore need not be expanded upon any further. Regardless, Emergency Management Australia (2000) also acknowledges that several smaller communities can combine to form larger communities. This notion is supported by Marsh and Buckle (2001) who challenge the assumption of there being a 'single' definition of community. Further, Marsh and Buckle (2001) cite four variations of community. These include communities of affection or function, communities of competition, communities of interest and communities of status groupings. Indeed,

a community may represent a mosaic of each of these community types and furthermore may disintegrate, reform, change, decline and grow as the community context alters with time.

Clearly, taken in concert, the various notions of community seem to exhibit a degree of commonality along at least one front, that is, interaction. Regardless of how social scientists describe communities, interaction is generally a common link. There are however, exceptions. Specifically, a community may be described according to their geographical boundaries, yet never interact. Similar examples abound along a number of other criteria.

Amidst this preponderance of theory and classification, it is not difficult to lose sight of the reasons for defining community. In this instance, a definition of community that facilitates a pragmatic analysis of the effects of emergencies on communities in terms of recovery is favoured. Thus, it is the manner by which the definition of community will be used, rather than adjusting the use to suit the definition that should dictate the means by which a community is defined. In terms of emergency management, current thinking leans toward analysing elements at risk in terms of the 'triple bottom line' (Esplin, 2001). This triple bottom line comprises societal, economic and environmental consequences. If we take the societal component as being analogous to community, then a definition of community emphasising interaction is advocated, as any other definition could arguably fit into economic or environmental (assuming environment refers also to the human-made environment).

Therefore, at the risk of tendering an overly complicated definition of community, a multi-layered definition of community, based on one unifying factor is advanced. Specifically community, for the purposes of this paper will be taken as referring to a group of people who interact, but who may do so within and between a number of sub-communities, such as those referred to earlier by EMA (2000) and Marsh & Buckle (2001). The community need not be bounded by geography, but for the purposes of analysing the effects of emergencies on communities in terms of recovery, will be bounded by the impact of the emergency.

Community analysis criteria

It is not enough that community is merely defined. For the definition to be truly effective, it must be complemented by a number of evaluation criteria. Put another way, the definition determines the scope of any subsequent analysis, whereas evaluation criteria provide the mechanism by which the analysis will be conducted. Figure 1, based on Lunn (2001), will provide the foundation upon which much of the following discussion is based and are described in detail later in the paper, noting that bounding these criteria is the definition of community previously discussed.

These thirteen criteria could also be thought of as vulnerability indicators or recovery capability indicators. Notwithstanding, as the following pages will demonstrate, they are also extremely valuable tools in determining what implications an emergency event holds for a community in terms of recovery.

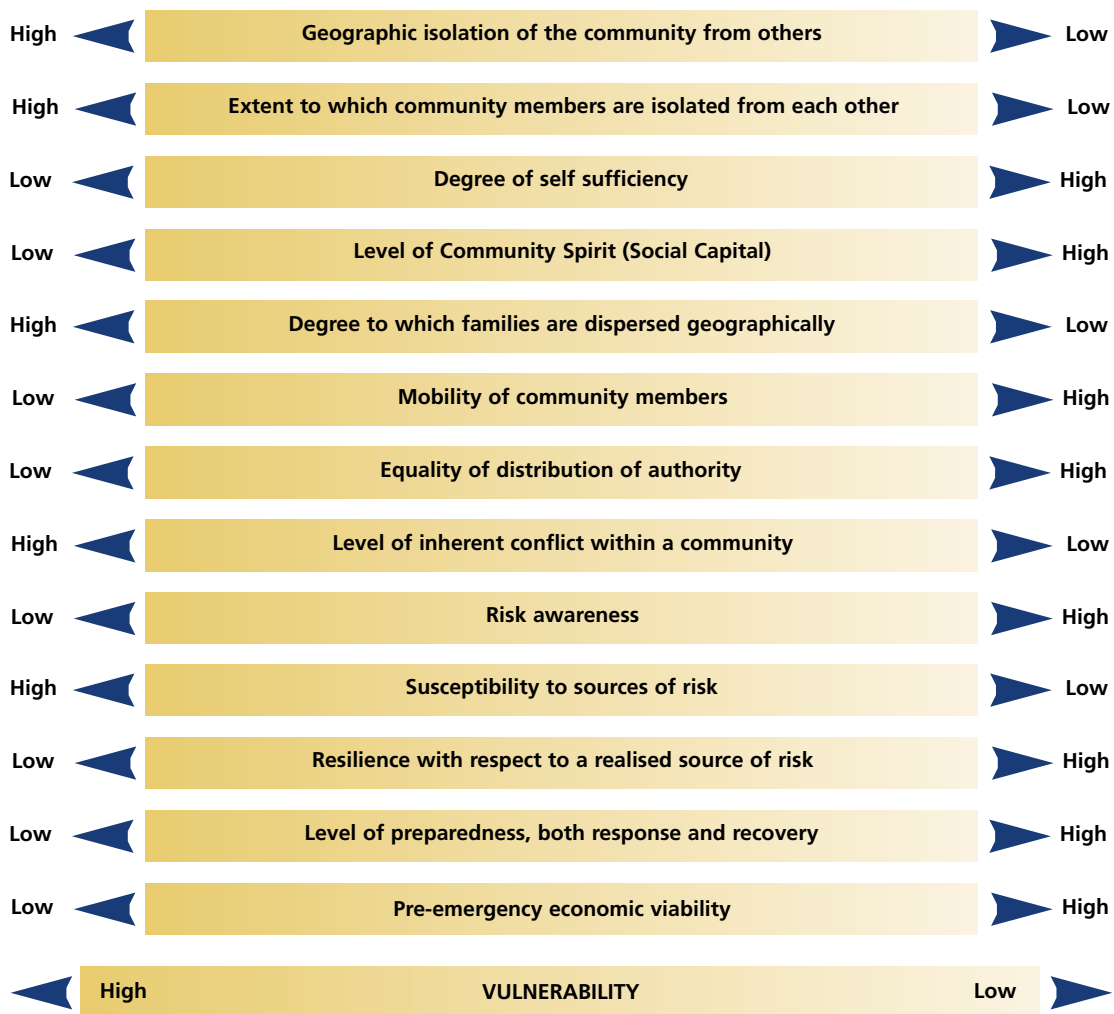## Implications of emergencies for communities in terms of recovery

There is no question that the impacts of emergencies on communities have wide and far-reaching effects on the community. It is also true that many of these effects, such as dislocation and psychological ramifications, have a significant bearing on the community's ability to effectively recover. However, before delving into any greater detail, it is wise to first consider in general terms the effects post-impact of the emergency upon the community.

Raphael (1986) paints an extremely accurate, yet poignant picture of a community's response to emergencies. She outlines the community response in parallel with the individual response, that is, confusion and change followed by adaptation, management of the situation, reorganisation, and recovery. That is not to say that this is the accepted process of individual recovery advocated by all authorities on the subject. In fact, Carter (1991) paints a less rosy picture of the individual response to emergencies; one that is characterised by devastation, realisation, rationalisation, accusation and finally, accumulation.

What effectively happens is that the emergency serves to fundamentally alter the myriad interactions within the community, or as Gordon (1990) suggests, destroy all bonds that come into its contact. However, what is discussed here is merely an aspect of the psychosocial ramifications of the emergency. There is also a physical aspect in the sense that the community can be physically broken up, such as was the case in the Hobart Bridge Disaster, which in itself can have psychosocial implications (Raphael, 1986).

Whilst many models of recovery focus on the functional aspects of recovery, such as that advocated by Kates & Pijawka (1977), such models say very little about the processes going on inside the community. However, Raphael (1986) offers a more appropriate approach when she discusses recovery in terms of the leadership and assistance aspects of response and recovery. This approach suggests that leaders emerge from the confusion and coordinate what is essentially a process driven by post-impact altruism. This stage is sustained to a point at which former power structures reassert themselves and altruism gives way to former patterns of conflict and bureaucracy, sometimes even manifesting in turf wars between aid and recovery agencies. This approach accords with Robbins', et. al. (2000) argument that groups are in a constant state of flux, forming and

Figure 1: Vulnerability Indicators

High	◄	Geographic isolation of the community from others	►	Low
High	◄	Extent to which community members are isolated from each other	►	Low
Low	◄	Degree of self sufficiency	►	High
Low	◄	Level of Community Spirit (Social Capital)	►	High
High	◄	Degree to which families are dispersed geographically	►	Low
Low	◄	Mobility of community members	►	High
Low	◄	Equality of distribution of authority	►	High
High	◄	Level of inherent conflict within a community	►	Low
Low	◄	Risk awareness	►	High
High	◄	Susceptibility to sources of risk	►	Low
Low	◄	Resilience with respect to a realised source of risk	►	High
Low	◄	Level of preparedness, both response and recovery	►	High
Low	◄	Pre-emergency economic viability	►	High

◄ **High**   **VULNERABILITY**   **Low** ►

reforming through a process of 'forming, storming, norming, performing and adjourning'. Nevertheless, the Victorian State Emergency Recovery Unit (SERU) Recovery Planning Guidelines (SERU, 2000) state that an unquestionable consequence of emergencies is a degree of community division. The degree to which this division affects the community will depend on a number of factors, many of which are discussed later, but include such things as level of social capital, isolation and resilience.

As one looks closer at what happens to communities in emergencies the real impact of emergencies on communities emerges. For example, uncertainty and complexity are cited by SERU (2000) as significant aspects of the earliest phases of recovery. This accords with Raphael's (1986) description of the '2nd Disaster', where confusion reigns supreme as a consequence of damaged communications and information dissemination mechanisms and infrastructure. This uncertainty, complexity and resulting confusion no doubt compounds the already burdensome stressors upon a community.

Another significant stressor bearing down on the recovering community is the loss of autonomy, which according to SERU (2000) can only be mitigated by encouraging a community-driven recovery process. However, as stated by Raphael (1986), the loss of dignity that goes with asking for help is also a significant stressor. It seems therefore inevitable that no matter which way the recovery of a community is facilitated, there is going to be some inherent conflict and resulting stress.

One of the key elements in mitigating the stresses of emergencies is to maintain a diverse social support network that resembles as closely as possible the one that existed prior to the event. Regrettably, as is often the case, the time and energy demands of engaging in the recovery process often leave little time for maintenance of these networks, which are so important for longer term recovery (Raphael, 1986).

A lot has been said thus far in respect of the destructive, or rather, psychosocial challenges that go with emergencies and recovery from emergencies.

One of the key elements in mitigating the stresses of emergencies is to maintain a diverse social support network.

Interestingly, Haas, et. al. (1977) argue very convincingly that emergencies merely serve to accelerate a community's normal evolutionary progression. That is, whilst emergencies force a community to rethink and rebuild, this rethinking and rebuilding is conducted consistently with that which would have taken place in the absence of the emergency, but which would have occurred over a greater period of time.

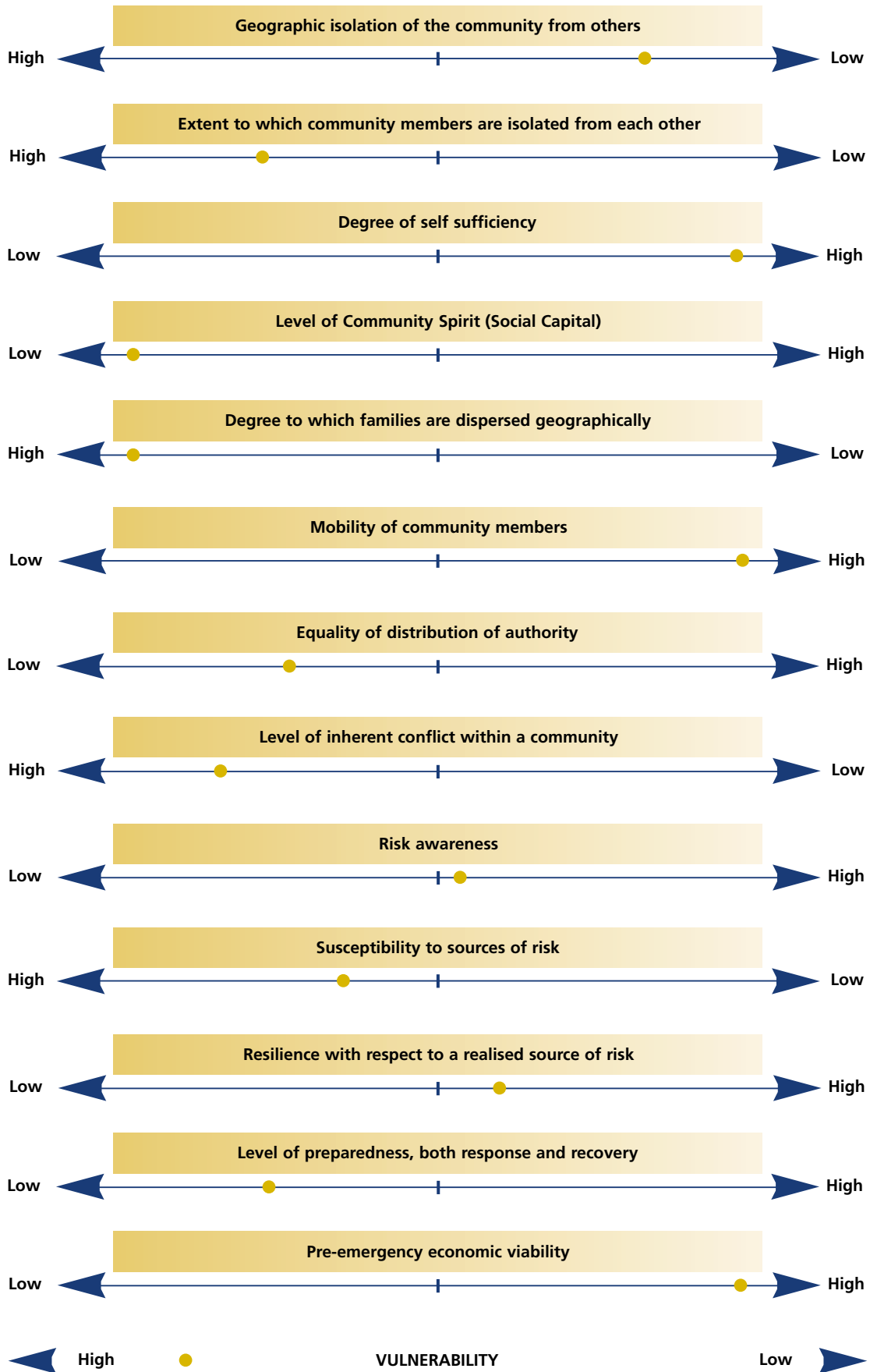## Community characteristics as determinants of recovery capacity

Whilst the preceding discussion offers a good generic picture of what happens to communities in emergencies, it does not address the fact that each community is different. At the start of this paper, a list of thirteen criteria were presented as possible tools in determining what implications an emergency event holds for a community in terms of recovery. In addition, these criteria might also be used to classify a community for the purposes of recovery planning. For example, Figure 2 shows how a typical city community might be classified as a step in such a process. However, it is important to note that what applies to one city does not apply to all cities. Moreover, the same analysis may only apply to one 'layer' of the community and quite possible will change over time.

Obviously such a means of classifying a community is a qualitative and possibly oversimplified model of community analysis. Nevertheless, as will be shown it can serve as an effective mechanism for describing a community's likely pattern of recovery. Hence, the following discussion will focus on how these criteria can apply in terms of the broad implications they hold for communities, particularly in terms of recovery.

Geography. The community may be either bounded geographically, such as an island community or ranging across a number of areas, such as the Anglican community. Clearly, the more geographically bounded a community is, the greater the likelihood that the entire community will be directly affected and therefore potentially less able to effect a rapid recovery. Conversely, a geographically dispersed community is more likely to be in a position to provide stable support throughout the recovery process, as only a portion is directly impacted by the emergency.

Isolation. Individuals within the community may live in relative isolation from other members of the community, such as elderly residents of a city or people of non English-speaking background. In fact, SERU (2000) cite such individuals, including the very young, very old, and people who for one reason or another maintain

Figure 2: Community Profile

Geographic isolation of the community from others

High ◄——————————————|————————●————————► Low

Extent to which community members are isolated from each other

High ◄————————●———————|————————————————► Low

Degree of self sufficiency

Low ◄————————————————|————————————●———► High

Level of Community Spirit (Social Capital)

Low ◄—●——————————————|————————————————► High

Degree to which families are dispersed geographically

High ◄—●——————————————|————————————————► Low

Mobility of community members

Low ◄————————————————|————————————●———► High

Equality of distribution of authority

Low ◄—————————●——————|————————————————► High

Level of inherent conflict within a community

High ◄———————●———————|————————————————► Low

Risk awareness

Low ◄————————————————|●———————————————► High

Susceptibility to sources of risk

High ◄——————————●—————|————————————————► Low

Resilience with respect to a realised source of risk

Low ◄————————————————|———●————————————► High

Level of preparedness, both response and recovery

Low ◄—————————●——————|————————————————► High

Pre-emergency economic viability

Low ◄————————————————|————————————●———► High

◄ High   ●   **VULNERABILITY**   Low ►

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A community can experience high levels of social capital.

poor social networks as particularly vulnerable to trauma as a result of emergencies. Therefore, such people are likely to demand a greater than average level of support during the recovery process.

Self sufficiency. A community may be relatively self-sufficient, as is the case for many rural communities, or rely significantly on the support of other communities. Indeed, it could be argued that the latter are becoming the norm, as suggested by Haas, et. al. (1977). Specifically, Haas, et. al. (1977) state that families are increasing becoming reliant on institutionalised support rather than traditional social support mechanisms. The same can be observed in many developing countries, hence the approach now advocated by international aid agencies to 'help nations help themselves'.

Social capital. A community may experience high levels of social capital (community spirit), evidenced by cohesion, trust and mutual support, or low levels of social capital. There is presently healthy debate in the social sciences as to whether or not levels of social capital in western society are in fact declining. Notwithstanding, it remains that the lower the level of social capital inherent within a community, the less able that community is able to pull together in support of

recovery efforts. This notion is supported by SERU (2000), which advocate building of social capital as part of enhancing community preparedness.

Dispersion. Families within a community may be either relatively intact and close in physical proximity, or widely dispersed. Raphael (1986) places particular importance on the role of family in assisting recovery. However, she also acknowledges that the highly cohesive extended family units characteristic of agrarian communities are becoming less the norm, resulting in significant challenges for the modern family in developed society with respect to recovering from emergencies.

Mobility. Levels of mobility, as evidenced by the level of immigration and emigration, have an important bearing on a community's recovery from an emergency. Highly mobile or nomadic communities, such as many indigenous communities are less resistant to temporary or permanent relocation (although this is not always the case). For example, the community of Yungay, Peru was relocated subsequent to an earthquake. Rather than returning to their original home when it was safe to do so, they chose to re-establish themselves in the place to which they had be relocated (Raphael, 1986). Similarly, relatively stable communities within which individuals

can claim to have lived for most of their lives are significantly more resistant to relocation, even for a short while.

Elitism. Communities may be elitist in terms of centralisation of power to a select few, or egalitarian in the sense that power is accessed and utilised by many. This criterion is two-pronged. Firstly, challenges arise in terms of the centralisation of power within the community. Quite often, such power structures are rendered insignificant during the confusion of an emergency (Raphael, 1986). However, such centralisation of power, when it remains intact, can be a useful tool for the recovery manager in terms of community consultation by providing a discrete and recognised link to the community that also has the power and authority to implement recovery measures. Conversely, Raphael (2000) warns of a risk that elite elements of the community may utilise the circumstances to further their own interests. A more egalitarian community, on the other hand, will deliver a more balanced approach to recovery, but may do so in slower time, owing to more cumbersome decision making processes.

Conflict. The level of inherent conflict within a community, whilst generally not a major factor in the early stages of recovery, plays a major role once the altruism wears off. As mentioned earlier, high levels of conflict manifest themselves in excessive bureaucracy and turf wars, and therefore is not healthy in terms of effecting a successful recovery.

Awareness. Communities may or may not be aware and alert to the sources of risk particular to their community. As discussed by Raphael (1986), the degree to which communities have previously been exposed to emergencies can have some interesting effects. Repeated impacts may serve to heighten a community's level of preparedness, which is the ideal. Alternatively, such a level of exposure may lead a community to perceive itself as invincible and therefore ambivalent in their approach to preparedness. A similar effect may be observed in communities infrequently impacted, in that they might adopt the philosophy of 'lightning never strikes the same spot twice' – perhaps the greatest fallacy of all time. Such communities will also maintain an air of invincibility and ambivalence with respect to preparedness. The effect of this low level of preparedness is discussed below.

Preparedness. A community may or may not have a level of preparedness appropriate to the level of risk. Low levels of preparedness not only serve to compound the effects of the emergency, but also leave recovery arrangements lacking, owing to an absence of pre planned contingencies and strategies. Preparedness also plays a key role in managing the psychological impact of emergencies. Hodgkinson & Stewart (1991) devote an entire text to advocating the role proper planning can play in mitigating the traumatic effects of emergencies, an approach endorsed by SERU (2000).

Pre-emergency economic viability. Whether or not a community was economically viable prior to the emergency can have a profound effect on the community's recovery. This position is supported by Raphael (1986), who states that those in most need before an emergency are most likely to be in need well into the recovery process. For this reason SERU (2000) advocate comprehensive community planning as part of preparedness in order to highlight at-risk elements of the community, or at-risk communities. This criterion is exemplified in the case of the East Gippsland Floods of

The close physical proximity of families can significantly assist recovery.

1998, mentioned in the opening paragraphs. Owing to the drought experienced in East Gippsland prior to the floods, recovery from the floods was enormously challenging for the region, which was heavily reliant on the agriculture sector.

Susceptibility. A community may or may not be susceptible to sources of risk. This is fairly self-explanatory, suffice to say that a community's level of susceptibility is correlated with the effectiveness of prevention and mitigation measures. In terms of its relevance to recovery, it merely relates to whether or not there is likely to be an emergency to recover from.

Resilience. Whilst many of the above criteria offer an insight into a communities degree of resilience, it is important to note that a community's overall level of resilience is an important consideration. Interestingly, Haas, et. al. (1977) imply that communities in general are inherently resilient, based on the assumption that all communities impacted by an emergency experience a re-emergence of pre-disaster characteristics which determine the future in approximately the same way that it would have happened had the disaster not occurred.

Conclusion

The concept of community is, at best, an intangible and amorphous social construct to attempt to describe. When described for the purposes of examining the interaction between humans and emergencies, the task is all the more challenging. Nevertheless, what has been advanced here is a definition of community that emphasises interaction within and between a number of sub-communities and bounded by the impact of the emergency. In order to facilitate a thorough analysis of what happens to communities during emergencies it is important to consider some of the generic (and principally psychosocial) effects of emergencies. Moreover, through the utilisation of a number of criteria describing various aspects of community, it is possible to get a structured and coherent understanding of what happens to communities during emergencies. More importantly, such an approach offers an opportunity to explore the way a community might approach recovery.

It remains to be said that, just as two emergencies are never the same, so too does this apply to communities. Therefore, any analysis of an interaction between the two cannot do justice to complex interplay of variables, nor can a single model be applied successfully to all situations. Notwithstanding, when dealing with what many perceive to be a 'black art', it falls to the emergency manager to utilise the best tool available from as diverse an arsenal as possible. Thus, whilst not claiming to have identified a tool for comprehensively analysing the interaction between communities and emergencies for the purpose of a better planned recovery, this paper does advance a number of ideas that may form the framework for such a tool.

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