

The role of individual and collective affect in fire incident management

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Fire and emergency management in Australia

Emergency management addresses the potential occurrence of major emergency situations requiring a whole-of-government approach: events such as floods, bushfires, cyclones, the consequences of acts of terrorism or the release of hazardous materials. These situations are usually characterised by the scope of their impact being community-wide, with medium-to long-term effects.

(Commonwealth of Australia, 2004, p. 1)

Almost two months without rain and a heat wave that swept across southern eastern Australia in January 2009, with record breaking high temperatures (48.8C), contributed to one of the most recent disasters that occurred in the State of Victoria - "Black Saturday". As many as 400 fires were recorded on and around February 7, 2009. Winds in excess of 120km/h contributed to the incredible speed and ferocity of the fires. The fires lasted for 2 months (i.e. early February to late March) with as many as 78 individual townships in the north-west of Melbourne and in the north-west of the state affected. During the period between February 7 and March 14 2029 houses were either destroyed or damaged with a total burnt area of 450,000ha (1,100,000 acres). During this time 7,500 people were displaced, and 414 injured including 173 people who lost their lives.

The secondary effects to this campaign fire were contamination of water, mass power outages with disruptions to communication and transport systems, school closures, arrests due to looting and a loss of commercial activity and tourism which estimated in \$1.5 billion in insurance claims. There was also destruction of wildlife habitats which could possibly lead to extinction. Because of the magnitude of the impact with "Black Saturday" many different agencies were called upon to assist in managing the fire and in the recovery stage of the incident. These agencies came from Victoria and other states and territories in Australia (Owen, 2012).

On average about 50 million hectares of land are burnt across Australia each year (CSIRO, 2010).

(photo: <http://bushfirefront.com.au/>)

ABSTRACT

This thesis proposes to make a contribution to the literature concerned with affect and teamwork in complex work domains. It presents a detailed analysis of people's affective experiences in fire incident management teamwork. This particular work activity was chosen because it represents numerous aspects of increasingly important features of high-consequence work environments. In such environments the work is characterised by high interdependency, time pressure and a sense of urgency. People working in such domains are susceptible to being emotionally charged, particularly when the potential consequences are high. Given the complexity and duration of events, it is also likely that they may be influenced by emotional exhaustion. Understanding the role of affect is, therefore, particularly important in this work domain and others like it.

The position taken in this thesis is a sociocultural one and is based on the assumption that people and their contexts cannot be separated. Hence, the experiences of the work context (e.g., as represented by organisational structures and organisational cultures) influences the affective states of incident management personnel.

In addition, there is a relationship between individual affect and collective affect as it plays out in teamwork. Fire incident management teamwork provides an excellent example of the way in which the affective states of incident management team members are interpreted collectively and feed into prevailing norms and values of certain groups that then become positive or negative group stereotypes.

This thesis is based on a qualitative study. Semi-structured interviews (n=70) were conducted across four states in Australia with experienced incident management team personnel. Participants were asked to talk

about their experiences when engaged in incident management teamwork. Using a qualitative theory building approach, the data was examined for people's affective experiences whilst engaged in work activity. The way in which organisational cultures are socially constructed within people's affective experiences and work activity were also examined in the data.

The study seeks to extend existing literature and understanding in the following ways. First, by elaborating the linkages between affect (manifested in descriptors of moods and emotions) to constructs such as collective efficacy and team cohesion which are typically cognitively framed. Second, by examining the intersection between individual and collective experiences and the way in which these are mediated by individual and collective affect. Finally, the thesis makes a contribution to the emerging body of literature about the role of affect in the workplace. In the domain under study, for example, the role of affect in emergency incident management teamwork is very present but not readily discussed.

The research concludes by highlighting the importance of the interconnections between affect and culture and the roles both play in teamwork. The thesis presents a model illustrating the ways in which individual and collective experience of affect may be built into models of teamwork. Many models of teamwork in the literature pay lip service to the affective domain but do not systematically examine how affect contributes to enabling and constraining teamwork.

Through the conceptual models of team differentiation, team fragmentation and team integration, the thesis shows how collective affect can either enable or constrain teamwork performance. The thesis concludes with a discussion about the implications from the findings

for practitioners, leaders, trainers, professional developers, policy developers and future research.

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