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Examining perceptions of luck in post-bushfire sense-making in Australia

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ABSTRACT

This paper explores how people in southeast Australia impacted by bushfire make sense of such threatening experiences. It focuses on three post-fire studies of residents affected by bushfire to a point where the fire threat was imminent, and where perceptions of luck was an emergent, yet pivotal, theme during interviews in explaining outcomes of the events. Despite differences in the severity of residents' experiences in terms of exposure, duration, and loss of life and property, narratives of luck were common across the interviews. The study results both enforce and challenge dominant paradigms of luck as something that is simultaneously "external" and "out of control". Using trust, hope and agency as axes of analysis, we argue that it is the act of infusing personal agency with the energy of trust and hope that is often expressed as "luck" in post-event sense-making. This enables many residents to be forward-looking, and for the threat to be a transformative experience. It also provides opportunity for enhanced dialogue on risk communication.

1. Introduction

Severe bushfires (wildfires), resulting in significant loss of property and lives, are a defining part of the history, ecology and culture of Australia. Over the past century bushfires have destroyed more than 25,600 houses [1,2] and claimed more than 674 civilian lives and 151 firefighter fatalities [3]. An even greater number of civilians have witnessed destructive bushfires at close range without experiencing direct personal loss. The greater number of potential losses and damages avoided contrasted with the number of actual losses and damages realised has been defined as an "arena of perceived luck" [4, p. 246]. Perceptions of luck offer insights into the sense-making process that follows a threatening event [5]. This paper analyses how perceptions of luck emerged unsolicited and spontaneously in the interview narratives of residents directly or indirectly impacted by bushfire, to better understand how people make sense of such threatening experiences.

1.1. Defining luck

Luck is defined as "that which happens to a person, either good or bad, as if by chance, in the course of events" [6]. Although a contested concept, it is widely held that luck is a function of three factors: chanciness, absence of control, and significance [7–10]. Because both good and bad luck is seen to occur in circumstances (coincidences) that are largely out of control, situations will often be negative, or at least suggest the possibility of a negative counterfactual alternative [10,11]. Exercising precision in locating luck is important, as *luck* and *fortune* are easily confused: "fortunate events are not lucky, they are luck-*involving* … the luck is located in the prior or structuring circumstances" [9, p. 495, p. 492]. For an actual outcome to be considered "lucky" (or fortuitous), the result need not necessarily be wholly positive or successful. Rather it is enough that the imagined (and usually negative) scenario was avoided [12]. In the sphere of natural hazards, this most frequently involves avoiding the loss of life and assets (be it a house, a forest, a memory or a way of life).

Comprehension and articulation of counterfactual alternatives, and consequently assessment of luck in determining outcomes, are typically retrospective of the event [13]. Studies of natural hazards have shown that the articulation of the outcome of an event as lucky by survivors is not uncommon [14,15]. The occurrence of natural hazards – such as flash-flooding, earthquakes, cyclones or bushfires – are largely uncontrollable and unpredictable. While the degree of impact on life and infrastructure can be mitigated with planning and preparation, they are rarely completely avoidable [16,17]. In any event, tens, hundreds or thousands of people may be killed, injured or left homeless. However, tens, hundreds or thousands of people may simultaneously not be as afflicted despite the perception that negative outcomes (e.g., death) are

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close at hand. The decisive factor for identifying oneself or someone else as lucky (or unlucky) is therefore, in this context, not the actual outcome itself. Rather it is the avoidance of the counterfactual outcome (what could have happened) [13].

A considerable body of literature examines human behaviour and decision-making during bushfires [18–20]. Yet, there is little discussion on luck as a causal factor in this literature. This is despite perceptions of luck being reported by survivors, for example, after the 2007 Peloponnesian wildfires in Greece, as one of the key determining outcome factors (together with chance, supernatural forces, or other persons), as opposed to their own (in)actions [21]. After the 2009 Black Saturday bushfires in Australia, 46% of surveyed survivors with minor or no property damage, and 43% of respondents whose houses were destroyed or sustained major damage, attributed to a great extent "luck or chance" as factors that influenced how the fires impacted their property [22]. A study of homeowners exposed to bushfire in 1977 in California, found that those with destroyed homes were "significantly more likely" to attribute their loss to luck, whereas homeowners who had been equally exposed to the fire but escaped serious damage often believed strongly in their own efforts to protect themselves [23]. These studies across three decades of disaster research indicate that the language of luck, particularly when used in the context of both potential and actual loss from wildfire, enforces the perception that luck is an attribute of something chancy that is seemingly out of control. Similar findings exist for studies of earthquakes [14], hurricanes [24], heatwaves and floods [25].

1.2. Attribution theory and locus of control

One of the primary foci within the field of natural hazards has been to better understand why some people prepare for natural hazards while others do not [26,27]. A number of theories have attempted to identify the psychological processes that contribute to a lack of preparation. Attribution theory attempts to explore the factors governing the ways people explain the doings of self and others [28]. People are motivated to explain events because causal knowledge helps people to regain feelings of control by increasing their understanding of the event [29]. In attribution theory, luck is regarded as an external causal factor [30]. According to Heider [28], an outcome will be attributed to luck under two circumstances: (i) when environmental conditions rather than the person are perceived as primarily responsible, and (ii) when the environmental conditions are perceived as products of chance. If one's success (or failure) is attributed to luck it means that the outcome is not predictable or controllable by the individual concerned [30].

Rotter [31] introduced Locus of Control (henceforth referred to as LOC) to represent the degree to which people accept personal responsibility for what happens to them. Persons with internally controlled locus believe that personal ability and action largely determine the outcome of events affecting their lives ("active trusting"). Persons with externally controlled locus believe that their successes and failures are determined by unpredictable, random forces beyond their control ("passive trusting"), such as luck, chance, fate, God, or powerful entities, such as the government or social norms [16,32]. Natural hazards studies utilising LOC typically predict action, and assess risk cognition and coping behaviour prior to, during, and following threat exposure, in an attempt to understand drivers of capacity and motivations for preparing and responding to a disaster. Correlations between LOC and behaviour responses have been examined in the contexts of floods [33,34], tornadoes [35], heatwaves [25], earthquakes [14,36], hurricanes [37,38], rockfalls [39], volcanoes [27] and wildfire [21,40], with contradictory results. Several studies have found LOC to be unrelated to preparation for, and recovery from, disasters with LOC being but one of several forces accounting for differential preparedness, coping behaviours, and death rates [32]. Factors such as educational level, age, and gender have also been shown to influence preparedness and coping behaviour when correlated with LOC [33].

Three interrelated concepts related to external locus (and to luck) have emerged as key predictors of people's failure to not only prepare for natural hazards but to comprehend risk and mitigate future hazards following exposure to an actual threat: (i) fatalism, or the belief that the destructive effects of a hazard are inevitable no matter how prepared one is [35,41]; (ii) denying behaviour, i.e. the belief that a particular risk will only affect others [42]; and (iii) learned helplessness, whereby people attribute negative events to uncontrollable causes, or generalise genuinely uncontrollable events to other events that can be controlled, and so remain passive [43]. The belief that there is little point in preparing for natural hazards, expressed on both individual and community scales, has been linked to the three attitudes described above [27]. However, both academics and emergency managers are quick to argue that while the hazard might be uncontrollable, the magnitude of the consequences can be influenced and lessened through appropriate preparedness measures [16,17,41]. In the context of bushfire, this may involve actions such as clearing gutters, maintaining a static water supply, installing roof sprinklers, maintaining a petrol pump/generator, or steps towards mental preparedness [44,45].

1.3. The agency of good luck, hope and trust

Challenging the assertion that perceptions of luck tend to inhibit preparedness action and post-disaster recovery, a body of work specifically associates perceptions of good luck with self-empowerment and self-efficacy concepts, such as hope, optimism and confidence [46,47]. Day and Maltby [48], for example, examined the relationship between belief in good luck and hope, finding that belief in good luck plays a significant part in the planning for, and completion of, a goal. They conceptualise "belief in good luck" (when examined through a model of hope) as positive and adaptive in that those who believe in good luck are more likely to attempt to achieve their goals, and persevere in the face of obstacles, than those who do not believe in good luck. However, as with studies of LOC, the efficacy of luck in prompting reflection and action towards a goal, comes down to whether an individual attributes luck to external causes, such as the weather, fate or chance, or to internal causes, such as preparedness or a sense of responsibility [48]. This aligns with the observation that hope is agency engaging in a way that other closely related statements, such as wishing or fantasising, are not:

> [H]oping must involve organizing and sustaining our efforts towards achieving some hoped-for end that we recognize may not be realised despite our best efforts. This suggests that hoping must also play a regulative role in our psychic life, keeping us on track through myriad difficulties and uncertainties, whether they be psychological or material. [49, p. 245]

Closely related to hope is the concept of trust, which in this paper is defined as "confident expectation of something; hope" [50]. Trust (and distrust) has been interrogated in both philosophical debates [49,51,52] and disaster studies of survivor preparedness and experiences of recovery [53,54]. In disaster studies, trust tends to be understood as "trust in others" [41], namely the trust of citizens in official institutions involved in risk reduction, crisis response and recovery. In this paper we are more concerned with trust in self, and how, when infused with the energy of hope (or vice versa), it is forward-looking and transformative. While trust feeds hope, and trust is influenced by knowledge, experience, common sense, as well as vulnerability [55], it is the empowering capacity of people to hope that rationalises their capacity to trust [49]. In the context of this paper, this translates to the capacity of residents to trust in their personal ability to make a difference in challenging situations. It is the interconnectedness of trust, hope and agency, which enables people to trust in a self-empowering way:

> [T]rusting well: not *passively*, in the way of those who see no place for their own agential involvement in their fate, but *actively*, in the