


Organisational resilience and emergency management

Dr Bernard Mees, Professor Adela J. McMurray and Professor Prem Chhetri, RMIT University, consider the concept of resilience in volunteer-based emergency services organisations. 

ABSTRACT

The concept of resilience figures prominently in discussions of disaster risk reduction, emergency management and community safety. Overwhelmingly, such discussions view resilience as a highly desirable characteristic of communities. Policies and practices of emergency services organisations imply that a major role of such organisations is to promote and foster community resilience. Yet there is little appreciation of the importance of resilience as a necessary characteristic of emergency services organisations. In this paper we argue that emergency services organisations need to address their own resilience issues in order to properly fulfil their community protection responsibilities. The concept of organisational resilience in relation to Australia's volunteer-based emergency services organisations is discussed and the importance of organisational climate and organisational culture in relation to organisational resilience is stressed.

of physical and human resources, strategy setting, and the assessment of risk. The management of organisational resilience is typically not formally articulated and does not often involve a deliberative or comprehensively planned approach to organisational adaptability, performance and recovery from disruption, crisis or stress. The volunteer-based nature of many of the key state and territory emergency management services in Australia makes the relevant organisations particularly prone to internal risk. The lack of a clear and well-developed commitment to organisational resilience is made all the more striking by the less structured nature of the volunteer-based emergency management organisations in Australia than is common in more fully professionalised sectors.

This paper accordingly draws on different frameworks of organisational theory to establish the variety of ways resilience can be enhanced in emergency services organisations. These frameworks are ways to analyse, critique and propose different ways that resilience can be enhanced. It is argued that an awareness of such frameworks may be significant in assisting emergency management bodies to better manage organisational risks, rather than relying on arbitrary, informal and largely outward-looking approaches to resilience. The focus is on the notion of organisational climate as a key, but often-neglected perspective from which to understand resilience in emergency management organisations.

Introduction

The concept of resilience or the ability to rebound has become a favoured theme in emergency management in recent years. Emergency management organisations in Australia have embraced the notion of resilience in much of their organisational literature as have the governments that they report to. Yet much of the talk of resilience evident in such literature – and moreover in terms of actual practice – assumes that resilience is something that the emergency management agencies aim to foster in the communities they serve. Little or no focus on the way in that the emergency management organisations may themselves become more resilient is evident in policy or practice in Australian emergency management bodies (e.g., Cole & Buckle 2004).

Achieving organisational resilience, however, is a complex process that centres on the management

Emergency services in Australia

Australian emergency services organisations have developed historically in an *ad hoc* manner. Fire services were professionalised in urban areas in the 19th century, much as were health services. But the rural and regional emergency management organisations have never been thoroughly professionalised and only became subject to formalised organisation following the disastrous Victorian bushfires of 1943–44 (Collins 2009). Other emergency services bodies were established in the 1950s as an extension of wartime homeland defence strategy, with the original Australian Civil Defence Service (modelled on the similarly-named body in the UK) remaining a volunteer-based series of organisations after the various state and territory bodies were renamed State

Emergency Services (SES) in the 1970s. The SES bodies are similar to the rural and regional state and territory fire services in being largely community-based organisations managed by a small body of full-time employees who rely on a much larger number of volunteer staff.

As such, much of the language of 'community' that has grown up about municipal and health services in Australia is more clearly germane to the largely volunteer-staffed bodies that respond to natural hazard events, especially bushfire, storm and flood (Fairbrother *et al.* 2014). With increasing prolonged periods of hot weather and incidence of flood and storm attributed to climate change, the nature of these services has come under increased scrutiny, particularly since the 2009 Black Saturday bushfires in Victoria, which killed 172 residents in rural and peri-urban areas and resulted in the Royal Commission into the bushfires (Teague 2010).

In 2012 the Victorian Government released the *Emergency Management Reform White Paper* that summarised the changes required to emergency management in the wake of the recommendations of the Bushfires Royal Commission (Victorian Government 2012). The Council of Australian Governments (COAG) had also adopted the National Strategy for Disaster Resilience in 2011 (COAG 2011). One of the key themes stressed in the White Paper (unsurprisingly) is resilience. Both the local SES and the Country Fire Authority (CFA) subsequently adopted the theme of resilience quite prominently. The Victorian SES Annual Report for 2012-13 (SES 2013) is entitled 'Building Community Resilience' and the CFA used 'Towards Resilience' as the subtitle of its 2013-18 strategic plan (CFA 2013). Emergency Management Victoria's official 'Shared Vision' for 2015-18 is 'Safer and more resilient communities' (EMV 2015) and similar references to 'resilient communities' have become typical of public policy initiatives in emergency management elsewhere in the country. Yet what resilience might mean for the emergency services organisations is never articulated in this literature. The notion of resilience seems instead to have been appropriated from international disaster management discourse and not fully integrated into established organisational practice.

Organisational resilience

Vogus and Sutcliffe (2007) define resilience as 'the maintenance of positive adjustment under challenging conditions such that the organization emerges from those conditions strengthened and more resourceful.' And internationally, the concept of resilience has been increasingly adopted in disaster management, particularly in terms of an extension of the notion of sustainability (United Nations 2012). Alexander (2013) explains the adoption of the term in disaster risk reduction literature as a reflection of its employment in ecological science, particularly after the pioneering work of Holling (1973). What is especially lacking in the reports and communications of emergency management agencies in Australia, however, and

particularly the volunteer-based organisations such as the state and territory SES and bushfire services, is a focus on making the agencies themselves more resilient. The term 'resilience' is not used other than in terms of community capacity building in publications such as the Victorian SES *Building Community Resilience Annual Report* (SES 2013) or Emergency Management Victoria's four-year strategic plan (EMV 2015). The term is always used in terms of building 'resilient communities' (or 'resilience in communities'), not of the resilience of the organisations themselves. Resilience is also conceptualised primarily in terms of community resilience in much of the research commissioned by organisations such as the Attorney-General's Department and the Bushfire and Natural Hazards CRC. The Australian Emergency Management Institute (AEMI) offered a professional development course on organisational resilience in the for-profit sector, that focused on organisations 'being change-ready, networked and having appropriate leadership and culture' (AEMI 2013). But nothing similar seems to have developed within Emergency Management Victoria or similar bodies where human resource management capacity is typically undeveloped, under-recognised and underfunded. Yet there has long been a disagreement in organisational studies concerning what resilience is and what it should mean in a management context.

The notion of resilience has generally been employed in three different manners in organisational studies. Most broadly, the notion of organisational resilience has typically centred on organisations that experience events comparable to natural disasters (Coutu 2002, Hamel & Valikangas 2003). In this literature, resilience is seen as associated with enabling business continuity in the face of severe economic risk such as that associated with an environmental accident, a major new entrant in a market or the collapse of a significant customer base or supplier (Lengnick-Hall & Beck 2005, Sheffi 2006). Resilience has thus been primarily related to governance, risk management and strategy in the organisational studies literature. This is the manner in which 'resilience' is understood in the *Organisational Resilience Position Paper* (Australian Government 2011) and similar publications such as the *Insider Threat to Business* (Attorney-General's Department 2010).

Yet the notion of resilience has been more recently used in terms of strengthening organisational capabilities at the level of human resource management (Norman, Luthans & Luthans 2005, Lengnick-Hall, Beck & Lengnick-Hall 2010, Nilakant *et al.* 2013). A focus on the resilience of individual members of staff is evident in recent studies (Luthans, Youssef & Avolio 2007), but the notion is typically used in a more broadly predicated manner. A focus on resilience is promoted in this emerging literature as representing a new approach to leadership and organisational performance (Coldwell 2010, Everly, Strouse & Everly 2010). In this way the notion of resilience has come to impinge on approaches to staff recruitment, development and retention, and particularly organisational culture and organisational climate.



Image: Victoria SES

Part of organisational resilience is the leadership qualities of its people.

Under the influence of climate change research, organisational resilience has also been analysed in terms of four key dimensions of:

- capacity and capability
- susceptibility
- adaptability
- organisational culture and climate (Adger *et al.* 2004, Pelling *et al.* 2008).

Figure 1 shows the interrelationships and interdependencies of these dimensions that have been argued in this literature to underpin the nature, scale and characteristics of organisational resilience. From this perspective, the capacity and capability of an organisation is typically expressed in terms of its workforce (i.e. number, quality, skills and experience of employees) and other material, financial and technological resources. But organisations that are reliant on large numbers of volunteers and are directly dependent on volunteer staff to deliver emergency services would be expected to be more susceptible to disruption. The quality or state of being affected, influenced and impacted by internal and external

disruptions reflects the level of organisational susceptibility. Adaptation can be characterised as the ability to modify behaviour to cope with current or predicted stressors (Adger *et al.* 2004) and organisational adaptability is related to the institutions and networks that enable the organisation to learn, gain knowledge and experience, and then make adjustments to system perturbations (Pelling *et al.* 2008). Organisational culture and commitment would similarly be expected to add to the ability of an organisation to cope with unexpected demand arising from an unplanned event. Organisational culture and climate would be expected to underpin and influence both the other dimensions to some degree, and they are generally accepted to be strongly influenced by organisational leadership. It is an understanding of the relationship of organisational culture to climate as well as leadership; however that seems most lacking in current emergency services literature.

Organisational culture and organisational climate

The notion of organisational culture was first popularised by Schein (1985) and has been widely contested in organisation studies (Morrill 2008). It chiefly concerns the 'basic assumptions about the world and the values that guide life in organizations' (Schneider, Ehrhart & Macey 2013). According to advocates of the notion, the culture of an organisation provides a context for the creation of meaning for its members; its shared assumptions, beliefs and values. Organisational culture is principally informed by firm-specific intangibles such as the philosophy of an organisation's founders, employee socialisation and the espoused values of its management according to key proponents of the notion such as Schein.

The less well known concept of organisational climate, however, stresses more patently measurable perceptions of staff regarding issues such as stress, morale, work/life balance and employee engagement – i.e. the shared perceptions of policies and practices among employees (McMurray 2003). Organisational climate contrasts with organisational culture as it is



chiefly concerned with 'the meanings people attach to interrelated bundles of experiences they have at work' (Schneider, Ehrhart & Macey 2013). Yet the two concepts – culture and climate – are typically considered to be inter-subjective and held to facilitate, or create barriers to, organisational adaptation and change. Hence a focus on both organisational culture and climate should be expected to help managers develop ways to embed resilience in an organisation.

The notion of organisational climate has its intellectual roots in Koffa's (1935) 'behaviour environment' and has proved less controversial than that of organisational culture. The relative congruence of organisational climate with the individual value systems of employees is now often considered a crucial determiner of an organisation's success and has proved a key concern of leadership studies (Altmann 2000). Yet organisational climate is often neglected in the literature on organisational resilience. Whitman and colleagues (2013), for example, omit any mention of organisational climate from their business resilience benchmarking metrics.

Nonetheless the beliefs that inform the value systems embodied in organisational culture and climate act as part of the work integration process that influences an employee's functioning fit (or misfit) in an organisation's behavioural context (Kirsh 2000). The value systems of organisational culture and climate have implications for an employee's organisational commitment, effective functioning and productivity, and hence their personal contribution to an organisation's capacity to engender resilience. To date no 'one-size-fits-all' organisational climate instrument has been developed and tested, although instruments to discern other associated climates such as creativity and change (Isaken & Lauer 2002), and work climate and innovation (Mohyeldin & Suliman 2001) have emerged. Climate has been measured in respect to national cultures and results indicate, for example, that employees from an individualistic culture (such as that in a developed country such as Australia) are more sensitive to organisational climate than their counterparts working in collectivist cultures (Tan *et al.* 2003). These results support the literature's theoretical and empirical consensus that organisational climate is a multi-dimensional and complex psychological phenomenon, and is context specific.

Yet in a world characterised by 'VUCA' factors (volatility, uncertainty, complexity and ambiguity), organisational leadership is typically seen as the key determinant of organisational culture. Organisational climate reflects perceptual agreement about organisational practices embracing organisational structure, management support, reward, risk-taking, participation in decision-making, communication, conflict, a sense of belonging, acceptance of teamwork and organisational image (Arabaci 2010). Shared elements of organisational culture and climate are broadly associated in recent literature with leadership practices. For example, commitment (Gormley & Kennerly 2010), trust (Sani 2012), the human resource aspects of organisational life (McMurray 2003), the predisposition to report bad news

and information irregularity (Tan *et al.* 2003), empowerment (Mok & Au-Yeung 2002), the construction of innovation (Dulaimi, Napal & Park 2005) and organisational learning have all been held to be associated with organisational culture and climate. Each of these factors can reasonably be taken to contribute to the relative ability of an organisation to both build resilience in itself as well as to engage in building capacities in the community. Leadership seems essential to managing the kind of organisational climate that would enable the establishment and embedding of resilience into an organisation's culture and, in turn, its work in the community (Choudhury 2011).

Community and organisation

A key factor of community organisations is their voluntary basis. Volunteers are integral to not-for-profit organisations that are (or are supposed to be) embedded within their communities. Emergency services organisations in Australia are predominantly comprised of volunteers and are tasked with addressing the needs of stakeholders and communities increasingly prone to 'VUCA' factors. Yet levels of engagement among volunteers can vary quite markedly between age groups, localities, services and functions (Victorian Auditor-General's Office 2014).

The Victorian Auditor-General's Report into how the CFA and SES manage their volunteers stressed how *ad hoc* and limited the human resources strategies adopted by the agencies were (Victorian Auditor-General's Office 2014). Poor human resource data management, high rates of churn and declining numbers of volunteers in relation to the overall population have occurred in the face of an increasing number of emergency events and increasing numbers of members of the public calling on emergency services assistance. The focus on community or external resilience has arisen at a time when organisational capacities of the emergency services have been subject to increasing stresses and challenges. A more holistic approach to resilience is required if such organisations are to continue to meet the needs of the communities they serve.

Organisations with an established high level of internal resilience should be better prepared for crises and better equipped to withstand setbacks. They should be expected to have a greater ability to recover from and adapt to adverse impacts and in some instances even come through a crisis in a stronger position than before. In order to encourage resilience in the community, capabilities for resilience must be built up in emergency services organisations. The complex relationships between full-time employees, the various kinds of volunteers and their levels of engagement, and the community more generally can only be enhanced by a focus on how the long-established psychological notions of culture and climate may be employed to strengthen and improve the capacity for resilience of communities and their relevant community organisations. Perceptions and assumptions of staff (both full-time and volunteer) clearly contribute to

the relative levels of organisational and community resilience observable in the increasingly challenging environment faced by emergency management services throughout Australia.

Conclusion

The focus on disaster resilience as a form of community capacity building has largely overshadowed the notion of organisational resilience in Australian emergency management. Resilience is a key theme in emergency management discourse in Australia (and increasingly internationally) but it is often conceptualised only in terms of the community at large rather than a commitment to building resilience in the organisations tasked with serving the public. Resilience is a concept that can be used at the personal level, the organisational, the regional and the national. Driven by a risk-management agenda originating at the highest point of this scale, the articulation of resilience has yet to be fully developed through to the operational levels in Australian emergency services.

Indeed even when it is used to describe internal capacities, the concept of resilience is often employed in a manner that does not reflect recent findings in organisational psychology. Rather than just focus on leadership and culture, research has consistently shown that it is essential to concurrently investigate and manage organisational climate in order to embed resilience into organisational practices. If the recent focus on resilience is to be applied more broadly to disaster management, much greater investment in human resource management and focus on determiners of organisational culture and climate is required in the relevant emergency services agencies than is presently the case. Organisational culture and climate are widely held to be significant determinants of organisational performance and are key elements in determining an organisation's success. If paid explicit attention to by managers, both concepts may provide emergency services organisations with sources of resilience, effectiveness and advantage that they currently lack. Organisational culture and climate are key conceptual frameworks that managers should pay

more attention to when proposing ways to enhance capability, capacity, adaptability and action in emergency services agencies.

References

- Arabaci IB 2010, *Academic and Administration Personnel's Perceptions of Organizational Climate*, *Procedia – Social and Behavioral Sciences*, Vol. 2, pp. 4445-50.
- Adger N, Brooks N, Bentham G, Agnew M & Eriksen S 2004, *New Indicators of Vulnerability and Adaptive Capacity*, Tyndall Centre for Climate Change Research, Technical Report 7.
- Alexander DE 2013, *Resilience and disaster risk reduction: an etymological journey*, *Natural Hazards and Earth Systems Sciences* vol. 13, pp. 2707-16.
- Australian Government 2011, *Organisational Resilience Position Paper*. Australian Government. At: www.organisationalresilience.gov.au/resources/Pages/default.aspx#_pub.
- AEMI 2013, *Organizational Resilience. Professional Development Program*. AEMI, Mt Macedon.
- Attorney-General's Department 2010, *Insider Threat to Business*. Attorney-General's Department. At: www.organisationalresilience.gov.au/resources/Documents/the-insider-threat-to-business.pdf.
- Altmann R 2000, *Understanding Organizational Climate: Start Minimizing Your Workforce Problems*, *Water Engineering & Management*, vol. 147, no. 6, pp. 31-32.
- Coldwell TS 2010, *Briscolage Culture: A study of the effects on organisational resilience*. Unpublished PhD dissertation. University of Maryland University College.
- Country Fire Authority 2013, *CFA Strategy 2013-18: Towards Resilience*, CFA, Melbourne.
- Choudhury G 2011, *The Dynamics of Organization Climate: An Exploration*, *Management Insight*, vol. 7, no. 2, pp. 111-16.
- COAG 2011, *National Strategy for Disaster Resilience*, Commonwealth of Australia, Canberra. At: www.ag.gov.au/EmergencyManagement/Documents/NationalStrategyforDisasterResilience.PDF.
- Cole E & Buckle P 2004, *Developing community resilience as a foundation for effective disaster recovery*, *Australian Journal of Emergency Management*, vol. 19, no. 4, pp. 6-16.



Volunteer organisations contribute significantly to community capacity in emergency management.

- Collins P 2009, *Burn: The Epic Story of Fire in Australia*, Scribe, Melbourne.
- Coutu DL 2002, *How Resilience Works*, *Harvard Business Review*, vol. 80, no. 5, pp. 46-55.
- Dulaimi MF, Nepal MP & Park M 2005, *A Hierarchical Structural Model of Assessing Innovation and Project Performance*, *Construction Management and Economics*, vol. 23, no. 6, pp. 565-77.
- EMV 2015, *Victorian Emergency Strategic Action Plan 2015-18*, Government of Victoria, Melbourne.
- Everly GS, Strouse DA & Everly GS 2010, *The Secrets of Resilient Leadership: When Failure is Not an Option. Six Essential Skills for Leading through Adversity*, *DiaMedica*, New York.
- Fairbrother P, Mees B, Tyler M, Phillips R, Akama Y, Chaplin S, Toh K & Cooper V 2014, *Effective Communication – Communities and Bushfire*, *Bushfire CRC*, Melbourne.
- Gormley DK & Kennerly S 2009, *Influence of Work Role and Perceptions of Climate on Faculty Organizational Commitment*, *Journal of Professional Nursing*, vol. 26, no. 2, pp. 108-15.
- Hamel G & Valikangas L 2003, *The Quest for Resilience*, *Harvard Business Review*, vol. 81, no. 9, pp. 52-63.
- Holling CS 1973, *Resilience and stability of ecological systems*, *Annual Review of Ecological Systems* vol. 4, pp. 1-23.
- Isaken SG & Lauer KJ 2002, *The Climate for Creativity and Change in Teams*, *Creativity and Innovation*, vol. 11, no. 1, pp. 74-86.
- Kirsh B 2000, *Organizational Culture, Climate and Person-environment Fit: Relationships with Employment Outcomes for Mental Health Consumers*, *Work*, vol. 14, no. 2, pp. 109-22.
- Koffa K 1935, *Principles of Gestalt Psychology*, *Harcourt Brace*, New York.
- Lengnick-Hall CA, Beck TE & Lengnick-Hall ML 2010, *Developing a Capacity for Organizational Resilience through Strategic Human Resource Management*, *Human Resource Management Review*, vol. 21, no. 3, pp. 243-55.
- Lengnick-Hall ML & Beck TE 2005, *Adaptive Fit Versus Robust Transformation: How Organizations Respond to Environmental Change*, *Journal of Management*, vol. 31, no. 5, pp. 738-57.
- Luthans F, Youssef CM & Avolio BJ 2007, *Psychological Capital: Developing the Human Competitive Edge*, *Oxford University Press*, Oxford.
- McMurray AJ 2003, *The Relationship between Organizational Climate and Organizational Culture*, *Journal of the American Academy of Business*, vol. 3, no. 1, pp. 1-8.
- Mohyeldin A & Suliman T 2001, *Are We Ready to Innovate? Work Climate-readiness to Innovate Relationship: The Case of Jordan*, *Creativity and Innovation Management*, vol. 10, no. 1, pp. 49-59.
- Mok E & Au-Yeung B 2002, *Relationships between Organizational Climate and Empowerment of Nurses in Hong Kong*, *Journal of Nursing Management*, vol. 10, no. 3, pp. 129-42.
- Morrill C 2008, *Culture and Organization Theory*, *Annals of the American Academy of Political and Social Science*, vol. 619, pp. 15-40.
- Nilakant V, Walker B, Rochford K & van Heugten K 2013, *Leading in a post-disaster Setting: Guidance for human resource practitioners*, *New Zealand Journal of Employment Relations*, vol. 38, no. 1, pp. 1-13.
- Norman S, Luthans B & Luthans K 2005, *The Proposed Contagion Effect of Hopeful Leaders on the Resilience of Employees and Organizations*, *Journal of Leadership and Organizations Studies*, vol. 12 no. 2, pp. 55-65.
- Pelling M, High C, Dearing J & Smith D 2008, *Shadow Spaces for Social Learning: A Relational Understanding of Adaptive Capacity to Climate Change within Organizations*, *Environment and Planning*, vol. 40, pp. 867-884.
- Sani DA 2012, *Strategic Human Resource Management and Organizational Performance in the Nigerian Insurance Industry: The Impact of Organizational Climate*, *Business Intelligence Journal*, vol. 5, no. 1, pp. 8-20.
- Schein EH 1985, *Organisational Culture and Leadership: A Dynamic View*, *Jossey-Bass*, San Francisco.
- Schneider B, Ehrhart MG & Macey WH 2013, *Organizational Climate and Culture*, *Annual Review of Psychology*, vol. 64, pp. 361-88.
- SES 2013, *Building Community Resilience*, *Victoria State Emergency Service Annual Report 2012-13*, Government of Victoria, Melbourne.
- Sheffi Y 2006, *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage*, *MIT Press*, Cambridge, Mass.
- Tan BC, Smith HJ, Keil M & Montealegre R 2003, *Reporting Bad News about Software Projects: Impact of Organizational Climate and Information Asymmetry in an Individualistic and a Collectivistic Culture*, *Engineering Management*, vol. 50 no. 1, pp. 64-77.
- Teague B 2010, *Victorian Bushfires Royal Commission: Final Report*, Government of Victoria, Melbourne.
- United Nations 2012, *Resilient People, Resilient Planet: A Future Worth Choosing*, *Final Report of the United Nations Secretary-General's High-level Panel on Global Sustainability*, UN, New York.
- Victorian Auditor-General's Office 2014, *Managing Emergency Service Volunteers*, Government of Victoria, Melbourne.
- Victorian Government 2012, *Emergency Management Reform White Paper*, Government of Victoria, Melbourne. At: www.dpc.vic.gov.au/images/images/featured_dpc/victorian_emergency_management_reform_white_paper_dec2012_web.pdf.
- Vogus TJ & Sutcliffe KM 2007, *Organizational resilience: Towards a theory and research agenda*, *IEEE International Conference on Systems, Man and Cybernetics, 2007*, New York, IEEE, pp. 3418-22.
- Whitman ZR, Kachali H, Roger D, Vargo J & Seville E 2013, *Short-form Version of the Benchmark Resilience Tool (BRT-53)*, *Measuring Business Excellence*, vol. 17, no. 3, pp. 3-14.

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