



Wildfire bureaucracy: The affective dimensions of state engagement with Indigenous peoples in southeast Australia

Lachlan Beggs^{a,*}, Cameo Dalley^b

^a Melbourne Centre for Behaviour Change, School of Psychological Sciences, University of Melbourne, Australia

^b School of Culture and Communication, University of Melbourne, Australia

ARTICLE INFO

Keywords:

Wildfire
Bureaucracy
Indigenous peoples
Affect
Natural hazards
Settler-colonial

ABSTRACT

In recent years settler governments have begun to seriously engage with Indigenous peoples' fire and other ecological knowledges in the context of managing natural hazards and resources. In Australia, Aoteroa New Zealand, Canada and the United States, Indigenous peoples and their ecological knowledge have become increasingly involved in combating such naturally—and socially constructed—threats as wildfires, floods, and storms. Nevertheless, while there has been significant research into the sociocultural dimensions of Indigenous peoples' ecological knowledges, until recently little analytic effort has been directed to understanding the other side of this intercultural interaction: what can be conceptualised as settler natural hazard management bureaucracies. Taking the emergence of government engagement with Indigenous peoples' fire knowledge in the southeast Australian state of Victoria as a case study, this paper contributes to the nascent body of ethnographically informed research focusing on the interaction between state natural hazard bureaucracies and Indigenous peoples. We do so by asking what motivated this change in government interest in Indigenous peoples and their fire knowledge. Informed by engagement with experienced fire sector staff, our findings reveal the presence and importance of *affect* and other *more-than-representational* qualities that animate state engagements with Indigenous peoples and their cultural burning knowledge.

1. Cultural burning: A vignette

It is a cold winter morning in August 2018 but the sparse cloud cover, rich blue sky, and perky sunlight signal that spring is not too far off. I'm [Beggs] on my way to what's known as an 'Aboriginal cultural burning workshop' being held in Victoria's Yarra Ranges, approximately-one hour and 30 min' drive northeast of the Australian city of Melbourne. Workshops such as this are organized by settler government land and fire management agencies increasingly interested in engaging Indigenous peoples and their knowledge of fire. When I arrive, the fresh mountain air is pulsating with the chug of diesel engines in low-range as off-road-capable government fire trucks assess the damp but drying landscape for any sign of risk. 'It's not ideal, but I reckon they'll get a burn happening', Benjamin, the lead non-Indigenous government fire practitioner assisting with the cultural burning workshop, tells me. Present are ten Aboriginal people who identify as being from Indigenous groups from around the state of Victoria, and a Tagalaka man from

northwest Queensland. The event is also significant for the notable array of non-Indigenous government fire and land management sector staff gathered in anticipation. Assembled are around twenty vehicles and about thirty settler practitioners, nearly all clad in thick, dark green fire-resistant uniforms. Most of these fire staff are from the local area, but some have travelled from as far as 200 km.

A senior Wurundjeri Woi Wurrung man provides a 'Welcome'¹ and directs us to cleanse ourselves in the smoke emanating from a wooden vessel filled with smouldering eucalyptus leaves. After, we head into a sparsely populated section of scrubby yellow and stringybark eucalyptus forest for an interactive lesson in cultural burning led by the Wurundjeri Woi Wurrung man and his Tagalaka friend. As our Aboriginal instructors begin to talk us through this complex locally situated practice, whispers and scoffs from several non-Indigenous observers suggest a degree of scepticism within the natural hazard staff. This scepticism, together with a more pervasive sense of hesitancy, however, soon give way to surprise, curiosity and then eventually to affective transformation, as these same

* Corresponding author.

E-mail addresses: lachlan.beggs@unimelb.edu.au (L. Beggs), cameo.dalley@unimelb.edu.au (C. Dalley).

¹ Also called a 'Welcome to Country', these ceremonies involve local Aboriginal people formally welcoming people onto their customary 'Country'. See Merlan (2014) and Kowal (2015: 87-108) for insightful analyses of the multiple meanings tied up in Welcome to Country ceremonies.

individuals begin to interact with the knee-high patchwork fires lit by our Aboriginal instructors (see Fig. 1). Peter, a senior government fire manager pertinently reflects later:

You literally see other fire managers watch this fire and go ‘shit, it did what they [the Aboriginal demonstrators] said it would do’, and they [non-Indigenous fire managers] step over the fire front into the black and they touch the freshly burnt ground and go ‘wow that’s cool to touch’, and transformation occurs.

The ‘cool’ ground here refers to a differentiation between ‘hot’, uncontrolled wildfires and the comparatively cool feel of the soil beneath a patch of forest undergrowth freshly treated by an Aboriginal cultural burn.

2. Introduction

The ‘challenge’ or ‘problem’ of managing the threat of wildfire,² as it is most typically viewed, is receiving increased public and academic scrutiny (see Gill and Stephens, 2009). This comes off the back of an escalation in the severity and frequency of bushfire events and seasons across the globe. For example, the most recent 2019–2020 Australian bushfire season burnt an unprecedented more than 11 million hectares (110,000 square km or 27.2 million acres) (Biddle et al., 2020: 1). Unlike past Australian wildfire seasons where impact tended to be confined to locales, the 2019–2020 season caused fiery devastation in five of six states and one of two territories. Although the direct death toll of 33 people was not as acute as with certain past events, a recent study estimates that nearly 80 percent of the Australian population were in some way affected, whether through direct or indirect exposure (Biddle et al., 2020). The non-human death toll was far higher, with the Royal Commission into National Disaster Arrangements Report (2020: 20) recording the death of almost 3 billion animals. Furthermore, Bhiemie Williamson (2022), a Euahlayi scholar of environmental management and natural disasters, shows that the ‘Black Summer’ wildfire not only disproportionately impacted Indigenous Australians, in terms of both comparative population numbers and their connection to land, but that Indigenous peoples were also marginalized in the post-event recovery process. Outside of Australia, during an extended heatwave in July of 2018, Greece experienced wildfires in its Attica region which killed 96 people. In the year preceding, Spain and Portugal experienced severe heatwaves and winds which combined to generate wildfires that were responsible for the deaths of 113 people. Meanwhile the fire prone United States’ state of California experienced two consecutive years of historic wildfire seasons in 2020 and 2021, with the 2020 season declared its worst on record (Keeley and Syphard, 2021: 7). Entailing more than 10,000 fires, the complex 2020 disaster was described as a ‘gigafire’ because the area it burned eclipsed more than one million acres of land: more than four percent of the state’s total landmass (Cal Fire, 2020).

This escalation in severity and frequency of wildfire events across the earth, in turn, flows from two further causal factors. The first is climatic change, with scientists predicting rising average global temperatures to lead to heightened fire activity (Moritz et al., 2014). Furthermore, studies show that the spatial dimensions burned and/or at risk of being burned by wildfire across the planet will increase because of climatic shifts (Wotton et al., 2017). Indeed, Gillett et al. (2004) have already pointed to evidence which demonstrates an increase in the landmass burnt by wildfires over the past several decades in Canada. The second factor is the movement, for work and/or residence, of large numbers of people in fire prone nations to the wildland-urban interface (WUI) (for example see Gill and Stephens, 2009). According to Gill and Stephens,

particularly prone WUIs include California and the south-eastern seaboard of Australia (2009: 1).

Meanwhile, as the challenge of wildfire and other ‘natural’ disasters intensify, many settler-governments have begun to progressively engage Indigenous³ peoples and their cultural fire knowledge (Christianson, 2015; Neale et al., 2019). In Australia at least, this follows a familiar, albeit largely unacknowledged pattern of government fire agencies and environmental scientists drawing insight from Aboriginal peoples’ approaches to fire and land management (see Neale, 2022). For example, in the wake of the Second World War, Australia’s national science organisation the Commonwealth Scientific and Industrial Research Organisation (CSIRO) established the nation’s first fire research units. The major project to emerge from their interconnected research undertakings was the development of an ‘Australian’ approach to fire science and management. As eminent fire historian Stephen Pyne (1991: 339) observes, at the core of this shift in thinking was the recognition of the indemnity of (wild)fire to Australia. This conceptual shift was accompanied by a ‘new’ practical strategy for managing wildfire through the introduction of controlled—in terms size, intensity, season, and location—burns to reduce the build-up fuel and therefore the severity of wildfires. This approach sat in contrast to the North American policy of ‘fire exclusion’ in vogue at the time. Despite the authors of the early Australian research occasionally noting the Aboriginal inspiration of their ideas (for example, see King, 1963: 4; McArthur, 1972: 43), the dominant settler fire paradigm of ‘controlled’ burning that evolved rarely engages its Indigenous origins.

Shifting back to the contemporary context, in their (2018) review of natural hazard sector engagements with Indigenous peoples in Canada, Australia, Aotearoa New Zealand, and the United States (CANZUS countries), Thomassin et al. postulate two broad trends informing the spatially uneven change toward engaging Indigenous peoples’ ecological knowledge. First, they identify an increased focus within international development towards policies underpinned by principles of sustainability and inclusion and as such promote more favourable conditions for government interactions with Indigenous peoples. Second, Thomassin et al. (2018: 1) underscore the importance of Indigenous peoples continued assertion of their sovereign rights in national and international contexts as compelling governments to engage them and their ecological knowledge more seriously in natural hazard management settings. Despite this progress, Thomassin et al. (2018: 2) maintain that government engagements with Indigenous peoples and their knowledges ‘are still on the margins of the natural hazards and emergency management sector.’ Two more recent studies shed further light on this emerging relationship in the context of fire management in Australia. For example, experienced fire management practitioner and Wiradjuri man, Dean Freeman, and his co-researchers Bhiemie Williamson, and non-Indigenous human geographer Jessica Weir (2021), report positively on a Ngunnawal and Ngambri-state engagement concerning a cultural burning enterprise in Australia’s Capital Territory. They conclude that ‘[r]ather than being restricted by public bureaucracy, the cultural burning program has leveraged policy and intertwined itself around the machinery of government’ (2021: 124). At the same time, another collaborative research effort (see Smith et al., 2021) exploring increasing government interest in Aboriginal peoples’ cultural burning in southern Australia argues that bureaucratic enthusiasm is not matched by the necessary policies to guarantee the ongoing sustainability of this project. Together these studies underscore the important relationship between policy and its enactment.

² While ‘wildfire’ is the preferred term for describing significant and out of control fire events in territories such as Britain, Canada and the United States, in Australia, the term ‘bushfire’ is more common.

³ In keeping with common usage, the capitalised terms ‘Indigenous’ and ‘Aboriginal’ are used interchangeably to refer to First Peoples in Australia and internationally. Where possible, we have also identified the specific local identity of the Aboriginal persons/groups discussed. To refer to non-Indigenous Australians, the terms ‘non-Indigenous’ and ‘settler’ and ‘settler-descendent’ are used.



Fig. 1. Image from Yarra Ranges Aboriginal cultural burning workshop, August 2018 (Photo, Beggs).

3. Research setting and approach

This article is an ethnographically informed exploration of the state as peopled and social—the professional-personal lives and observations of various mid-level and senior fire sector bureaucrats and practitioners (which we also call bureau-practitioners)—undertaken in 2018–2019, in the southeast Australian state of Victoria.⁴ These bureau-practitioners were predominately highly educated, non-Indigenous people (settlers and settler descendants) who had each been involved in the sector for between 15 and 45 years. Eleven semi-structured interviews were conducted with ten experienced non-Indigenous professionals working in fire-implicated land management capacities. Of these individuals, eight identified as male, which is consistent with the sector's gender disparity (Eriksen, 2014). This included interviews with volunteer organisations and government agencies responsible for coordinating state-led land management regimes related to fire management. These interviews were augmented by participant-observation at three Aboriginal-led burning workshops, as well regular phone and email exchanges with several research participants throughout the two-year project. Held in wildland locations populated by eucalyptus forests to the north and northeast of the Victorian capital city of Melbourne, these workshops entailed educational talks and demonstrations by local and non-local Aboriginal peoples to a combination of personally interested and professionally obligated emergency management staff. The vignette opening this paper provides insight into the affective nature of one such workshop.

Considering the importance of narratives for qualitative research (Reck, 1983), our analysis is substantially based on engagement with the stories, experiences, and reflections of research participants. The importance of personal narratives as a means of accessing the internal workings of literate and managerialist groups and cultures has been well established (for example, see Fialkova and Yelenevskaya, 2007: 22). Following Bruner (1990: 35), narratives are understood as an essential

ordering device through which 'people organize their experience in, knowledge about, and transactions with the social world.' From this viewpoint, narrative-based inquiry lends itself to the examination of the arrangement of sociocultural and cognitive interpretations, allowing analysis to concentrate on either the process of interpretation or the happenings interpreted (Cortazzi, 2011: 5). We are aware that accounts generated from within institutions are likely to protect the dominant structure and status quo (Habermas, 1984). However, as Shaun Gallagher (2017: 471) notes, 'it is not clear how one could generate new or different possibilities without employing narrative.' Furthermore, following Brian Massumi (2002), we recognise that affect can be examined not only through direct observation, but also through careful and contextualized readings of emotional articulation during the production of such narratives.

The period of the study straddles the aftermath of a major 2009 wildfire event, known as 'Black Saturday', and the lead up to the more recent catastrophic fire season of 2019–2020 known colloquially as Australia's Black Summer, which was internationally significant and widely reported. The timing of the study provides insights into the watershed nature of disasters and their aftermath, but also identifies the antecedents for planning and how it is brought forth into action. As for understanding the local impetus informing these emergent government engagements with Indigenous peoples and their ecological knowledges in the context of natural hazard management, Thomassin et al. (2018) show that this remains a 'blind spot' in research to date. Instead, previous scholarship has largely focused on the Indigenous side of settler state-Indigenous natural knowledge entanglements (Huffman, 2013; McKemey et al., 2020; Williamson et al., 2020), while it is non-Indigenous practitioners who are disproportionately impactful in wild-fire management. Research into non-Indigenous hazard bureaucracies is important for three further reasons beyond understanding the impetus for shifts in government engagement with Indigenous ecological knowledge. First, little is known about the values and practices of such state players (Neale, 2017: 6), or the role affect and other non-representational forces play in these contexts. Second, and relatedly, because the ways in which Indigenous ecological knowledge is engaged by governments has significant bearing on the future opportunities that will either be afforded or foreclosed to contemporary Indigenous

⁴ All interviews and participant-observation for the project were conducted by Beggs as part of an Honours degree project at the University of Melbourne, under the supervision of Dalley. Analysis and writing of this paper occurred via a collaborative process between both authors.

peoples. It follows that understanding regimes of power is vital for Indigenous peoples to have a meaningful say about how their country is managed in the face of increasingly precarious socioenvironmental conditions.

Our approach is to consider the state qualitatively, both teasing apart its organizational structures and the subjectivities of those involved. In the Australian state of Victoria, the key government agencies and departments engaged in fire management are the Country Fire Authority (CFA), Emergency Management Victoria (EMV), Forest Fire Management Victoria (FFMV), local councils, the Department of Environment, Land, Water and Planning (DELWP), and Parks Victoria (PV). These organisations employ a range of predominately non-Indigenous (settler and settler descendant) professionals who are mostly university-educated. Our approach to thinking about bureaucrats in these government and government-adjacent organizations has in large part been provoked by critical scholar Tess Lea's (2021: 4.4) call to move beyond critique to grapple with the truly human, and therefore ambiguous and non-rational tendencies of the inhabited state. It is through such an ethnographically informed approach to the state that we seek to move beyond the vexed and entrenched 'policy-practice' problematic highlighted by cultural anthropologist Colin Hoag (2011: 81). According to Hoag (2011: 85), addressing this problematic requires scholars to 'not only write about the gap [between policy and practice], but to find ways to write from it, looking for those aspects of bureaucratic ecology that complete the legal realism of bureaucratic discretion.'

This paper is structured as follows. We begin by outlining the dominant techno-managerialist account of governance against which we push back, before canvassing the affective theory and language upon which our research draws. We then examine the relationship between the state, affect and Indigenous peoples' fire knowledge. In the following section we examine the conjunctural impacts of the 2009 Black Saturday wildfire disaster on the Victorian environmental hazard sector and the people who constitute it. We also highlight the convergence of two settler narratives concerning Indigenous peoples and their fire knowledge in Australia. First, that Indigenous peoples' fire knowledge originating from more northern and remote parts of Australia is somehow more 'legitimate' or 'vital' than Indigenous peoples' knowledge emanating from more southern and settled parts of Australia. And second, that this is the first time Indigenous peoples' fire knowledge has been 'discovered' by bureaucrats in the south-east of Australia. We then explore the complex affective and emotional toll rendered by the Black Saturday disaster, with its multiscalar and enduring impacts. In the discussion, we reflect on the significance of our findings in the context of dominant functionalist accounts of natural hazard sector governance, arguing that our study contributes to the nascent body of literature revealing the human and situated aspects of the state.

4. Techno-managerialist accounts of governance and calculative rationality

This study sits at the intersection of two expansive fields of academic inquiry and within the complex sets of important policy challenges that accompany them. First, the field of environmental management and, more specifically, that of natural hazard governance. Second, the field of Indigenous-state relations in the context of Indigenous development. Both domains notably share conventional policy strategies that seek to represent and address their respective challenges in terms of technical problems to be (re)solved. In the case of the former, recent environmental policy has sought to represent such natural phenomena as forests (see Buizer and Lawrence, 2014), river systems (see Verran, 2012) and flood plains (see Handmer, 2008), via a rationality of calculation, whereby complex socioecological domains are rendered legible via a process of abstraction: namely, quantification and valuation. This same policy rationality has been applied to what Gill et al. (2013) call the 'worldwide wildfire problem', where the three predominant policy responses have been to 'solve it, live with it, or minimize its effects (2013:

444)'. In the emotionally charged wake of wildfire disasters such as the 2009 Black Saturday fires and the 2019–2020 Black Summer fire season in Australia, debate about how best to prepare for the inescapability of the next fiery disaster crescendo. At the centre of this debate lies the vexed question of the effectiveness of 'controlled burns' (also called 'prescribed', 'hazard fuel reduction', and 'Aboriginal cultural burns'), in reducing the 'risk' and 'impacts' of future wildfire events. Despite, but also because the ecological and scientific literature on planned burning continues to reflect a significant degree of uncertainty when it comes to valuing and measuring its effectiveness, not only for mitigating future risks, but also its impacts (positive and/or negative) on biodiversity, there exists several divergent positions supported by a 'scientific evidence base' (for example see Pyne, 2006; Bowman, et al. 2013; Buizer and Kurz, 2016). Altangerel and Kull (2013: 105) suggest that this uncertainty may be innate to fire; while Neale (2022) shows how Indigenous peoples' fire knowledge has been variously ignored, (re)discovered and incorporated in such debates, as we discuss later.

In the adjacent Indigenous development policy sphere, the same techno-rationality prevails. In the international development context, which encompasses a range of socio-politically marginalised groups including Indigenous peoples, anthropologist David Mosse (2004: 641–642) argues that this 'new managerialism' is underpinned by two trends. First, a narrowing of the quantifiable objectives of development and, second, an expansion of the technological repertoire to achieve these. This new managerialism, Mosse opines, provides a view that is 'resolutely simplistic about (or ignorant of) the social and political life of [policy enactor's] ideas (2004: 667)'. In the contemporary Australian Indigenous development context, the dominant Indigenous policy approach can be characterised as one of remedialism (see Kowal, 2015; Lea, 2020), whereby the same calculative logic informs policies seeking to 'restore'—as if there once was—statistical equality between Indigenous and non-Indigenous peoples. There is no better example of this than the broad suite of national policies collectively known as the *Closing the Gap Framework*, which includes policies directed at 'improving' Indigenous peoples' 'outcomes' in a range of areas such as schooling, health, economic participation, governance, and leadership with the aim (or naïve hope) that they will eventually achieve parity with non-Indigenous settlers and settler-descendants (see *Closing the Gap Report*, 2009). Just as the uncertainty inherent to natural hazards perverts simple technological policy resolutions, anthropologists Emma Kowal and Lea highlight several factors likely to continue to inhibit straightforward policy responses to Indigenous-settler state entanglements. For example, in the context of the *Closing the Gap* policy agenda, Kowal (2015), illustrates how the unexamined incongruity between Indigenous difference and non-Indigenous policy expectations traps both non-Indigenous 'helpers' and their Indigenous 'subjects' in gaps of incommensurability. Lea (2020: 24) on the other hand draws attention to the self-perpetuating nature of policy problematisation which holds out the promise of—but never provides—an ideal abstract future. This, Lea says, has the effect of reinforcing the magic-myth of policy rationality.

While techno-managerialist accounts of governance have been extensively critiqued, the accompanying qualitative scholarship engaging the bureau-practitioners charged with the difficult task of brokering natural hazard policy is only budding. Within this emerging body of empirically grounded literature there are two trends. The dominant trend suggests institutional conservatism, whereby hierarchical orders of control prevail and old ideas and ways of doing things are stubbornly preferred over change and innovation (Morss et al., 2005; Rayner et al., 2005). The second, just emerging trend, seeks to explore the diverse and incongruent ways natural hazard sector bureau-professionals interpret and respond to the different forms of uncertainty, change, and information they are presented with (Cook, 2015; Neale, 2017). These trends and our study's relationship to them is examined in greater depth in the discussion later. Outside of emergency management, empirical attention has also been given to human service

(Lipsky, 1980), defense (Cohn, 1987), international development (Mosse, 2004; High, 2014), and Indigenous health (Lea, 2008; Kowal, 2015) bureaucracies.

5. Bureaucratic affect and Indigenous peoples' fire knowledge

Recently, affect theory has roused significant interest within the social sciences (see Gregg and Seigworth, 2010; Blackman and Venn, 2010; Skoggard and Waterston, 2015), yet it is also ethnographically underexplored (Laszczkowski and Reeves, 2017). Arguably, this affective scholarship fits underneath a broader theoretical umbrella which social geographers Nigel Thrift (2007) and others following him (see Lorimer, 2008; Anderson and Harrison, 2010) term 'the non-representational' and Martin Müller (2015) calls the 'more-than-representational'. The representational analytic framework that the 'non' and 'more-than-representational' seek to challenge and expand upon entails the practice of understanding and describing the world in essentially cognitive and semiotic terms. According to Müller (2015: 410), the more-than-representational 'does not abandon the representational entirely but maintains that the more-than-representational—practices, affects, things—is intertwined with the production of meaning.' It is in this sense that we explore the affective and less readily definable aspects of the inhabited worlds of our informants. In the context of the state, humanistic research attention to the affective aspects of governance has enabled further exploration of the 'non-rational' tendencies and potentialities of institutions (Bennet, 2004; Stoler, 2004; Navaro-Yashin, 2012). As Navaro-Yashin (2012: 33) notes, this move has required governance be conceived in terms that move beyond simplistic understandings of Foucault's notion of governmentality which assume the centrality of 'political reason'. Consequently, affective accounts of governance have tended to emphasize the means through which state administrations have sought to control and edify various publics through the medium of affect (Borch, 2012; Anderson, 2016; Barrios, 2017). An important example among this work is anthropologist-historian Ann Stoler's (2004) essay *Affective States*. By way of a detailed examination of pertinent historical records, Stoler shows that the Dutch colonial authorities governed via means that went beyond strategic curtailment or encouragement of certain kinds of rationality to also include the deliberate management and fashioning of affective states.

Our theoretical framing draws on the work of two important scholars of the affective state. The first is Lea, whose research provokes us to question the 'anonymous authority' of governance and to return the varied, encultured, and affective personhoods of bureaucrats (see 2012; 2020; 2021). Lea's (2012) examination of the highly contentious and widely reported on 2007 Australian Federal Government's 'Northern Territory Emergency Intervention'⁵ into remote Aboriginal communities is a good example of this work. In it, Lea reveals an emotionally charged anarchic quality to state bureaucracy that is otherwise projected onto Indigenous peoples, including to justify 'remedial' policy interventions. Nevertheless, we understand the overall thrust of Lea's provocation to be critically agnostic in that it asks us to move beyond simplistic one-sided accounts of bureaucracy to be both harsher and more empathetic towards state-functionaries (2021: 4.11). Human geographer Ben Anderson is the other scholar of affective governance whom we turn to for analytic grounding. In contrast to Lea, the work of Anderson's that we draw on is more theoretically driven. In his seminal (2014) book *Encountering Affect*, Anderson explores how to develop a language for talking about such non-readily conceptualizable phenomena as emotion and feeling in relation to political life; an affective vocabulary capable of assisting us to 'relate to the future without capturing it and neutralising

⁵ See Altman and Hinkson (2007) edited volume *Culture Crisis: Anthropology and Politics in Aboriginal Australia* for an overview of the types of discussion and debate this government policy sparked.

it before it happens' (2014: 15). Underpinning this vocabulary are three conceptual terms for talking about affect: affect as the *object-target* of different manifestations of power which are termed apparatuses after Foucault (2008); affect as *bodily capacity* evolving from encounters; and affect as a *collective condition*. We adapt the last two of these concepts to characterize both the enduring *collective affective atmosphere* of Black Saturday which continues to animate the environments our research participants operate in, as well as several of these state players' *personal affective encounters* with the Black Saturday disaster.

Much has been made of the relationship between fire and affect, with it regularly described as part of an evolutionary or primordial development, and a universalizing human fascination. The longevity of this relationship has taken up the bulk of research in this area, with much of the existing scholarship detailing the history, ideas, and practices which collectively make up what is broadly conceived of as Indigenous peoples' fire knowledge (for example see Bowman, 2001). As we both identify as settler-descendant scholars, our intention is not to further define that history or field of knowledge. Instead, we concur with Babidge et al. (2007: 148-49), who in a related study contend that the more pressing issue is to be conscious of the nature of the political relationships 'that the practice of such a category implies.' Moreover, Indigenous peoples involved in the process of 'reviving' and 're-invigorating' their fire knowledge have asserted the need to drive and determine this process on their terms (see Neale et al., 2019).

In this vein, we note that Victorian Aboriginal peoples have conveyed several basic tenets regarding their understanding of and relationships to fire and burning—also referred to as 'cultural' (Wales, 2019) and 'traditional' (Neale et al., 2019) burning. First, cultural fire is significant to Victorian Aboriginal peoples for an array of interconnected reasons, including: to care for country in a wholistic manner; to connect them with their history and ancestors; for shared learning and cultural maintenance; for healing Country and people; and for practical ends such as employment and contributing to mainstream land and fire management goals (The Victorian Traditional Owner Cultural Fire Knowledge Group, 2019). Aboriginal burns are those involving the deliberate introduction of fire into the landscape by Aboriginal peoples for cultural and ecological management purposes, as they themselves determine (ibid.). According to Neale and his Dja Dja Wurrung Aboriginal research collaborators (2019: 3-4), this typically entails input from Aboriginal Elders about where and when to treat the landscape with fire. This mode of burning is also frequently referred to by Indigenous peoples as 'firestick burning', after the precolonial practice of introducing fire into the landscape via a stick that is alight with flames (Jones, 1969). Today, ignition often occurs via a small incendiary device mimicking a stick (Costello, undated). Non-Indigenous interest in these practices has expanded dramatically over the last two decades, the confluence of liberal forms of Indigenous recognition and the desire for 'innovation' in response to the challenges of climate change. These patterns became more intense following the Black Saturday disaster in 2009.

6. The inhabited state

6.1. Black Saturday: Settler narratives and recentering Indigenous peoples

Following one of the most prolonged and sweltering heatwaves to hit Victoria, where the temperature in Melbourne exceeded 40 degrees Celsius for three consecutive days, Saturday 7 February 2009 presented an extreme wildfire threat. Hot morning temperatures and strong winds escalated Victoria's fire danger as fears of bushfire increased. Unfortunately, these fears were not only met but exceeded and what transpired that afternoon and in the days that followed is now recognised as one of Australia's worst 'natural' disasters (DELWP, 2017: 1). So severe were the impacts to people and communities that, just two days later and well before all blazes were extinguished, an independent government inquiry termed a Royal Commission was established to investigate this

unprecedented event (McLennan and Handmer, 2012: 4). More than 19,000 volunteer CFA staff were involved in battling the fire, along with the support of personnel from various other government agencies (Australia Institute for Disaster Resilience, 2019). While only one firefighter was killed because of the Black Saturday fires (Murdoch, 2009), 19 crews were caught in dangerous 'burn-overs': an incident whereby flames ensnare a fire truck forcing the firefighters inside to seek protection in the tanker—a thin aluminium emergency shelter—positioned in the back of the fire truck (Cowan, 2009).

In total, Victorian emergency fire staff responded to over 300 hundred fires across the state, of which the aforementioned Victorian Bushfire Royal Commission (VBRC) (2010a: 1) examined fifteen that 'caused (or had the potential to cause) the greatest damage.' In total, 173 people lost their lives, the most of any fire event in Australia's history. These bushfires also burnt 430,000 ha of land and destroyed approximately 2,133 homes (VBRC, 2010b: 213). To give an idea of the intensity of these blazes, fire behaviour expert Kevin Tolhurst estimated that '[t]he energy of the fires was equivalent to more than 1500 atomic bombs the size of the one used at Hiroshima' in his report to the VBRC (2009: 14). According to fire bureaucrats, it was in the wake of this historically catastrophic event, and the subsequent broadscale institutional reassessment, that government interest in Indigenous peoples' fire knowledge emerged. In this sense, Black Saturday was experienced by the fire practitioners we spoke to as a 'conjunctural moment' (Oliver-Smith and Hoffman, 2002: 6) enabling novel discussions within government about Indigenous peoples' fire knowledge to commence in Victoria.

In sharing their personal accounts, bureaucrats couched their own experiences of Indigenous peoples' fire knowledge within a broader state transformation in approach to fire management by the Victorian Government. In four separate interviews, informants specifically referred to Black Saturday as the watershed event that catalysed the integration of interest in Indigenous peoples' fire knowledge in Victoria. For example, Eliza, a community engagement and policy specialist working for the peak state fire management agency FFMV noted: 'Indigenous fire hadn't been on the radar in Victoria before Black Saturday, and it's been something that I now wonder about, but it had never been pursued.' Another FFMV employee and senior fire manager Jeremy stated that before Black Saturday:

Indigenous fire wasn't even on the radar in Victoria, that's for sure. That was something that was ahhh "that's a Queensland or Northern Territory thing." So there was no understanding of Indigenous fire on the landscape here.'

Likewise for Brian, a senior landscapes management officer from the CFA, the lead agency responsible for preparing for and responding to residential fires across suburban and rural Victoria:

It wasn't on the table before Black Saturday. And for me, if I've been aware of Indigenous burning, it'd be only up North, knowing that's how they dealt with conservation and fuel management up there. It just wasn't on the agenda here in Victoria, not that I'm aware of.

According to Nick, an emergency service coordinator at a local council whose region was severely impacted by the south-western front of the 2009 Black Saturday wildfires:

From a fire sense it was never discussed or considered, not down here at least. So prior to Black Saturday I had no real knowledge or exposure to anything that related to Indigenous fire or anything associated with that.

As well as commenting on the significance of Black Saturday, the accounts here also illustrate the convergence of two settler/settler-descendant narratives about Indigenous peoples and their fire knowledge. The first of these is exemplified by Jeremy's reference to 'up North'. This references a pervasive view among fire practitioners in Victoria; that Indigenous peoples' fire knowledge and management practices exist in a more intact manner in parts of the country where

colonisation occurred later in time (for example in the Northern state of Queensland and the Northern Territory), compared with the more settled parts of southern Australia, including the states of New South Wales and Victoria.

The second relates to the personal accounts of discovery about Indigenous peoples' cultural burning, seeming to suggest that this is the first occasion when the state has shown interest in these forms of knowledge. In his extensive research on the Victoria fire management sector, anthropologist Timothy Neale has explored the origins and history of the integration of Indigenous peoples' knowledge. As Neale (2022: 8; see also Pyne, 1991) reveals, there have been several preceding moments whereby Aboriginal peoples' fire knowledge has been 'discovered' in the southeast Australian context, dating back as far as the 1960 s. Drawing on the work of cultural studies scholar and historian Chris Healy (2008), Neale links this interest in cultural burning in Victoria to a broader trend within white settler history of periodically remembering and forgetting Aboriginal peoples. Neale's (2022) analysis acts as a caution, as such patterns of remembering and forgetting tend to be self-perpetuating and inhibitive to substantial and lasting change that would meaningfully recognise Indigenous peoples and their knowledge. However, while the earlier examples of bureaucratic engagement with Aboriginal peoples' fire knowledge which Neale (2022) highlights entail isolated moments of policy speculation, the current manifestation of government interest in Aboriginal peoples' burning is motivated, conditioned, and reinforced by several other unique factors, as will be further discussed.

6.2. Personal and collective layering of affect

As illustrated, the 2009 Black Saturday fires had a profound and revelatory impact on the bureaucrats engaged for this project, and on the work environments and cultures of the fire sector in Australia. Less plain to characterise, was these bureaucrats' intensity of feeling when discussing their experiences of the devastating Black Saturday fire event. As Teresa Brennan (2004: 1) once asked, 'Is there anyone who has not, at least once, walked into a room and "felt the atmosphere?"'. As Nick described:

The emotional thing is the biggest thing that we're still dealing with, and you know we've got the ten-year anniversary coming up and that'll bring back a whole lot more emotion and the cost to people through that stress and emotion is immeasurable, but it is everywhere.

This non-readily definable atmosphere was palpable in rural fire station mess halls, government department backrooms, and city offices where research participants worked and where interviews were conducted. For Anderson (2014: 20), such (extra)ordinary encounters, which influence and inform the body's 'force of existing', are to be understood as bodily responses to events. This affective intensity was rendered apparent in tense bodies and subtly quavering voices. Jeremy, for example, was momentarily lost for words when asked to reflect on his experience of the event, then offered a description which suggested the predominant feeling conditioning his experience of the event was one of being overwhelmed: 'It was just crazy... and the weather was crazy, and the conditions were crazy.' His role varied as the fiery destruction unfolded, from working in the control center on the first day to getting out on the ground the subsequent days:

We were up at Marysville just assessing the damage and the fire was still burning. I remember getting out and having to put fire out with my feet and there were powerlines and trees still burning and falling everywhere. We'd go up a road and come back and trees had locked us in. It was crazy.

Despite all the work he and his colleagues undertook in preparation for what they expected would be an extreme fire risk day, Jeremy reflected that 'in hindsight we weren't prepared for the day that

eventuated, that's for sure.' This realization that Black Saturday, despite all their preparation, still wrought unprecedented amounts of damage, weighs on Jeremy and makes him question 'whether the agencies have still got [their wildfire preparedness strategies] wrong.' This perspective, animated by the affective toll of the event itself has motivated him to explore Indigenous peoples cultural burning practices.

In the case of Eliza, whose experience of the Black Saturday disaster was starkly different to Jeremy's and several other informants who performed frontline response and technical advisory roles, there was a converse feeling. The principal affective quality characterising her encounter with the wildfire event was 'guilt':

So I had left the country [Australia] to go hiking, and to a certain extent one of my feelings is, I feel guilty, because well I hadn't realised at the time that you don't take holidays in summer when you work for the bushfire management... So I felt like pretty bad actually, 'cos a lot of my colleges were literally fighting that incredible fire.

When Black Saturday took place, Eliza had only been in her role for eighteen months at FFMV, and when she read news headlines reporting the catastrophe it was surreal, just as was witnessing enormous plumes of smoke make their way over to her foreign destination, carried on strong south-east summer trade winds. The ensuing pressure FFMV felt as a consequence of the effects of the wildfire fed into Eliza's feeling of guilt. However, Eliza explained that because her team's focus was on community education rather than frontline response, they were spared the tougher questioning and blame linked to the unprecedented numbers of human life lost which other departments and organisations reportedly felt. Regarding this broader experience of blame and guilt felt by other fire sector staff, Eliza observed that it took its toll on some departments and organisations more than others. Referring to the organisation which felt this impact strongest, Eliza said 'I think a lot of the people felt blamed for you know all those deaths in the community, the deaths of those people who tried to stay and defend their homes.' Eliza explained that this situation resulted in both a high level of staff turnover as well as a defensive approach to post-event community engagement whereby staff within this organisation relied on scripts provided by the department to communicate to affected communities and the media.

In addition to these personal affective responses to the 2009 Black Saturday wildfires, informants also brought to light a collective level of affect, where impact is enduring and omnipresent. For Nick, quoted at the start of this section, this affect exists everywhere within the fire sector he works, as well as in the communities he is responsible for serving and protecting; and where he lives. Turning again to Anderson, these broader manifestations of affect can be interpreted as shared conditions or feelings that inform how life is inhabited and understood (2014: 20–21). Anderson says that both these types of affects, the personal and collective, together with what he calls object-target affects, are linked by a common concern with future possibilities. What this suggests is the potential of affect to transcend simple models of linear dispersal as for Anderson (2014: 18), '[f]utures become present as affective geographies are made and remade.' As veteran EMV manager Peter explained, to be 'carried by people all their lives... which can be triggered at any moment, by a conversation you're having that's even oblique to the fire, but it triggers something.' This is the affective geography that informs and conditions the inhabited worlds of the state functionaries responsible for the enactment of future wildfire policies, including those which involve Indigenous peoples and their fire knowledge. Although drawing significantly on the vernacular of affect which Anderson (2014) so effectively develops, our study of governance broadens the scope of affective inquiry into the state. While Anderson sees institutional apparatuses as mobilising affect towards certain object-targets, our results show that bureaucracies are also affectively inhabited spaces themselves.

6.3. Desire, irreverence, and paperwork

One fire practitioner who displayed a particularly strong desire to support Indigenous peoples' involvement in contemporary fire management in Victoria was Adam. A senior manager with over 30 years' experience in the sector, Adam conveyed this passion in terms of institutional irreverence. In addition to basic principles such as 'treating people well and loyalty', Adam explained that to achieve positive governmental transformation 'there's also got to be a little bit of irreverence there too':

You've got to be willing to shake the system just a bit to change things for the better. Because if you're not and you're completely conformist, you just don't change anything. So it's about doing it respectfully and knowing your boundaries, and pushing them a little bit.

When reflecting on the key factors informing the shift in government involvement with Aboriginal peoples concerning the management of wildfire risk and the landscape, Adam commented on the importance of 'a core group of passionate innovators'. Adam highlighted the value of this group's advocacy in successfully challenging wider sector reluctance to increasingly generate opportunities for local Aboriginal groups to continue to build capacity in this domain, including to run cultural burning workshops. Additionally, Adam reflected that these individuals had 'to go above and beyond their professional roles' and to 'shed a normal day job skin and be more humble' for their engagements with local Aboriginal people to be successful. When asked what this looks like on the ground, Adam explained that it had involved his team building genuine relationships with their Dja Dja Wurrung counterparts by inviting them into their personal lives beyond work. As examples, Adam cited one occasion where he had several of his Dja Dja Wurrung colleagues around to his house for lunch to meet his family, and informal car trips taken for the purpose of creating time and space for the exchange of personal stories and history.

Informing Adam's irreverent approach is a desire to be characterised as something other than a representative of the state:

Never ever have I considered myself a bureaucrat, in fact I hate it, being considered a bureaucrat. And I don't know why. It's a bias that's probably come from my family [laughs]. But when you're trying to do innovative things in government organisations, it's not that they don't want to do it, but by God the bureaucracy makes it hard.

In this reflection, Adam both acknowledges that he is recognised as a bureaucrat, but also identifies the bureaucracy as something outside of himself. In doing so, he reconciles institutional irreverence for what he perceives as the risk averse, red tape obsessed, overly mechanised aspects of the public service by seeing his role 'as a personality': a personality with different aspects and flexibility. According to Adam, on the one hand the bureaucratic personality requires 'certain public obligations and responsibilities be met, which you have to take seriously', while on the other hand, bureau-professionals sometimes need to 'act unconventionally and shake things up in order to get things done'.

Adam's desire to support Aboriginal peoples and their fire knowledge was shared by nearly all research participants, but with varying understandings of what this means and how to operationalise it. While Adam sees many of the conventional aspects of bureaucracy as inhibitive to change, and therefore seeks to shake things up, other participants relied more heavily on the more mundane and tedious *lingua franca* of bureaucracy, paperwork, to pursue change. cursorily put, paperwork is the written—and typed—language contained in all those files, books, reports, policy briefs and other documents used to record and justify governmental decisions, authority, and existence. According to cultural historian Ben Kafka (2007: 17), paperwork, or 'the bureaucratic medium' as he also aptly terms it, is what makes 'it possible for the state to tax and spend, protect and serve, discipline and punish, expand and

contract (2007: 17).’ It is within this bureaucratic idiom that Sam, Brian’s CFA project officer colleague, couches his passion for Indigenous peoples’ fire knowledge:

So yeah the Inclusion Plan came about because of three or four people having a passion to change CFA’s thinking. So getting the Inclusion Plan up was a milestone, a huge milestone.

Sam is referring to an archetypal 20-page policy position paperwork document—with its eye-catching cover and skilfully illustrated contents, jampacked with information encoded in different coloured tables and graphs—that outlines the Victoria Country Fire Authority’s strategy to better include Victorian Aboriginal peoples (known collectively as ‘Kooris’⁶). The *CFA Koori Inclusion Action Plan (KIAP, 2014–19)*,⁷ has four key themes: 1) systematic Koori inclusion, 2) data, service, and emergency management, 3) Koori volunteerism, employment, training, and economic participation and 4) communication, engagement, and partnerships. Sam acknowledges that this document represents only a ‘minor win’, explaining that around half of the twenty specific objectives listed in the plan remain to be met at the time of interview (March 2018). Nevertheless, it was his view that such incremental institutional and policy change would not be possible without this foundational document, which he sees as the outcome of the ‘drive and enthusiasm of a select few.’ Therefore, for Sam, in contrast to Adam, bureaucratic passion is ineffective unless it is communicated and instituted via the medium of paperwork.

Another significant piece of written documentation that functioned as an important thread linking our informants’ personal narratives of interaction with Indigenous peoples’ fire knowledge in the wake of Black Saturday was historian Bill Gammage’s (2011) *The Greatest Estate on Earth: How Aborigines Made Australia*. Gammage is a settler historian whose work examines among other things, Australian Aboriginal and New Zealand and Maori history. For many research participants, Bill Gammage’s book began their forays into understanding Indigenous peoples’ burning. For Sam, ‘it was Gammage’s description of the Australian landscape as a park-like estate managed by Indigenous people that stuck with me, and I thought, whoa there’s something in that.’ In the case of Sarah, Nick’s local council project officer colleague, Gammage’s text provoked her to reflect:

Geez I didn’t know that, I think I need to find out more. When he started talking about Aboriginal fire in the landscape and how fire was managed before colonisation and that it was common, it really dawned on me, perhaps this could be relevant down here.

This popular engagement with Gammage’s book is not surprising given the widespread soaking it received in the Australian liberal mainstream, having won many high-profile literary awards, and been reviewed in numerous leading mainstream media outlets. Nevertheless, despite its seemingly progressive contribution to the growing body of literature seeking to refute lingering colonial discourses of Aboriginal ‘depravity’ and ‘savagery’ with accounts of deep Aboriginal understanding and active cultivation of the ‘environment’ (for example, Rose, 2004; Birch, 2016), Gammage’s text has generated certain problematic repercussions for contemporary Indigenous peoples. In addition to homogenising an historical record into a single ‘estate’ that otherwise reflects significant Aboriginal sociocultural and ‘spiritual’ complexity (Keen, 2014: 86–7), Gammage also reifies an unhelpful dichotomy between pre- and post-1788 Aboriginal peoples. This is problematic because, as Neale (2022) highlights, if comprehensive knowledge of the

Australian landscape and bushfire management is said to exist pre-1788, then the grounds left for engaging contemporary Aboriginal peoples, especially those who have been most thoroughly impacted by the consequences of colonisation, are diminished.

What was surprising about our informant’s engagement with Gammage’s text was the ardent way in which it was championed. The best illustration of this concerns a senior EMV officer, Gary (not interviewed for this study), referred to on multiple occasions by different informants. Gary was described as a key advocate of the Indigenous peoples’ cultural burning movement, as well as a much-respected fire practitioner. According to Peter, Gary was renowned for ‘carrying Gammage’s book around with him and waving it about like a bible.’ He was also known for engaging people into long hallway conversations about the finer details of Gammage’s argument. This image of an impassioned public servant keenly championing the value of Indigenous peoples’ fire knowledge à la Gammage stands in stark contrast to the dispassionate, neutral, and disenchanting portraits of state administrators we encounter in academic (see Scott, 1998) and mainstream (Rockman, 2021) materials. Nevertheless, this portrait fits within a broader trend of qualitative work seeking to illuminate the diverse nature of the inhabited state, which we examine in our discussion below.

In addition to the conjunctural impact of Black Saturday, our interviews and fieldwork also confirm the importance of several other factors informing this governmental shift, which Thomassin et al.’s (2018) review of similar local case studies highlights. For example, multiple informants commented on the importance of recent land rights determinations under relevant national and state-based legislations, the *Native Title Act 1993* (Cth) and the *Traditional Owners Settlement Act 2010* (Vic), which led them into discussions with Traditional Owners regarding their fire knowledge. In this regard, the state of Victoria differs somewhat to other state and territory jurisdictions in Australia, known for a more progressive liberal government with an agenda for engaging productively with Aboriginal peoples. The irony of this agenda is that it remains unrealised in many ways, including, notably, that there have in fact been fewer positive land rights determinations for Indigenous peoples relative to most other Australian states and territories. While much of this can be attributed to the uneven realisation of legislation-driven recognition of Indigenous peoples across Australia; in Victoria the development of social and environmental policy has offered possibilities for Aboriginal management and cultural knowledge to be recognised and incorporated in particular ways. What this means is that currently, the Victorian Government are engaging with Aboriginal peoples across a range of relevant sectors such as water management, child welfare, and wildfire management and recovery. These projects have often linked to strong Aboriginal-led initiatives such as the ‘Return of the Firestick’ project (Firesticks Initiative, 2018) and the ‘Victorian Traditional Owner Cultural Fire Strategy’ (2019) which entail coordinated Aboriginal efforts to reinvigorate their fire knowledge through engagement with government and other partners such as universities.

7. Discussion: A more-than-rational state personality

Policy gets made in response to problems. But what is perceived as puzzling or problematic is not predetermined or fixed for all time... In part, this is a matter of a gestalt shift as to “whose problem it is.” And in part it is a matter of transforming sheer “puzzles” into “actionable problems:” if no solution can be envisaged, then for all practical purposes there simply is no problem (Goodin et al., 2009: 26).

Within human geography and other allied scholarship, the foremost representation of natural hazard governance has been one of technical control (McLennan and Handmer, 2012). Like Goodin et al.’s (2009: 26–18) depoliticized conceptualization of public policy as ‘puzzles, problems, and persuasion’, such accounts have the effect of magically disappearing the sociocultural and affective elements of governance.

⁶ Koori is a regional Aboriginal identity marker used by Victorian Aboriginal people to refer to themselves. This is a group defined by more than linguistic markers and includes shared cultural history, family ties and spatiality.

⁷ While this policy is no longer in date, the CFA website (last accessed 26 February 2022) says that ‘CFA’s Koori Inclusion Action Plan (KIAP) is in the process of being revised and refreshed.’

Despite its enduring prevalence, the techno-managerialist view of natural hazard governance has become the subject of increasing theoretical criticism, with scholars such as [Buizer and Kurz \(2016\)](#), [Otero and Nielson \(2017\)](#) and [Neale \(2022\)](#) highlighting the problematic ecomodernist aspects of this framing. Less well developed is the companion qualitative literature exploring the lived experiences of those practitioners responsible for enacting the state and negotiating natural hazard management policy. So far, the few qualitative studies that have been produced suggest the cultural domains of natural hazard sector bureaucracies are characterized by an overarching culture of conservatism, wherein rigid chains of control are dominant and novel thinking and practice are eschewed ([Morss et al., 2005](#); [Rayner et al., 2005](#)). A nascent trend within this scholarship reveals a more diverse set of values and priorities animating environmental hazard sector governance. For example, [Neale \(2017\)](#) shows how, in contrast to scientific narratives of technical control, experienced bushfire practitioners in northern Australia offer a locally situated and pragmatic approach to confronting increasingly flammable futures in their region. In another case, human geographer [Brian Cook \(2015\)](#) shows how flood disaster managers in Bangladesh enroll local Indigenous peoples' ecological knowledge and culture to support their own views and positions of power. This emergent trend compliments other recent qualitative portraits of bureaucracy outside of natural hazard governance which highlight the libidinous ([Cohn, 1987](#)), self-serving ([Brenneis, 1994](#)), bleeding heart ([Lea, 2008](#)), and desiring ([High, 2014](#)) qualities which animate the contemporary experience of enacting the state.

Our study contributes to these still emerging branches of scholarship by illuminating a richly embodied, felt, collectively conditioned and not quite coherent side to natural hazard sector bureaucracies. It shows that the story behind the Victorian Government's engagement with Aboriginal peoples and their fire knowledge is more complex than a simple linear process of rational, cognitive decision making. It also shows, that in addition to important structural advances such as the implementation of state-mandated land rights regimes, and the ongoing advocacy and mobilization of local Aboriginal peoples, the experiences and commitments of settler bureau-practitioners have been important too. Through their varying personal narratives, and their diverse styles of enacting the state (desiring, passionate, irreverent, and prescriptive) they have also contributed to this transformation. In this sense, we concur with [Lipsky](#) in suggesting that 'the decisions of street-level bureaucrats, the routines they establish, and the devices they invent to cope with uncertainties and work pressures, effectively *become* the public policies they carry out (1980: xii, emphasis original).' However, our study further highlights the importance of emotional resilience and ongoing relationship building in policy formation. As [Adam](#) put it, being a bureau-professional is more than just 'feeding the beast', which entails obligations such as 'reporting back up what you're doing to a point'. It also involves other more diversely human aspects, which for [Adam](#) include institutional irreverence and a strong desire to harness the power of relationships:

I keep coming back to that point, because that's where the power lies. We're all human beings. We're actually all fundamentally decent when it's all said and done. And that's where I see the benefit in all this. First, from a social perspective and then from an environmental slash risk reduction perspective.

Consequently, our study reveals another side to what [Adam](#) aptly calls the 'bureaucratic personality'. It goes beyond conventional accounts of governance to remind us that the cultural and affective worlds of natural hazard bureaucracies, although shaped by heightened levels of risk aversion because of what is at stake, are just like the myriad other peopled places social scientists explore. That is, they entail the complex intersection and interaction of both rational and more-than-rational forces, which as [Anderson](#) notes 'offer a way of attending to moments of change in which social life is reordered and other possibilities may be glimpsed' (2014: 15).

8. Conclusion: Beyond the evaluative impulse

Although fire is not animate in an indubitably human sense, life, as [Pyne \(2012: 199\)](#) remarks, shares many of its characteristics. Life provides the oxygen fire inhales; the fuels it feeds on; and most frequently the ignition that sparks it into existence. The confluence of these three phenomena—oxygen, fuel and ignition—entail a bio-chemical process that essentially reverses what photosynthesis engenders: respiration and growth ([Pyne, 2012: 198](#)). Because fire is dependent on these things and is not pre or permanently existing of itself, [Pyne \(2012: 199\)](#) sees its character as inextricably linked to and dependent upon context. Weather and geography are evidently key amongst the variables shaping this polymorphous phenomenon, as are cultural interpretations and understandings of fire, as recent research shows (see [Buizer and Kurz, 2016](#); [Neale, 2017](#); [Otero and Nielson, 2017](#)).

This study focuses on state actors primarily responsible for confronting the escalating challenge of managing wildfire in one of the most fire prone contexts in the world. This is a fiery problem for which current research ([Gill, Stephens and Cary, 2013](#)) suggests there is no simple technological fix.⁸ Meanwhile, the same tired policy strategies such as post-event inquiries continue to be recycled *ad nauseum*, unsurprisingly with the same results ([Eburn and Dovers, 2015](#)). In line with a broader trend occurring within similar natural hazard sector domains in other settler countries, these same bureaucrats have more recently become involved in another challenging policy question: Indigenous-state relations concerning the management of the environment (or Country) and future risk. This too is an issue for which there is no easy 'solution', for as [Lea \(2021: 157\)](#) writes 'policy under continuing settler occupation [and extractive capitalism] is fundamentally about amelioration, not "cure"'. While we recognise the constrained and obstinate nature of this complex and multivariate policy milieu and the various human expectations placed on bureau-practitioners, we believe that it is possible to broker 'better' wildfire or Indigenous cultural burning policy. Nevertheless, we contend that for 'better' policy to be created a more detailed and situated understanding of the inhabited world of state actors and policy brokers is needed.

In contrast to dominant techno-managerialist accounts of governance, which seek simple answers to complex problems, our approach has been to explore in more detail the relations and perceptions which underpin policy development. This has come about through engagement with experienced fire bureau-practitioners who are expected to 'control' and 'manage' the increasing risk of devastating wildfires. The cohort who remains working in this sector over long periods, our research participants, are those who have beaten the odds of high staff turnover to endure in a profession for which public critique and blame far outweigh praise and accolade—provide several important insights into what it means to inhabit the state. What this amounts to in Australia, at least, has been to incite thought about what it takes to coexist with fire, a management reality driven by necessity rather than choice, but also what it takes to exist more equitably with Indigenous peoples who have been dispossessed through settler-colonial processes. In tandem, understanding the conditions under which policy brokers operate gives a sense of the barriers and opportunities for this equity to occur. First, it suggests that these socioecological domains are emotionally laden and require a high degree of resilience to endure in. Second, that the process of brokering policy sometimes requires individuals to go above and beyond what is expected, as well as some institutional irreverence. Third, bureaucracies are not simply 'iron cages' of rationality but also entail passion and desire.

For geographic and allied research to contribute such situated

⁸ Recent scholarship suggests a more productive policy goals would be to build greater resilience and capacity to coexist with fire ([Moritz et al., 2014](#), [Otero & Nielson, 2017](#)) and to democratise wildfire strategies ([Otero et al., 2018](#)).

understandings of governance, we argue that the impulse to provide evaluative accounts—affirmative or critical—must be suspended and de-naturalized. This is difficult because as [Lea \(2021: 4.8\)](#) observes, as researchers we share a bureaucratic longing to uncover a more coherent and functional core, through critical teleological explanation. [Colin Hoag \(2011\)](#) describes the gap that exists between this grasped for functional whole and the messier, incomplete on-the-ground reality as the ‘policy-practice problematic’. It is this provocation that our study responds to, and which we seek to encourage further inquiry along similar lines into settler governance, including with the increasing number of Indigenous fire professionals employed in these bureaucracies. As [Lea \(2021: 4.7\)](#) notes, ‘[t]he point is not to create cute new platforms for making the overfamiliar strange’, but rather to destabilise the overreliance of scholarship on functionalist explanations of governance which enable failed policy formulations, and bureaucratic formations, to continually justify—guess what—more of the same. This self-perpetuating narrative is one which ethnographically informed research is suitably placed to challenge.

CRediT authorship contribution statement

Lachlan Beggs: Conceptualization, Methodology, Investigation, Writing – original draft. **Cameo Dalley:** Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

Acknowledgments

Data collection for this article was undertaken while Beggs was a Bachelor of Arts Honours student at the University of Melbourne, supervised by Dalley. Ethical review for the research was provided by the University of Melbourne Human Research Ethics Committee, identification number 1851367.1. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The anonymity of research participants is protected by the use of pseudonyms and other obscuring details which does not otherwise impact on the integrity of their contributions. To these people we express our thanks for their generosity of time and energy.

References

- Altangerel, K., Kull, C., 2013. The prescribed burning debate in Australia: Conflicts and compatibilities. *J. Environ. Plan. Manag.* 56 (1), 103–120. <https://doi.org/10.1080/09640568.2011.652831>.
- Anderson, B., 2016. Neoliberal Affects. *Prog. Hum. Geogr.* 40 (6), 734–753. <https://doi.org/10.1177/0309132515613167>.
- Anderson, B., Harrison, P., 2010. The promise of non-representational theories. In: Anderson, B., Harrison, P. (Eds.), *Taking-Place: Non-Representational Theories and Geography*. Ashgate Publishing Company, Farnham, pp. 1–34.
- Anderson, B., 2014. *Encountering Affect: Capacities, Apparatuses, Conditions*. Surrey, Ashgate Publishing Limited.
- Australia Institute for Disaster Resilience 2019. Australian Disaster Resilience Knowledge Hub, viewed 10 January 2019, <<https://knowledge.aidr.org.au/resources/bushfire-black-saturday-victoria-2009/>>.
- Australian Government, 2009. *Closing the Gap on Indigenous Disadvantage: The Challenge for Australia*. Canberra.
- Babidge, S., Greer, S., Henry, R., Pam, C., 2007. Management speak: Indigenous knowledge and bureaucratic engagement. *Soc. Anal.* 3, 148–164. <https://doi.org/10.3167/sa.2007.510307>.
- Barrios, R., 2017. *Governing Affect: Neoliberalism and Disaster Recovery*. University of Nebraska Press, Lincoln.

- Bennet, J., 2004. *The Enchantment of Modern Life: Attachments, Crossing, and Ethics*. Princeton University Press, Oxford.
- Biddle, N., Edwards, B., Herz, D., Makkai, T., 2020. Exposure and the impact on attitudes of the 2019–20 Australian Bushfires. *Soc. Res. Methods* 32, 1–42. <https://doi.org/10.26193/S15919>.
- Birch, T., 2016. Climate change, recognition and social place-making. In: Vincent, E., Neale, T. (Eds.), *Unstable Relations: Indigenous Peoples and Environmentalism in Contemporary Australia*. UWA Publishing, Crawley, pp. 356–383.
- Blackman, L., Venn, C., 2010. *Affect. Body Soc.* 16 (1), 7–28. <https://doi.org/10.1177/1357034X09354769>.
- Borch, C., 2012. *The Politics of Crowds: An Alternative History of Sociology*. Cambridge University Press, Cambridge.
- Bowman, D., 2001. Future eating and country keeping: what role has environmental history in the management of biodiversity? *J. Biogr.* 28, 549–564. <https://doi.org/10.1046/j.1365-2699.2001.00586.x>.
- Bowman, D., O'Brien, J., Goldammer, J., 2013. Pyrogeography and the global quest for sustainable fire management. *Ann. Rev. Environ. Resour.* 38, 57–80. <https://doi.org/10.1146/annurev-environ-082212-134049>.
- Brennan, T., 2004. *The Transmission of Affect*. Cornell University Press, New York.
- Brenneis, D., 1994. Discourse and discipline at the National Research Council: A bureaucratic Bildungsroman. *Cult. Anthropol.* 9 (1), 23–36.
- Bruner, J., 1990. *Acts of Meaning*. Harvard University Press, Cambridge.
- Buizer, M., Kurz, T., 2016. Too hot to handle: Depoliticisation and the discourse of ecological modernisation in fire management debates. *Geoforum* 68, 48–56. <https://doi.org/10.1016/j.geoforum.2015.11.011>.
- Buizer, M., Lawrence, A., 2014. The politics of numbers in forest and climate change policies in Australia. *Environ. Sci. Policy* 35, 57–66. <https://doi.org/10.1016/j.envsci.2012.12.003>.
- Cal Fire 2020. Fire incidents, viewed 10 May 2020 <<https://www.fire.ca.gov/incidents/>>.
- Christianson, A., 2015. Social science research on Indigenous wildfire management in the 21st century and future research needs. *Int. J. Wildland Fire* 24, 190–200. <https://doi.org/10.1071/WF13048>.
- Cohn, C., 1987. Sex and death in the rational world of defense intellectuals. *Signs* 12, 687–718.
- Cook, B., 2015. Disaster management culture in Bangladesh: The enrolment of local knowledge by decision makers. In: Krüger, F., Bankoff, G., Cannon, T., Orłowski, B., Schipper, E. (Eds.), *Cultures and Disasters: Understanding Framing in Disaster Risk Reduction*. Routledge, London, pp. 193–207.
- Cortazzi, M., 2011. Narrative analysis in ethnography. In: Atkinson, P., Coffey, A., Delamont, S., Lofland, J., Lofland, L. (Eds.), *Handbook of Ethnography*. Sage Publications Ltd, Los Angeles, pp. 384–394.
- Costello, O. n.d. ‘Cultural burning - diversity of fire’, *Firesticks Alliance*, viewed 10 February 2022, <https://assets.nationbuilder.com/natureorg/legacy_url/3187/ocostello-write-up_final.pdf?1630462786>.
- Country Fire Authority Koori Inclusion Plan 2014–2019. Country Fire Authority, Victoria.
- Cowan, J., 2009. ‘Over 100 fire fighters “at risk” in Black Saturday burnovers’, *ABC News*, viewed 9 January 2021, <<https://www.abc.net.au/news/2009-11-26/over-100-fire-fighters-at-risk-in-black-saturday/1158396>>.
- Department of the Environment, Land, Water and Planning 2017. *Inquiry into Fire Season Preparedness: Final Report*, Parliament of Victoria.
- Eburn, M., Dovers, S., 2015. Learning lessons from disasters: Alternatives to royal commissions and other quasi-judicial inquiries. *Aust. J. Public Adm.* 74, 495–508. <https://doi.org/10.1111/1467-8500.12115>.
- Eriksen, C., 2014. *Gender and Wildfire: Landscapes of Uncertainty*. Routledge, New York.
- Fialkova, L., Yelenevskaya, M., 2007. *Ex-Soviets in Israel: From Personal Narratives to a Group Portrait*. Wayne State University Press, Detroit.
- Firesticks Initiative 2018. *Firesticks*, viewed 6 May 2021, <<http://www.firesticks.org.au>>.
- Foucault, M., 2008. *The Birth of Biopolitics: Lectures at the Collège de France, 1978–1979*, (translated by Burchell, G.). Palgrave, London.
- Freeman, D., Williamson, B., Weir, J., 2021. Cultural burning and public sector practice in the Australian Capital Territory. *Aust. Geogr.* 52 (2), 111–129. <https://doi.org/10.1080/00049182.2021.1917133>.
- Gallagher, S., 2017. The narrative sense of others. *HAU: J. Ethnographic Theory* 7 (2), 467–473. <https://doi.org/10.14318/hau7.2.039>.
- Gammage, B., 2011. *The Biggest Estate on Earth: How Aborigines Made Australia*. Allen & Unwin, Sydney.
- Gill, A., Stephens, S., 2009. Scientific and social challenges for the management of fire-prone wildland-urban interfaces. *Environ. Res. Lett.* 4 (3), 1–10. <https://doi.org/10.1088/1748-9326/4/3/034014>.
- Gill, A., Stephens, S., Cary, G., 2013. The worldwide “wildfire” problem. *Ecol. Appl.* 23 (2), 438–454. <https://doi.org/10.1890/10-2213.1>.
- Gillett, N., Weaver, A., Zwiwers, F., Flannigan, M., 2004. Detecting the effect of climate change on Canadian forest fires. *Geophys. Res. Lett.* 1, L18211. <https://doi.org/10.1029/2004GL020876>.
- Goodin, R., Rein, M., Moran, M., 2009 [2008]. The Public and its policies. In: Robert, E., Michael, M., Martin, R. (Eds.), *The Oxford Handbook of Public Policy*. Oxford University Press, New York, pp. 1–38. <https://doi.org/10.1093/oxfordhb/9780199548453.003.0001>.
- Gregg, M., Seigworth, G. (Eds.), 2010. *The Affect Theory Reader*. Duke University Press, Durham.
- Habermas, J., 1984. *The Theory of Communicative Action: Reason and the Rationalisation of Society*. Beacon Press, Boston.

- Handmer, J., 2008. Risk creation, bearing and sharing on Australian floodplains. *Int. J. Water Resour. Dev.* 24 (4), 527–540. <https://doi.org/10.1080/07900620801921439>.
- Healy, C., 2008. *Forgetting Aborigines*. University of New South Wales Press, Sydney.
- High, H., 2014. *Fields of Desire: Poverty and Policy in Laos*. NUS Press, Singapore.
- Hoag, C., 2011. Assembling partial perspectives: Thoughts on the anthropology of bureaucracy. *PoLAR* 34, 81–94. <https://doi.org/10.1111/j.1555-2934.2011.01140.x>.
- Huffman, M., 2013. The many elements of traditional fire knowledge: Synthesis, classification, and aids to cross-cultural problem solving in fire-dependent systems around the world. *Ecol. Soc.* 18 (4) <https://doi.org/10.5751/ES-05843-180403>.
- Jones, R., 1969. Firestick farming. *Australian Nat. History* 16, 224–228. <https://doi.org/10.1007/BF03400623>.
- Kafka, B., 2007. The demon of writing: Paperwork, public safety, and reign of terror. *Representations* 98 (1), 1–24. <https://doi.org/10.1525/rep.2007.98.1.1>.
- Keeley, J., Syphard, A., 2021. Large California wildfires: 2020 fires in historical context. *Fire Ecol.* 17 (22), 1–11. <https://doi.org/10.1186/s42408-021-00110-7>.
- Keen, I., 2014. Review of Bill Gammage's (2011) 'The Biggest Estate on Earth: How Aborigines Made Australia'. *Australian Economic History Review* 5, 86–89. <http://doi.org/10.1111/aehr.12038>.
- King, A.R., 1963. *The influence of colonization on the forests and the prevalence of bushfires in Australia*. Commonwealth Scientific and Industrial Research Organisation, Melbourne.
- Kowal, E., 2015. *Trapped in the Gap: Doing Good in Indigenous Australia*. Berghahn Books, New York.
- Laszczkowski, M., Reeves, M., 2017. Introduction: Affect and the anthropology of the state. In: Laszczkowski, M., Reeves, M. (Eds.), *Affective States: Entanglements, Suspensions, Suspicions*. Berghahn Books, Farnham, pp. 1–14.
- Lea, T., 2008. *Bureaucrats and Bleeding Hearts: Indigenous Health in Northern Australia*. UNSW Press, Sydney.
- Lea, T., 2012. When looking for anarchy, look to the state: Fantasies of regulation in forcing disorder within the Australian Indigenous estate. *Crit. Anthropol.* 32, 109–124. <https://doi.org/10.1177/0308275X12438251>.
- Lea, T., 2020. *Wild Policy: Indigeneity and the Unruly Logics of Intervention*. Stanford University Press, California.
- Lea, T., 2021. Desiring bureaucracy. *Ann. Rev. Anthropol.*, 50, 4.1–4.16. <http://doi.org/10.1146/annurev-anthro-101819-110147>.
- Lipsky, M., 1980. *Street-Level Bureaucracy: Dilemmas of the Individual in Public Service*. Russell Sage Found, New York.
- Lorimer, H., 2008. Cultural geography: Non-representational conditions and concerns. *Prog. Hum. Geogr.* 32 (4), 551–559. <https://doi.org/10.1177/0309132507086882>.
- Massumi, B., 2002. *Parables for the Virtual: Movement, Affect, Sensation*. Duke University Press, Durham.
- McArthur A.G., 1972. 'Fire control in arid and semi-arid lands of Australia'. In: N. Hall. (Eds.) *The use of trees and shrubs in the dry country of Australia*, Australian Government Publishing Service, Canberra, pp. 488–516.
- McKemei, M., Costello, O., Ridges, M., Ens, E., Hunter, J., Reid, N., 2020. A review of contemporary Indigenous cultural fire management literature in southeast Australia. *EcoEvoRxiv*. <https://doi.org/10.32942/osf.io/fvsvy>.
- McLennan, B., Handmer, J., 2012. Reframing responsibility-sharing for bushfire risk management in Australia after Black Saturday. *Environ. Hazards* 1, 1–15. <https://doi.org/10.1080/17477891.2011.608835>.
- Merlan, F., 2014. Recent rituals of Indigenous recognition in Australia: Welcome to Country. *Am. Anthropol.* 116 (2), 1–14. <https://doi.org/10.1111/aman.12089>.
- Moritz, M., Batllori, E., Bradstock, R., Gill, A., Handmer, J., Hessburg, P., Leonard, J., McCaffrey, S., Odion, D., Schoennagel, T., Syphard, A., 2014. Learning to coexist with wildfire. *Nature* 58 (515), 58–66. <https://doi.org/10.1038/nature13946>.
- Morss, E., Wilhelm, O., Downton, M., Grunfest, E., 2005. Flood risk, uncertainty, and scientific information for decision making: Lessons from an interdisciplinary project. *Am. Meteorol. Soc.* 86, 1593–1601. <https://doi.org/10.1175/BAMS-86-11-1593>.
- Mosse, D., 2004. Is good policy unimplementable? Reflections on the ethnography of aid policy and practice. *Dev. Chang.* 35 (4), 639–671. <https://doi.org/10.1111/j.0012-155X.2004.00374.x>.
- Murdoch, L., 2009. 'Dead firefighter professional with young family'. *The Sydney Morning Herald*, viewed 2 February 2022, <<https://www.smh.com.au/national/dead-firefighter-professional-with-young-family-20090218-8aol.html>>.
- Müller, M., 2015. More-than-representational political geographies. In: Agnew, J., Mamadouh, V., Secor, A., Sharp, J. (Eds.), *The Wiley Blackwell Companion to Political Geography*. John Wiley and Sons, Maiden, pp. 407–423.
- Navaro-Yashin, Y., 2012. *The Make-Believe Space: Affective Geography in a Postwar Polity*. Duke University Press, Durham.
- Neale, T., 2017. 'Are we wasting our time?': bushfire practitioners and flammable futures in northern Australia. *Soc. Cult. Geogr.* 19 (4), 1–23. <https://doi.org/10.1080/14649365.2017.1285423>.
- Neale, T., 2022. What tradition affords: articulations of indigeneity in contemporary bushfire management. *Curr. Anthropol.* 64 (1) <https://doi.org/10.1086/722533>.
- Neale, T., Carter, R., Nelson, T., Bourke, M., 2019. Walking together: a decolonising experiment in bushfire management on Dja Dja Wurrung country. *Cult. Geogr.* 26 (3), 1–19. <https://doi.org/10.1177/1474474018821419>.
- Oliver-Smith, A., Hoffman, S., 2002. Why Anthropologists Should Study Disasters? In: Hoffman, S., Oliver-Smith, A. (Eds.), *Catastrophe & Culture: The Anthropology of Disaster*. School of American Research Press, Santa Fe, pp. 3–23.
- Otero, I., Nielson, J., 2017. Coexisting with wildfire? Achievements and challenges for radical social-ecological transformation in Catalonia (Spain). *Geoforum* 85, 234–246. <https://doi.org/10.1016/j.geoforum.2017.07.020>.
- Pyne, S., 1991. *Burning Bush: A Fire History of Australia*. University of Washington Press, Seattle.
- Pyne, S., 2006. *The Still Burning Bush*. Scribe, Carlton North.
- Pyne, S., 2012. Pyric other, pyric double: Fire tame, fire feral, fire extinct. *Aust. Humanit. Rev.* 52, 199–203.
- Rayner, S., Lach, D., Ingram, H., 2005. Weather forecasts are for wimps: Why water resource managers do not use climate forecasts. *Clim. Change* 69, 197–227. <https://doi.org/10.1007/s10584-005-3148-z>.
- Reck, G., 1983. Narrative anthropology. *Anthropol. Human. Quart.* 8 (1), 8–22. <https://doi.org/10.1525/ahu.1983.8.1.8>.
- Rockman, B., 2021. 'bureaucracy', *Encyclopedia Britannica*, accessed 10 May 2022, <<https://www.britannica.com/topic/bureaucracy>>.
- Rose, D., 2004. *Reports from a Wild Country: Ethics for Decolonization*. University of New South Wales Press, Sydney.
- Royal Commission into National Disaster Arrangements Report 2020. Australian Government, Canberra, 1–594.
- Scott, J., 1998. *Seeing like a State: How Certain Schemes to Improve the Human Condition have Failed*. Yale University Press, London.
- Skoggard, I., Waterston, A., 2015. Introduction: Toward an anthropology of affect and evocative ethnography. *Anthropol. Conscious.* 26 (2), 109–120. <https://doi.org/10.1111/anoc.12041>.
- Smith, W., Neale, T., Weir, J., 2021. Persuasion without policies: The work of reviving Indigenous peoples' fire management in southern Australia. *Geoforum* 120, 82–92. <https://doi.org/10.1016/j.geoforum.2021.01.015>.
- Stoler, L., 2004. *Affective States*. In: Nugent, D., Vincent, J. (Eds.), *A Companion to the Anthropology of Politics*. Blackwell, Oxford, pp. 4–20.
- The Victorian Traditional Owner Cultural Fire Knowledge Group, 2019. *The Victorian Traditional Owner Cultural Fire Strategy*. Department of Environment, Land, Water and Planning, Melbourne.
- Thomassin, A., Neale, T., Weir, J., 2018. The natural hazard sector's engagement with Indigenous peoples: A critical review of CANZUS countries. *Geogr. Res.* 1–14. <https://doi.org/10.1111/1745-5871.12314>.
- Thrift, N., 2007. *Non-Representational Theory: Space, Politics, Affect*. Routledge, Oxfordshire.
- Tolhurst, K., 2009. *Report on the Physical Nature of the Victorian Fires occurring on 7th February 2009, for the Counsel Assisting the Victorian Bushfire Royal Commission*. Parliament of Victoria.
- Verran, H., 2012. The changing lives of measures and values: From centre stage in the fading 'disciplinary' society to pervasive background instrument in the emergent 'control' society. *Sociol. Rev.* 59, 60–72. <https://doi.org/10.1111/j.1467-954X.2012.02059.x>.
- Victorian Bushfires Royal Commission, 2010a. *Victorian Bushfires Royal Commission: Summary*. Parliament of Victoria.
- Victorian Bushfires Royal Commission, 2010b. *Victorian Bushfires Royal Commission, Volume 1*. Parliament of Victoria.
- Wales, S., 2019. Cultural burning to return to Victoria after 170 years in the hope of revitalising the land. viewed 6 February 2022 ABC News. <<https://www.abc.net.au/news/2019-01-31/indigenous-cultural-burning-to-return-to-victoria/10761772>>.
- Williamson, B., Weir, J., Cavanagh, V., 2020. Strength from perpetual grief: How Aboriginal people experience the bushfire crisis. *The Conversation*, 10 January, viewed 19 December 2022, <<https://theconversation.com/strength-from-perpetual-grief-how-aboriginal-people-experience-the-bushfire-crisis-129448>>.
- Williamson, B., 2022. *Aboriginal Community Governance on the Frontlines and Faultlines in the Black Summer Bushfires*. The Australian National University Centre for Aboriginal Economic Policy Research Working Paper 300/2022, <http://doi.org/10.25911/V482-AE70>.
- Wotton, B., Flannigan, M., Marshall, G., 2017. Potential climate change impacts on fire intensity and key wildfires suppression thresholds in Canada. *Environ. Res. Lett.* 12 (9), 1–12. <https://doi.org/10.1088/1748-9326/aa7e6e>.