

ABSTRACT

Stories of events form an integral part of the social context in which disasters are interpreted, made sense of and can influence risk-taking behaviour. However, 'heroic' stories can have a darker side in the context of natural disasters when they become part of myths or are used to bolster risk-taking activities. Such stories have the potential to undermine the safety messages of governments and emergency services organisations. This paper explores three narratives from historical disaster events to consider if social narratives offer avenues to reduce risk-taking behaviours during emergency events.

People's past experiences and personal stories can influence risk-taking behaviour

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Introduction

Human behaviour is notoriously difficult to understand and predict. It is the outcome of a complex mix between biological urges and perception, agency and social structures. There is clear evidence that more men than women place themselves in higher risk situations that have potential and actual fatalities (Fitzgerald *et al.* 2010, Jonkman & Kerman 2005). There is now literature that explores why this may be the case. However, one aspect that has received less attention is that of social narratives and social memory and the influence these may have on perceptions, meaning and, ultimately, risk-taking behaviour. This paper draws on an oral history research project that explored community resilience within a Queensland coastal community that had experienced a number of cyclone events. Three stories in particular stand out related to risk-taking behaviour. The stories had been retold many times over the years within the local community. This retelling prompted the question: Is it possible these stories influence the risk-taking behaviour of others as well as the story tellers? This paper presents the three narratives and briefly describes the disaster-related literature on risk-taking behaviour to examine how social narratives and social memory open up areas of research into risk-taking behaviour.

Background

Risk-taking behaviours during hazardous events are of concern for emergency management organisations as the risk extends beyond those acting in risky ways to potentially impact on others, including emergency response personnel. Regarding flood injury risk, Franklin and colleagues (2014) noted that levels of risk depend on the characteristics of the flood and context as well as the behaviour of people. They argued that education programs may raise awareness of the dangers of driving through flooded waters, but it is difficult to create accurate perceptions of threat for events that rarely occur. Also, people with past experiences of flood often underestimate their propensity of being at risk in future flood events (Franklin *et al.* 2014). They also recognised that increased urbanisation and climate change contribute to more flood events occurring in the future. Thus, the public's experience of floods is likely to increase. Whether this contributes to

riskier behaviour is difficult to predict. Where Franklin and co-authors (2014) suggested people with experience underestimate their risk, Li's (2009) research with residents of Darwin suggested long-term residents have a good understanding of their risks and live and behave with awareness while newer residents are less aware and often nonchalant. This finding points to the potential role of social narratives and social memory to remind long-term residents of the dangers of natural hazards; that messages of awareness and staying safe infiltrate stories that long-term residents tell themselves as part of understanding the meaning associated with such events.

Thompson and co-authors (2018) looked at the preparedness and risk behaviours of horse owners during bushfires in South Australia. They noted the influence of 'disaster myths' and warn that heroic stories of survival are not helpful, even if near misses and cautionary tales can be used to better prepare communities. The stories that circulate within communities (and increasingly on social media) are of risk-taking behaviours where all ended well. This tendency reflects a broader approach to risk. Athanassoulis and Ross (2010) argued there is a need to shift research away from outcomes of risk to understanding the decisions to take risks in the first place as well as the notion of 'reasonableness' in that decision. They purport that the tendency to focus only on outcomes diminishes the 'moral responsibility' of action. Instead, they argue that focusing on the reasonableness of a decision to act puts more attention on good judgement and requires wisdom and sensitivity to context.

Social narratives play a role as they help people derive meaning from experiences. Social narratives are the stories communities tell themselves about themselves. These stories influence what options people see as available and they influence the interpretations people make. Social narratives help construct memories and traditions and they condition people's lives and communities by making meaning of the present and opening possibilities for the future (Anderson 2010). Social narratives are derived from personal and collective stories that are told and retold and become a part of how people see themselves within their communities. They also contribute to social memory that relates to institutionalising these ways of being, knowing and doing. They can actively construct and reconstruct which social elements are retained, reordered or suppressed and often lead to unquestioned traditions gaining 'truth claim' status (Anderson 2010). However, it is possible to change social narratives and social memories. An example is the changing social role of women over the past two centuries in western countries. This has changed from unchallenged stories and legal constraints that diminished women's cognitive and social abilities to one where women have legal equality with men, even if there are specific cultural legacies of inequality that remain.

Thus, while there is increasing literature on the psychological and behavioural aspects of disaster-related risk-taking, little research has been undertaken

on the contribution of social narratives and social memories in constructing the social context in which risk-taking behaviours take place. This study takes a historical perspective on three narratives that contribute to the social meaning associated with cyclones within a small community. It explored how social narratives and social memory are important factors to consider in improving preparations for emergency events.

Setting

The Capricorn Coast of Australia is nestled on the shore of Keppel Bay in Central Queensland. From the shore, the islands that sit on the horizon provide a comforting sense of protection; ensuring the waters are safe for swimming and recreation. Indeed, the cooling sea breezes and the safe swimming beaches were critical to the townships of Yeppoon and Emu Park becoming established as seaside resorts for the regional city of Rockhampton. The local economy relies heavily on tourism but also has economic bases in agriculture and fishing. Over the past 30 years, the population has expanded rapidly as people choose to undertake the daily commute to the city. Several moderate-to-severe cyclones have been recorded since 1900.

Method

This research used oral history within a narrative inquiry methodology. Narrative inquiry privileges the stories of people and can be approached through a variety of methods, including oral history (Reissman 2008). Oral history is juxtaposed between narrative inquiry and history and, therefore, seeks to tell historical truths as well as recognise the social construction of personal perspectives (Abrams 2010). Oral history can provide insights into:

- social consciousness to help raise awareness of issues impacting on public health
- social narratives or the stories told about people and place (this is the most common use of oral history)
- social memory, which includes the institutional policies and practices as well as mainstream historical precedents and explanations (Anderson 2010, Madsen 2018).

Following Cyclone Marcia in 2015, the Livingstone Shire Council funded an oral history project to understand how the community dealt with adversity in the past and how these stories could provide insight into community responses. Between June and December 2016, interviews were conducted with 20 long-term residents to explore their relationship with the community and their experiences of past adversities, including weather events. All the participants (11 men and 9 women) had lived in the community for more than 40 years; most were in their 70s and 80s when interviewed. One resident who was in her 90s could remember the 1930s cyclone event.

This paper focuses on three of these testimonies as they included stories that had apparently been told many times over the years to family and community members. These stories are presented in an abbreviated narrative form that was constructed from the verbatim transcripts (Clandinin 2013, Kim 2016).

Listening to and exploring the memories of older people needs to be understood for what it is. Memories are not archival repositories of lived experiences and are not reliable sources of facts when compared to written records (Tumblety 2013, Abrams 2010). Rather, individual memory is constructed through dialogue (Green 2012), thus, individual memory is also about community. There is a symbiotic relationship between subjective experiences and events, and between individual and collective memory (Abrams 2010). It is this interplay that influences what is remembered, how it is remembered and why it is remembered (Abrams 2010, Tumblety 2013). The three narratives outlined in this paper are examples of this interplay. The stories relate to people's experiences during either the 1949 or 1976 cyclone events that were told with fluidity, indicating the stories had been told many times, have contributed to the shared construction of the past within the community (Smith 2012) and indicated the events affected the community in quite a traumatic manner (Abrams 2010). It is the interplay between the individual and the collective that improves the understanding of social narratives and memories. While the stories and experiences themselves are unique, they can represent the broader meaning-making within communities (Dodd 2013).

Ethics approval was granted by the Central Queensland University Human Research Ethics Committee (H16/06-072). The interviews were digitally recorded, transcribed and lodged with the local historical society. Pseudonyms have been used in this paper for personal reflections.



Tropical Cyclone Marcia caused significant damage to property in Yeppoon, Queensland due to its severe winds.

Image: Cyclone Testing Station, James Cook University

The narratives

'Joan' moved to Yeppoon with her family in the early 1940s when she was 14 years old (Joan personal communication, 2 August 2016). In 1949, she was working in a general store and was engaged to be married. She had a certain nonchalance towards cyclones. 'Cyclones weren't called cyclones then, they were just 'blows'', she recalled. Not having experienced a cyclone before, she remembered looking out to sea in 1949 as it approached:

This blow was getting a bit fierce and I looked out and the horizon was white and I thought, 'I wonder what's that', you know, and it didn't hit me but it must have been the storm, and it was heading for Yeppoon and the winds – the gusts were getting stronger and stronger – and my mother said, 'If we don't put something to stop the windows in the front' – they were starting to buckle in – she said, 'the whole roof will come off'. So she said to me, 'We'll take the bedroom door off'.

(Joan)

Joan and her mother nailed a blackboard brought up from under the house and the bedroom door to the windows to prevent them from collapsing and possibly dislodging the roof.

And it's getting darker and darker and the wind was screaming. This was an old house and there were places where the wind could get through and scream. And we were sitting on the floor, having some cold stew mum had cooked in the morning. We had a kerosene refrigerator and we had a light, that was the only light we had, and my younger sister was crying, and the ducks were squeaking and the dog and cat weren't too happy. And all of a sudden it stopped, and we thought, 'Wow'. We didn't know there was an eye in a cyclone. We didn't know it was a cyclone even, and it was just rain and wind and as it came back again, daylight was starting. And it came in the back of the house and because there's glass windows, two lots there, mum said, 'Well, we have to try to save the roof from this side', and we got the table and put it up and she's hanging onto the table and I'm driving six-inch nails in and that stopped the roof from coming off. And I wasn't married in those days and my fiancé came up to see how we were and looked at the table and said, 'How the bloody hell are we going to get that down!' But you see, fear lends you strength. We did it, we saved the house.

(Joan)

This story highlights how people can be unaware of how extreme weather conditions can be and thus be unprepared. On the day the cyclone crossed the coast, the local newspaper reported the cyclone's position was south of the local area and it was 'too far from the tropical coast to affect the area to any marked extent' (*Morning Bulletin* 2 March 1949, p.4). Two days later, this same newspaper reported the region had been battered by one of the worst cyclones in its history (*Morning*

Bulletin 3 March 1949, p.1). The unexpectedness and speed with which the weather turned became part of the social narrative and Joan's unexpected physical feats, heroine-like in the midst of a frightening event, are also reflected in the stories of 'Frank' and 'Bill'.

Where Joan's story centres on the domestic space, Frank's story focuses on saving his business, including a relatively new (and expensive) boat on which the business depended (Frank personal communication, 15 September 2016). After years of struggling to make the business profitable, the timing of the 1976 cyclone could not have been worse.

It wasn't so much the wind that did the damage, it was the great big swells. About every half hour, there'd be this enormous wave, up to 10 metres high. That's 30 foot, that's a helluva big wave and this is what did all the damage. That big wave'd come in and it would pick up the boulders over there at the harbour and just pick 'em up and toss 'em.

(Frank)

Frank's boat was moored in the harbour and as he and his partner watched thick ropes snapping, they decided to head out to sea.

We got in our boat and away we went, and everybody's saying, 'Those bloody mad blokes, they are'. Because it was an 80-foot boat and here we went out and up, we're going over the waves and you couldn't see – it was just absolutely pouring rain. So we knew roughly where we had to go. We didn't have the gadgets they've got today electronically, just a compass. We kept in so we could run from island to island to island.

(Frank)

Frank and his partner were looking for the mouth of the Fitzroy River in which they believed they would find shelter, but the water current dragged them further south than they anticipated and they knew the area was shallow. Visibility was very limited.

'Alan' (Frank's partner) said, 'Wouldn't it be good if we could see the Cape. We'd have some idea just roughly where to head for'. And I'd say within a minute, maybe two, without any warning, as sharp as you like, the weather in front of us split like that, just slowly and in between there and there, visibility was 100 per cent. Not a drop of rain. Either side, nothing. And where was it pointing? Right at the Cape. It's open like that say 5 to 10 seconds, and then it gradually closed like that, and as it closed, the weather closed with it.

(Frank)

Frank believed this experience bordered on the miraculous and, as such, the story is worth recounting. However, the decision to head out to sea to save the boat is an activity that is more likely to infiltrate social memory. This behaviour, seen as madness by some, likely prevented significant damage to the boat and has contributed to a social narrative of heroism in the face of danger.

Emergency services volunteers often act heroically during disasters. The Queensland Government established the Queensland State Emergency Service (SES) in 1975 after a major flooding event. In Yeppoon, a local branch of the SES was set up in 1976, a few months before Cyclone David hit the area. It was the first test for the new volunteers. Bill was one of those volunteers (Bill personal communication, 2 August 2016).

In the middle of the cyclone, at night, we were set up in the library at the Town Hall, at the Council Chambers and that was our council headquarters. And my wife was there and Cindy and they were manning the radios and telephones and takin' the calls and that, and we tried not to have people out in the cyclone, you know, but we had an issue. We got a call at about 3 o'clock, from the hospital. The nursing staff, they'd evacuated the patients to Rockhampton that day, but the nursing staff were still down there and the salt water from the ocean started comin' in underneath the hospital. Okay, so we went down and the water on the road then was about three feet deep, nearly a metre deep, and we brought the nursing staff up to the Town Hall where they set up a little nursing station. And just after that, we got a phone call from the ambulance that there was a lady in labour in Oak Street. This is in the middle of the bloody cyclone and trees are down, you know, all over the road and you couldn't get through. So we're out there with chainsaws in the middle of the cyclone, clearin' the road, just to get the ambulance through. And we got this lady back to the Town Hall and that's the only baby that's ever been born in the Town Hall in Yeppoon.

(Bill)

Bill remained a member of this volunteer emergency service for the next 40 years and recalled that the training and safety precautions have changed significantly. However, his story of this first cyclone is well known within the township and points to extraordinary physical acts undertaken in dangerous circumstances.

Discussion

Stories contribute to the forming of personal and collective identities, including senses of meaning and attachment to place (Kim 2016, Proudley 2013). Stories can provide a source of strength during difficult times (Madsen & O'Mullan 2013). Stories of heroism are often the source of mirth within families and local communities and can be repeated many years after the original events occurred. However, there can be a darker side to these heroic tales in the context of natural disasters when they become part of disaster myths or are used to bolster risk-taking behaviours (Thompson, Haigh & Smith 2018). In this way, these stories have the potential to undermine the safety messages of governments and emergency services organisations.

In the narratives presented, each depict risk-taking behaviour during cyclone events: Joan needed to go outside to get supplies, Frank and his partner went to sea, Bill cleared roads. Only Bill's narrative was tempered with cautionary elements, reflecting his ongoing involvement with the SES. As such, his telling of 'the old days' retained the attractions of the story but incorporated contemporary precautions, perhaps considered a necessary element especially when retelling this story to fellow SES workers. It is likely the Darwin residents in Li's (2009) research contain similar precautionary elements in their social narratives that help them remain risk-aware. As such, social narratives have the potential to be used as a protective mechanism.

It is difficult to know the effects of any of the narratives outlined in this paper (retold over many years to countless people) and whether they have influenced the behaviour of others or subsequent behaviours of the narrators. It is likely these stories, and others, have contributed to the broader social narratives regarding how Capricorn Coast residents respond to cyclones. It is also likely these narratives have both supported and undermined safety initiatives put in place by governments and emergency management authorities. The challenge lies in how to use social narratives to support risk-reduction efforts (Houston *et al.* 2015). This would require further research but opens up possibilities for prevention that have been under-explored.

Conclusion

Reducing risk-taking behaviours of people during disaster events remains a core part of the preparations that local emergency management organisations and governments undertake. Much of this has relied on communication campaigns to educate and raise awareness of the outcomes of such behaviours. This paper outlined that social narratives are worthy of research to investigate how the stories told about past experiences of disasters make meaning of the events, connect communities to each other and to place and are an avenue for disaster risk reduction.

References

- Abram L 2010, *Oral history theory*, Routledge, London.
- Anderson EB 2010, *Memory, tradition, and the remembering of suffering*, *Religious Education*, vol. 105, no. 2, pp.124–139.
- Athanassoulis N & Ross A 2010, *A virtue ethical account of making decisions about risk*, *Journal of Risk Research*, vol. 32, no. 2, pp.217–230.
- Clandinin J 2013, *Engaging in narrative inquiry*, Routledge, New York.
- Dodd L 2013, *Small fish, big pond: using a single oral history narrative to reveal broader social change*, in J Tumblety (Ed), *Memory and history: understanding memory as source and subject*, Routledge, London, pp.34–49.
- Fitzgerald G, Du W, Jamal A, Clark M & Hou X 2010, *Flood fatalities in contemporary Australia (1997–2008)*, *Emergency Medicine Australia*, vol. 22, pp.180–186.
- Franklin R, King J, Aitken P & Leggat P 2014, "Washed away" – assessing community perceptions of flooding and prevention strategies: a North Queensland example, *Natural Hazards*, vol. 73, pp.1977–1998.
- Green A 2012, *Can memory be collective?*, in DA Ritchie (Ed), *The Oxford handbook of oral history*, Oxford University Press, New York, pp.96–111.
- Houston J, Spialek M, Cox J, Greenwood M & First J 2015, *The centrality of communication and media in fostering community resilience: a framework for assessment and intervention*, *American Behavioural Scientist*, vol. 59, no. 2, pp.270–283.
- Jonkman S & Kelman I 2005, *An analysis of the causes and circumstances of flood disaster deaths*, *Disasters*, vol. 29, no. 1, pp.75–97.
- Kim JH 2016, *Understanding narrative inquiry*, Sage Publications, Thousand Oaks.
- Li G 2009, *Tropical cyclone risk perceptions in Darwin, Australia: a comparison of different residential groups*, *Natural Hazards*, vol. 48, pp.365–382.
- Madsen W 2018, *History in health: health promotion's under-explored tool for change*, *Public Health*, vol. 154, pp.118–122.
- Madsen W & O'Mullan C 2013, *Responding to disaster: applying the lens of social memory*, *Australian Journal of Communications*, vol. 40, no. 2, pp.57–70.
- Proudley M 2013, *Place matters*, *Australian Journal of Emergency Management*, vol. 28, no. 2, pp. 11–16. At: <https://knowledge.aidr.org.au/resources/ajem-apr-2013-place-matters/>.
- Reissman C 2008, *Narrative methods for the human sciences*, Sage Publications, Thousand Oaks.
- Smith G 2012, *Toward a public oral history*, in DA Ritchie (Ed), *The Oxford handbook of oral history*, Oxford University Press, New York, pp.429–448.
- Thompson K, Haigh L & Smith B 2018, *Planned and ultimate actions of horse owners facing a bushfire threat: implications for natural disaster preparedness and survivability*, *International Journal of Disaster Risk Reduction*, vol. 27, pp.490–498.
- Tumblety J (ed) 2013, *Memory and history: understanding memory as source and subject*, Routledge, London.

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