Twitter content analysis of the Australian bushfires disaster 2019-2020: futures implications

Gregory Willson, Violetta Wilk, Ruth Sibson and Ashlee Morgan

Gregory Willson, Violetta Wilk, Ruth Sibson and Ashlee Morgan are all based at Edith Cowan University, Perth, Australia.

Abstract

Purpose – *This paper aims to explore the themes and nature of sentiment of Twitter content that discussed the Australian bushfire disaster 2019–2020 and its associated wildlife devastation, with considerations for the future of Australia's tourism industry.*

Design/methodology/approach – *A large, qualitative data set consisting of all publicly available Twitter posts during the period of the Australian bushfires from December 2019 to March 2020 that mentioned the bushfires and wildlife are explored.*

Findings – *The devastation of wildlife through the Australian bushfire disaster elicited emotionally charged Twitter content from both Australian and overseas users. Positive sentiment focused on offering support to areas impacted by wildlife devastation. Negative sentiment concentrated on linking the Australian bushfires disaster to global discussions surrounding the climate emergency, and a perceived lack of political action.*

Originality/value – *Despite the intensity of media attention directed towards the Australian bushfires disaster 2019–2020, there has been little scholarly research exploring social media content specifically focused on the wildlife devastation and its association with, and implications for, the tourism industry.*

Keywords *Australia, Climate change, Leximancer, Social media, Bushfires, Wildlife*

Paper type *Research paper*

Australian bushfires disaster and wildlife devastation

Australia's 2019–2020 bushfire season was disastrous and led to unprecedented levels of wildlife devastation, with estimates of 1 billion animals perishing (Green, 2020). During and post-disaster, social media activity was extensive, with many users sharing emotive content regarding their sorrow at the immense loss of iconic Australian wildlife (Sokolov, 2020). It is possible that this social media content facilitated cancellations of travel; 70% of the 850 members of The Australian Tourism Export Council indicated they had received tourist cancellations as a result of the bushfires, ranging in value from AU$5,000 to AU$500,000 (SBS News, 2020).

This paper aims to explore the themes and nature of sentiment of Twitter content that commented upon both the Australian bushfire disaster 2019–2020 and wildlife devastation. In doing so, this paper will evidence how global crises such as climate change and ineffective environmental policy are perceived by Twitter users to be inextricably linked to a major disaster with wide-reaching implications for the future of Australia's tourism industry. Further, this paper presents consideration not widely examined within scholarly literature, the potential insight that social media analysis yields regarding tourism futures.

Methods

This paper sourced 109,357 publicly available Twitter posts, which featured #australiafires, #australianfires and/or #australiaonfire and the words "animals" and/or "wildlife". Salesforce Social Studio was used to source the data, as it is frequently used by marketing professionals for social media monitoring (Salesforce, 2020). Data were collected between 14 December 2019 (when the social media hashtag #australiafires was launched) (Twitter, 2020) and 31 March 2020, which marked the end of the 2019–2020 bushfire season (Al Jazeera, 2020). Content analysis is a sense-making enquiry aimed at identifying meanings within qualitative data (Vaismoradi *et al.*, 2016) and has often been used in qualitative tourism-related studies (Költringer and Dickinger, 2015). The data were analysed using Leximancer, an automated qualitative data analysis programme. Leximancer quantifies content relevant to each emergent theme as "Hits", which denote the number of text blocks (set to four sentences) associated with each theme, and these are indicated below.

Results

Table 1 (see below) outlines the sample's composition and whether the content was positive, neutral or negative in sentiment.

Figure 1 (see below) evidences the key themes that emerged from Twitter content.

Australian bushfires (hits: 105,752)

This theme primarily consisted of sharing of information about the Australian bushfires and the resharing of news updates about the disaster. These posts displayed positive and negative sentiment and were largely devoid of opinion based, emotive content. Content typically focused on the scale of the *emergency*, *loss of wildlife*, *lives* and damage to *communities*, particularly in *New South Wales*.

Climate emergency (hits: 44,918)

Emotive language, fuelled by negative sentiment, was used to link the disaster to a *devastating* climate emergency or *crisis*. Content focussed on the *billion animals killed*, with *species lost* as Australia *burned*. Debate and calls for action were noticeable, particularly in terms of tackling climate issues and reconceptualising human consumption behaviours. Deep concern that Australian bushfires would be a continuing and increasing threat to the country was chillingly expressed: *What if January 2020 is just a trailer of what is coming to us in this new decade?*

Australian politics (hits: 31,843)

Strong negative sentiment was directed towards the Australian Government, particularly at a federal level. Users expressed frustration at a perceived lack of planning or response to the bushfires, and/or linked governmental climate change policy both within Australia and globally, to the disaster. Particularly derisive commentary was directed towards Australia's

Table 1 Sample overview		
	Australian Twitter content	*Overseas Twitter content*
Positive sentiment	18,910	21,689
Negative sentiment	23,620	24,633
Neutral sentiment	10,586	9,919
Total	53,116	56,241

Figure 1 Australian and overseas Twitter content by sentiment type

Prime Minister. Demands to take urgent and immediate action towards reducing Australia's carbon footprint were common:

> The devastation in Australia is unimaginable. 6 million hectares burned, more than one billion animals dead, entire communities gone. How many more disasters before we #ActOnClimate? #ClimateAction #ClimateCrisis #cdnpoli #AustraliaFires @scottmorrisonMP.

Perceived lack of climate change action by the Australian Government was viewed as a significant threat to Australia's tourism futures:

> The cost of not acting on climate change. No one is going to want to set up shop here, no one is going to want to go on holiday here, and so on.

Support (hits: 19,980) and helping (hits: 2,716)

Twitter posts expressing positive sentiment primarily focused on messages of support and helping. Users expressed condolences to Australia and offered words of support. Many of these posts were from overseas users, illustrating emotional connection to Australia's iconic wildlife:

CRAFTING FOR AUSTRALIA: Tons of animals have died or injured by Australian's wildfires. An Austin group is helping by making Koala mittens, blankets, nests and joey pouches for the animals. #AustraliaFires.

News (hits: 16,406)

News stories were commented upon and more broadly, the "news" of the disaster was shared and re-shared by users, to inform, connect and update others, both locally and overseas. Both positive and negative sentiment was evidenced:

Wonderful news from #kangarooisland «Thanks @kilaswild and @hsiaustralia #biodiversity2020 #wildliferescue #koalarescue #australiafires

Woke up to the most devastating news. My heart is breaking into a million pieces. Prayers to all animals and human lives lost. Everyone that's risking their lives to save these beautiful creatures is a hero.

Donations (hits: 6,311)

Content which expressed positive sentiment included specific commentary of donations made to assist the bushfire affected areas, communities and wildlife. Twitter users also shared information on how donations could be made to help the recovery effort, particularly in relation to wildlife support:

You've probably heard of the #AustralianBushfiresDisaster but do you know the depth of the damage? There's something YOU CAN DO about it though! Donate to @onetreeplanted to get #trees planted as soon as the fires have been mitigated.

Discussion

Similar to most global destinations which have a vibrant wildlife tourism industry, the integrity of Australia's natural environment, easy access to protected areas and careful maintenance of wildlife populations are of paramount importance to a sustainable future (Newsome, 2020). Twitter content discussing the bushfires and wildlife devastation illustrates the strong emotional connection many people have with Australian wildlife.

Researchers are warning that bushfires in Australia are increasing as a direct result of climate change; specifically, the country is experiencing reduced rainfall and increases in extremely hot temperatures (Yu *et al.*, 2020). The future of Australia's tourism industry is therefore under significant threat. Australia's Government, tourism industry and citizens must therefore urgently heed the call of climate scientists and be leaders in addressing climate change or face a bleak future. As noted, these discussions were at the forefront of users' concerns.

Perhaps, though, the Australian appetite for positive change is at its zenith and the Australian bushfire disaster 2019–2020, may mark a watershed moment in Australia's policies around climate change. Indeed, in a newspaper opinion piece in February 2020, acclaimed Australian novelist Thomas Keneally declared "These fires have changed us" and that "After our long glorying in minerals, it is promised that, if it wishes, Australia can be a leader in the new post-fossil-fuel world. It is a destiny our politicians seem unwilling to embrace, but they may have to #AustraliaFires #climatechange" (Keneally, 2020).

Conclusion

This paper has provided insights into how Twitter users viewed the wildlife devastation of Australia's bushfire disaster 2019–2020. It is hoped that our findings will facilitate increased

dialogue between decision makers, planners and operators within the tourism industry and, potentially, future policy concerning approaches to sustainable tourism and the rebuilding of important wildlife destinations. Results evidence how global threats to sustainable tourism, such as the climate crisis are seen by many Twitter users to be inextricably linked with the wildlife tragedy associated with Australia's bushfires.

Listening to and analysing social media users' online narrative presents invaluable insights. Politicians and planners must heed the call of Newsome (2020) that wildlife tourism plays a critical role in informing the world about our environment and stimulates discussion about humanity's relationship with nature. Through development of policy, investment in clean energy and through listening and learning what our larger planet-self is telling us (Lew, 2020), Australia must avoid a repeat of the 2019–2020 bushfire disaster. Australia has an opportunity to reposition its tourism industry through strong leadership that sets a hopeful agenda of more responsible, sustainable tourism. Australia remains one of the most carbon intensive economies in the developed world and is not on track to reaching its commitments to the Paris Agreement by 2030 (ABC, 2019). Encouragingly though, Prime Minister Scott Morrison has acknowledged that Australia must transition to net-zero emissions "as soon as possible" (Malos and Skarbek, 2021). New policy that incentivises innovation and adoption of smarter practices and technologies and investments in clean and renewable energy infrastructure is required. Further, transparent and thorough consultation with all stakeholders involved in tourism development including Aboriginal and Torres Strait Islanders is required, particularly with regards to how land can be managed sustainably and in a manner that lessens the possibility of fire. This will aid Australia in meeting its commitments to the Paris Agreement and will ease environmental pressures contributing to the frequency and intensity of Australia's bushfires.

Future research can further examine how global disasters are viewed as being connected with existential threats to sustainability in tourism, and there is a need for further examination of the importance of wildlife to tourism experiences. The future of Australian tourism is under threat, and urgent action that address the world's climate emergency is of paramount importance.

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Corresponding author

Gregory Willson can be contacted at: g.willson@ecu.edu.au