# Trauma-organised systems and parallel process

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### Trauma-organised systems

This chapter takes a seemingly obvious but fundamentally radical position that organisations – including human service organisation – are, like individuals, living systems (Senge *et al.*, 2004). Being alive, they are vulnerable to stress, particularly chronic and repetitive stress. Chronic stress stealthily robs an organisation of basic interpersonal safety and trust and thereby robs an organisation of health. Organisations, like individuals, can be traumatized, and the result of traumatic experience can be as devastating for organisations as it is for individuals. As a result, many human service delivery networks are functioning as 'trauma-organised systems' (Bentovim, 1992).

The impact of chronic stress and adversity on organisations has thus far been minimized and denied, except in the most dramatic of circumstances. As a result, managers and leaders remain largely unaware of the multiple ways in which organisational adaptation to chronic stress creates a state of dysfunction, which in some cases virtually prohibits the proper delivery of services to the individual clients who are the source of the organisation's original mission, while damaging many members of the organisation's workforce. Just as the encroachment of trauma into the life of an individual client is an insidious process that turns the past into a nightmare, the present into a repetitive cycle of re-enactment and the future into a terminal illness; in a parallel way, chronic strain insidiously has an impact on an organisation. As seemingly logical reactions to difficult situations pile upon each other, no-one is able to truly perceive the fundamentally skewed and post-traumatic basic assumptions upon which that logic is built. As an earthquake can cause the foundations of a building to become unstable, even while the building still stands apparently intact, so, too, does chronic repetitive stress destabilize the cognitive and affective foundations of shared meaning that is necessary for a group to function and stay whole.

# Parallel process

The concept of parallel process, taken out of the individual context and applied to organisations, is a useful way of offering a coherent framework that can enable organisational leaders and staff to develop a way of thinking 'outside the box' about what *has* happened and *is* happening to their service delivery systems, based on an understanding of the ways in which trauma and chronic adversity affect human function.

When two or more systems – whether these consist of individuals, groups, or organisations – have significant relationships with one another, they tend to develop similar affects, cognition, and behaviours, which are defined as parallel processes.... Parallel processes can be set in motion in many ways, and once initiated leave no one immune from their influence (Smith et al., 1989, p.13).

Clients bring their past history of traumatic experience into the social service sectors, consciously aware of certain specific goals but unconsciously struggling to recover from the pain and losses of the past. They are greeted by individual service providers, subject to their own personal life experiences, who are more or less deeply embedded in entire systems that are under significant stress. Given what we know about exposure to childhood adversity and other forms of traumatic experience, the majority of service providers have experiences in their background that may be quite similar to the life histories of their clients, and that similarity may be more or less recognized and worked through (Felitti *et al.*, 1998).

The result of these complex interactions between traumatized clients, stressed staff, pressured organisations and a social and economic environment that is frequently hostile to the aims of recovery is often the opposite of what was intended. Staff in many treatment programmes suffer physical and psychological injuries at alarming rates and thus become demoralized and hostile. Their counter-aggressive responses to the aggression in their clients help to create punitive environments. Leaders become variously perplexed, overwhelmed,

ineffective, authoritarian or avoidant as they struggle to satisfy the demands of their superiors, to control their subordinates and to protect their clients. When professional staff and non-professionally trained staff gather together in an attempt to formulate an approach to complex problems, they are not on the same page. They share no common theoretical framework that informs problem solving. Without a shared way of understanding the problem, what passes as treatment may be little more than labelling, the prescription of medication, and behavioural management. When troubled clients fail to respond to these measures, they are labelled again, given more diagnoses and termed 'resistant to treatment'.

In this way, our systems inadvertently but frequently recapitulate the very experiences that have proved to be so toxic for the people we are supposed to help. Just as the lives of people exposed to repetitive and chronic trauma, abuse and maltreatment become organised around the traumatic experience, so too can entire systems become organised around the recurrent and severe stress of trying to cope with a flawed mental model based on individual pathology, which is the present underpinning of our helping systems. When this happens, it sets up an interactive dynamic that creates what are sometimes uncannily parallel processes.

Trauma theory brings context back to human services while integrating the importance of the biological discoveries of the last several decades. There are currently significant efforts directed at helping systems to become trauma-informed. The goal of this chapter is a practical one: to provide the beginnings of a coherent framework for organisational staff and leaders to more effectively provide trauma-informed care for their clients by becoming *trauma-sensitive* themselves. This means becoming sensitive to the ways in which clients, staff, managers, groups, policy makers, regulators and systems are impacted by individual and collective exposure to overwhelming stress and adversity.

# When tragedy strikes: the impact of chronic stress and collective trauma

When tragedy strikes, the whole organisation becomes traumatized, a collective experience that disaster researcher Kai Erikson termed 'collective trauma':

... a blow to the basic tissues of social life that damages the

bonds attaching people together and impairs the prevailing sense of communality (Erikson, 1994, p. 233).

Because we are group animals, we identify with the institutions to which we are affiliated. Patient deaths and injuries – from natural causes, accidents and, most particularly, suicide, and deaths while in restraints or the death of a child under the surveillance of child protection workers, staff deaths or injuries, loss of leaders, lawsuits, downsizing – all may overwhelm overall organisational function as well as every individual connected to the organisation. Just as individuals respond to acute stress and chronic stress in variable ways, so too can organisations experience the effects of both acute and chronic stressors. The effects of stress in organisations and within whole systems are cumulative. A series of small, unrelated, stress-inducing incidents can add up to a mountain of stress in the eyes of people who work in, and receive services within, these settings.

### Lack of basic safety

Workplaces that are experienced as fundamentally unsafe – physically and emotionally dangerous, untrustworthy environments – are experienced collectively as dangerous as well. When this occurs, the basic trust that supports complex problem solving and high productivity is eroded. The list of behaviours that can trigger mistrust in staff is a long one and includes both verbal and non-verbal behaviour: silence, glaring eye contact, abruptness, snubbing, insults, public humiliation, blaming, discrediting, aggressive and controlling behaviour, overtly threatening behaviour, yelling and shouting, public humiliation, angry outbursts, secretive decision making, indirect communication, lack of responsiveness to input, mixed messages, aloofness, unethical conduct – all can be experienced as abusive managerial or supervisory behaviour (Ryan and Oestreich, 1998). According to Bill Wilkerson, CEO of Global Business and Economic Roundtable on Addiction and Mental Health, mistrust, unfairness and vicious office politics are among the top 10 workplace stressors (Collie, 2004).

# Loss of emotional management

One group of investigators has argued that:

... emotions are among the primary determinants of behaviour at work ... and profoundly influence both the social climate and the productivity of companies and organisations (Pekrun and Frese, 1992, p. 154).

Under normal conditions, an organisation manages and contains the emotional contagion that is an inevitable part of human group functioning through normal problem-solving, decision-making and conflict-resolution methods and group norms that must exist for any organisation to operate effectively. These are the norms that enable the group to tolerate the normal amount of anxiety that exists among people working on a task, tolerate uncertainty long enough for creative problem solutions to emerge, promote balanced and integrated decision making so that all essential points of view are synthesized, contain and resolve the inevitable conflicts that arise between members of a group, and complete its tasks (Bloom, 2004a).

In organisations under chronic, relentless stress, however, this healthier level of function is likely to be sacrificed in service of facing repetitive emergency situations, and entire organisations may begin to look like highly stressed individuals. Traumatized people often develop chronic hyperarousal as the central nervous system adapts to the constancy of threat. Similarly, organisations may become chronically hyperaroused, so that everything becomes a crisis. When this happens, the capacity to triage what is important and must be immediately attended to, and what can be postponed, is lost. Stress levels universally increase for everyone and, as one manager has said, 'It's like managing with your hair on fire'. Under conditions of chronic crisis, emotional distress escalates, tempers become short, decision making becomes impaired and driven by impulse, while pressures to conform reduce individual and group effectiveness (Ryan and Oestreich, 1998).

# Dissociation and organisational amnesia

Just like individuals, if they are to learn, organisations must have memory. Some modern philosophers believe that all memories are formed and organised within a collective context (Halbwachs, 1992). Organisational memory refers to stored information from an organisation's history that can be brought to bear on present decisions. Corporate knowledge, like individual knowledge, exists in two basic

forms: explicit knowledge, which is easily codified and shared asynchronously; and tacit knowledge, which is experiential, intuitive and communicated most effectively in face-to-face encounters. Explicit knowledge can be articulated with formal language. It is that which can be recorded and stored in the more concrete organisational storage bins: records, policies and procedure manuals, training curricula, orientation programmes, organisational structure and lines of authority, and other educational and written materials (Weick, 1979).

Tacit knowledge is that knowledge which is used to interpret the information – in clinical circles more commonly referred to as 'clinical wisdom'. It is knowledge that is more difficult to articulate with language and lies in the values, beliefs and perspectives of the system (Lahaie, 2005; Othman and Hashim, 2004). Tacit knowledge resides within the individual memories of every person who is or has ever been a part of the organisation, is cumulative, slow to diffuse, is rooted in the human beings who comprise the organisation, and creates organisational culture. Every person who leaves an organisation takes a part of the organisational memory out the door with them. As a result, over time and with sufficient loss, the organisation may develop organisational amnesia that affects learning and adaptation (Kransdorff, 1998). Corporate amnesia becomes a tangible problem to be reckoned with when there is a loss of collective experience and accumulated skills through the trauma of excessive downsizing and layoffs (Newsbriefs, 2000).

The result of organisational amnesia may be a deafening silence about vital but troubling information, not dissimilar to the deafening silence that surrounds family secrets such as incest or domestic violence. There is reason to believe that maintaining silence about disturbing collective events may have the counter-effect of making the memory even more potent in its continuing influence on the individuals within the organisation as well as the organisation as a whole, much as silent traumatic memories continue to haunt traumatized individuals and families (Pennebaker *et al.*, 1997).

# Organisational miscommunication

Under increasing levels of organisational stress, the vital communication that is the lifeblood of an organisation starts to break down. As stress increases, perception narrows, more contextual information is lost and circumstances deteriorate to more extreme levels before

they are noticed, all of which leads to more puzzlement, less meaning and more perceived complexity. Communication is necessary to detect error and crises tend to create vertical communication structures when, in fact, lateral structures are often more appropriate for detection and diagnosis of problems. Research has shown that organisations are exceedingly complex systems that can easily drift toward disaster, unless they maintain resources that enable them to learn from unusual events in their routine functioning. When communication breaks down, this learning does not occur (Marcus and Nichols, 1999).

Organisations that already have poor communication structures are more likely to handle crises poorly (Kanter and Stein, 1992). Instead of increasing interpersonal communications, people in crisis are likely to resort to the excessive use of one-way forms of communication. Under stress, the supervisory structure tends to focus on the delivery of top-down information flow, largely characterized by new control measures about what staff and clients can and cannot do. Feedback loops erode under such circumstances and morale starts to decline as the measures that are communicated do not alleviate the stress or successfully resolve the crisis. Complex collective responses are all more vulnerable to this kind of disruption than are older, simpler, more over-learned, cultural and individual responses.

#### Increased authoritarianism

When danger is real and present, effective leaders take charge and give commands that are obeyed by obedient followers, thus harnessing and directing the combined power of many individuals in service of group survival. When a crisis occurs, centralization of control is significantly increased, with leaders tightening reins, concentrating power at the top and minimizing participatory decision making (Kanter and Stein, 1992). Even where there are strong beliefs in the democratic way of life, there is always a tendency in institutions, and in the larger containing society, to regress to simple, hierarchical models of authority as a way of preserving a sense of security and stability. This is not just a phenomenon of leadership – in times of great uncertainty, everyone in the institution colludes to collectively bring into being authoritarian organisations, as a time-honoured method for providing at least the illusion of greater certainty, and therefore a diminution of anxiety (Lawrence, 1995).

However, when a state of crisis is prolonged, repetitive or chronic, there is a price to be paid. The tendency to develop increasingly authoritarian structures over time is particularly troublesome for complex organisations. Chronic crisis results in organisational climates that promote authoritarian behaviour, and this behaviour serves to reinforce existing hierarchies and create new ones. Communication exchanges change and become more formalized and top-down. Command hierarchies become less flexible, power becomes more centralized, people below stop communicating openly and, as a result, important information is lost from the system (Weick, 2001).

The centralization of authority means that those at the top of the hierarchy will be far more influential than those at the bottom, and yet better solutions to the existing problems may actually lie in the hands of those with less authority. Authoritarian leadership is likely to encourage the same leadership style throughout the organisation. The loss of democratic processes results in oversimplified decision making and the loss of empowerment at each organisational level reduces morale and increases interpersonal conflict.

As a result, the organisational norms for all staff are likely to endorse punitive behaviour, empathic failure and traditional methods for managing difficult situations. It is hard to imagine a situation more detrimental to long-lasting, positive change in the lives of people with complex problems. As for the staff, when authoritarian behaviour comes to dominate a situation, the result can also be devastating. Unchecked authoritarians can become bullies at any organisational level, but when they are given power they can become petty tyrants.

# Silencing of dissent and organisational alexithymia

The greater the authoritarian pressures in an organisation, and the greater the chronic stress, the greater is the likelihood that strenuous attempts will be made to silence dissent. Empirical data show that *organisational silence* emerges out of workers' fear to speak up about issues or problems they encounter at work (Morrison and Milliken, 2000). These underground topics become the undiscussables in an organisation, covering a wide range of areas, including decision-making, procedures, managerial incompetence, pay inequity, organisational inefficiencies and poor organisational performance (Ryan and Oestreich, 1998).

Dissent is even less welcome in environments characterized by chronic stress when dissent is seen as a threat to unified action. As a result, the quality of problem analysis and decision making deteriorates further. If this cycle is not stopped and the organisation allowed opportunity to recuperate, the result may be an organisation that becomes as rigid, repetitious and ultimately destructive as do so many chronically stressed individuals (Bloom, 2004b). Organisational alexithymia – the inability to give words to feelings – becomes a significant barrier to constructive change as the number of undiscussable topics accumulates. The silencing of dissent is dangerous to organisational and individual well-being, because dissent serves as corrective feedback within an organisation that can avert disaster if attended to in time.

# Decision making and conflict management

As systemic stress increases and authority becomes more centralized, organisational decision-making processes are likely to deteriorate, becoming less complex, more driven by impulse, with a narrowing of focus and attention only to immediate threat. Long-term consequences of decisions may not be considered and alternatives remain unexplored (Janis, 1982). As work-related stressors increase, employees develop negative perceptions of their co-workers and organisational leaders and this may precipitate serious decreases in job performance. Conflict over the content of task-related issues can be very useful, but emotion inevitably accompanies conflict and the heat of a conflict over issues can spill over into interpersonal conflict rather easily. Without good conflict management skills in the group, task-related conflict can lead to even more misunderstanding, miscommunication, and increased team dysfunction, instead of providing the kind of enriching discourse that can lead to creative problem solving. The bottom line is that if people in a group do not like and respect each other and spend their time in personal conflict, the group as a whole will perform badly. Chronic stress puts an added burden on old conflicts, which are likely to emerge with a vengeance and propagate new conflicts.

Hierarchical structures concentrate power and, in these circumstances, power can easily come to be used abusively and in a way that perpetuates rather than attenuates the concentration of power. Transparency disappears and secrecy increases under this influence. Communication networks become compromised as those in power

become more punishing, and the likelihood of error is increased as a result. In such a situation, conflicts tend to remain unresolved, tension and resentment mount under the surface of everyday group functioning. Interpersonal conflicts that were suppressed during the initial crisis return, often with a vengeance, but conflict resolution mechanisms, if ever in place, deteriorate under stress.

### Disempowerment and learned helplessness

Under these conditions, helplessness, passivity, and passive–aggressive behaviours on the part of the subordinates in the hierarchy increase, while leaders become increasingly controlling and punitive. In this way the organisation becomes ever more radically split, with different parts of the organisation assuming the role of managing and/or expressing different emotions that are then subsequently suppressed (Bloom, 2004a). Such conditions as these make an organisation ripe for collective disturbance that may go unresolved and unrecognized, while policy changes are made that ensure that the underlying conflicts will remain out of conscious group awareness.

Learned helplessness at work has been defined as a debilitating cognitive state in which individuals often possess the skills and abilities necessary to perform their jobs, but exhibit suboptimal or poor performance because they attribute prior failures to causes which they cannot change, even though success may be possible in the current environment (Campbell and Martinko, 1998). In a controlling, non-participatory environment exercising top-down management, every subsequent lower level of employee is likely to become progressively disempowered. After years, decades and even generations of controlling management styles, reversing this sense of disempowerment can be extremely difficult, particularly under conditions of chronic, unrelenting organisational stress. Helpless to protect themselves, feeling embattled, hopeless and helpless, the staff and management often engage in risky risk avoidance in which risk management policies prevent healthy change and adaptation.

# Increased aggression

The most feared form of workplace aggression is physical violence, but every episode of violence has a history. Violent physical or sexual assault in the workplace always emerges within a context and can usually be traced to various kinds of less appreciated forms of violence that may occur routinely within an organisation. Dirty looks, defacing property, stealing, hiding needed resources, interrupting others, obscene gestures, cursing, yelling, threats, insults, sarcasm, the silent treatment, damning with faint praise, arbitrary and capricious decisions, ignoring input, unfair performance evaluations, showing up late for meetings, causing others to delay actions, spreading rumours, back-stabbing, belittling, failing to transmit information, failing to deny false rumours, failing to warn of potential danger – all of these actions on the part of management, staff and clients are forms of aggression which can terminate in the emergence of physical violence (Spector, 1997).

Stressful times are difficult for employees and as interpersonal conflict increases, it is likely that workers will express their anger, frustration and resentment in a variety of ways that have a negative effect on work performance. Frequently, bureaucracy is substituted for participatory agreement on necessary changes, and the more an organisation grows in size and complexity, the more likely this is to happen (Huberman, 1964). Research has demonstrated that the lower performance gets, the more punitive leaders become, and that very possibly just when leaders need to be instituting positive reinforcing behaviours to promote positive change, they instead become increasingly punitive (Sims, 1980).

A sure sign of an increase in aggression in the workplace is an escalation of vicious gossip and unsubstantiated rumour. Research shows that 70% of all organisational communication comes through this system of informal communication, and several national surveys have found that employees used the grapevine as a communication source more than any other vehicle (Crampton *et al.*, 1998). Not only that, but the grapevine has been shown to communicate information far more rapidly than formal systems of communication. Rumours fill in the gap where facts are absent and the grapevine may become poisoned by unsubstantiated rumour and gossip. All of this lends itself to the promotion of a toxic environment.

# Unresolved grief, re-enactment and organisational decline

Losses to the organisation are likely to be experienced individually as well as collectively (Carr, 2001). For the same reason, failures of the organisation to live up to whatever internalized ideal the individual has for the way that organisation should function are likely to be

experienced individually and collectively as a betrayal of trust, a loss of certainty and security, a disheartening collapse of meaning and purpose. Sudden firings or other departures of key personnel, the sudden death of a leader or otherwise influential employee, may be experienced as organisationally traumatic. The effects of downsizing, mergers, hostile takeovers, cuts in programme funding, changes in roles, increased and burdensome demands of insurance companies – all may be experienced as examples of more widespread chronic disasters (Erikson, 1994).

As workers in this field have determined:

... the relationship between employee and organisation are: deep-seated, largely unconscious, intimately connected to the development of identity, and have emotional content (Carr, 2001, p. 429).

Because of this connectedness between individual and collective identity, and because all change involves loss, organisational change and grieving tend to go hand-in-hand (Carr, 2001). It is clear that the ways in which grief, loss and termination are handled have a significant impact on employee attitudes. Unresolved grief can result in an idealization of what has been lost that interferes with adaptation to a new reality. The failure to grieve for the loss of a leader may make it difficult or impossible for a new leader to be accepted by the group. In fact, one author has noted that:

Nostalgia is not a way of coming to terms with the past (as mourning or grief are) but an attempt to come to terms with the present (Gabriel, 1993, p. 132).

Traumatized individuals are frequently subject to traumatic re-enactment, a compulsive reliving of a traumatic past that is not recognized as repetitive and yet which frequently leads to revictimization experiences. Re-enactment is a sign of grief that is not resolved. Instead the trauma and the losses associated with it are experienced over and over, relentlessly. An organisation that cannot change, that cannot work through loss and move on, is likely to develop patterns of re-enactment, repeating past failed strategies without recognizing that these strategies may no longer be effective. This can easily lead to organisational patterns that become overtly abusive.

The rigid repetition of the past and the inability to adapt to change may lead to organisational decline and, possibly, dissolution. Increases in conflict, secrecy, scapegoating, self-protective behaviours, loss of leader credibility, rigidity, turnover, decreases in morale, diminished innovation, lowered participation, non-prioritized cuts and reduced long-term planning are common problems associated with periods of decline (Cameron *et al.*, 1987). All of these behaviours can be seen as inhibitors of organisational learning and adaptation.

#### Conclusion

Organisational change is always challenging and all too frequently fails (Pascale *et al.*, 2000). But constant and rapid adaptation to a rapidly changing environment has become a basic necessity for organisational survival. In treating individual survivors of traumatic life events and sustained adversity, it has become clear that having a different way to assess and formulate past and current dilemmas is frequently the beginning of a healing and even transformative process (Bloom, 1997). This chapter entertains the possibility that, if members of organisations can similarly adopt a trauma-informed mental model that enables them to collectively assess and constructively respond to recurrent stress in a different way, transformative organisational change may be possible.

#### References

- Bentovim, A. (1992) *Trauma-organized Systems: Physical and Sexual Abuse in Families*. London: Karnac Books.
- Bloom, S.L. (1997) Creating Sanctuary: Toward the Evolution of Sane Societies. New York: Routledge.
- Bloom, S.L. (2004a) Neither liberty nor safety: the impact of fear on individuals, institutions, and societies, Part II. Psychotherapy and Politics International 2, 212–228.
- Bloom, S.L. (2004b) Neither liberty nor safety: the impact of trauma on individuals, institutions, and societies. Part I. *Psychotherapy and Politics International* 2, 78–98.
- Cameron, K.S., Whetten, D.A., Kim, M.U. (1987) Organizational dysfunctions of decline. *Academy of Management Journal* **30**, 126.
- Campbell, C.R., Martinko, M.J. (1998) An integrative attributional perspective of empowerment and learned helplessness: a multimethod field study. *Journal of Management* 24, 173–200.

- Carr, A. (2001) Understanding emotion and emotionality in a process of change. *Journal of Organizational Change Management* 14, 421–434.
- Collie, D. (2004) Workplace stress: expensive stuff: http://www.emaxhealth.com/38/473.html [accessed 22 October 2009].
- Crampton, S.M., Hodge, J.W., Mishra, J.M. (1998) The informal communication network: factors influencing grapevine activity. *Public Personnel Management* 27, 569.
- Erikson, K. (1994) A New Species of Trouble: The Human Experience of Modern Disasters. New York: W.W. Norton.
- Felitti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V. et al. (1998) Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The adverse childhood experiences (ACE) study. American Journal of Preventative Medicine 14, 245–258.
- Gabriel, Y. (1993) Organizational nostalgia reflections on 'The Golden Age'. In Fineman, S. (ed.), *Emotion in Organizations*. Thousand Oaks, CA.: Sage.
- Halbwachs, M. (1992) On Collective Memory. Chicago, IL: University of Chicago Press.
- Huberman, J. (1964) Discipline without punishment. Harvard Business Review 42, 62–68.
- Janis, I.L. (1982) Decision making under stress. In Goldberger, L., Breznitz, S. (eds), Handbook of Stress: Theoretical and Clinical Aspects. New York: Free Press.
- Kanter, R.M., Stein, B.A. (1992) The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It. New York: Free Press.
- Kransdorff, A. (1998) Corporate Amnesia: Keeping Know-how in the Company. Woburn, MA: Butterworth-Heineman.
- Lahaie, D. (2005) The impact of corporate memory loss: what happens when a senior executive leaves? *Leadership in Health Services* 18, xxxv–xlvii.
- Lawrence, W.G. (1995) The presence of totalitarian states-of-mind in institutions. Paper read at the Inaugural Conference on 'Group Relations' of the Institute of Human Relations, Sofia, Bulgaria, 1995: http://human-nature.com/free-associations/lawren.html [accessed 23 November 2006].
- Marcus, A.A., Nichols, M.L. (1999) On the edge: heeding the warnings of unusual events. Organization Science: A Journal of the Institute of Management Sciences 10, 482.
- Morrison, E.W., Milliken, F.J. (2000) Organizational silence: a barrier to change and development in a pluralistic world. *Academy of Management Review* **25**, 706.
- Newsbriefs (2000) More knowledge; song strikes chord. *Computing Canada* **12 May**.
- Othman, R., Hashim, N.A. (2004) Typologizing organizational amnesia. *The Learning Organization* **11**, 273.

- Pascale, R.T., Millimanm, M., Gioja, L. (2000) Surfing the Edge of Chaos: The Laws of Nature and the New Laws of Business. New York: Crown Business.
- Pekrun, R., Frese, M. (1992) Emotions in work and achievement. *International Review of Industrial and Organizational Psychology* 7, 153–200.
- Pennebaker, J.W., Paez, D., Rime, B. (eds) (1997) Collective Memory of Political Events. Mahwah, NJ: Lawrence Erlbaum.
- Ryan, K., Oestreich, D. (1998) Driving Fear out of the Workplace: Creating the High Trust, High Performance Organization. San Francisco, CA: Jossey Bass.
- Senge, P., Scharmer, C.O., Jaworski, J., Flowers, B.S. (2004) Presence: Human Purpose and the Field of the Future. Cambridge, MA: Society for Organizational Learning.
- Sims, H.P. Jr (1980) Further thoughts on punishment in organizations. Academy of Management. *Academy of Management Review* 5, 133.
- Smith, K.K., Simmons, V.M., Thames, T.B. (1989) 'Fix the women': an intervention into an organizational conflict based on parallel process thinking. *Journal of Applied Behavioral Science* **25**, 11–29.
- Spector, P.E. (1997) The role of frustration in antisocial behavior at work. In Giacalone, R.A., Greenberg, J. (eds), *Antisocial Behavior in Organizations*. Thousand Oaks, CA: Sage.
- Weick, K.E. (1979) The Social Psychology of Organizing. Reading, MA: Addison-Wesley.
- Weick, K.E. (2001) Making Sense of the Organization. Malden, MA: Blackwell.