Article

Flames and Viruses: Australian and Hungarian Media Representation of the Australian Bushfires and the COVID-19 Pandemic, A Case Study

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Abstract: This study addresses the difference in media coverage of the Australian bushfires and the pandemic, using an Australian and a Hungarian news site. After a frame analysis of text and imagery, a narration analysis was conducted. Our results provided evidence that crises were covered in different ways. For a distant news portal, it was an obvious option to use the bushfires in order to visualize climate change. In contrast, the bushfire–climate link has been a politicized subject in Australia for decades; hence, the exceptional bushfire season was also unable to get the issue on the agenda. Although the Australian news media in our sample strived to portray a crisis under control, when compared to the pandemic, it was not so effective. Therefore, localization is a major challenge for effective climate communication, where lessons from the pandemic, using more economic and social frames, could be helpful.

Keywords: COVID-19 pandemic; bushfire; emergency; environmental communication; media coverage; climate change

1. Introduction

When Greta Thunberg started protesting against ineffective governmental climate change attitudes and policies in August 2018, masses joined her from more than a hundred countries, bringing the Fridays for Future movement into life [1]. One year later, devastating fires ravaged the Brazilian Amazon rainforest, which were subsequently followed by the Australian bushfires, and one focus of our study. For many, these events were seen as visible signs of climate change, although the attribution of specific events to climate change was challenging and widely debated [2,3], as highlighted in Australian political debates on the bushfire-climate change link [4,5].

While the media coverage of these topics raised public awareness and suggested that climate change policy may be approaching a breakthrough [6], the COVID-19 pandemic outbreak de-emphasized climate change [7,8]. At the end of 2019, news and social media were overwhelmed with news of the new coronavirus (SARS-CoV-2) [9]. Interestingly, many parallels and differences have emerged between the climate change emergency and the pandemic [10–12]. Although media coverage of climate change has a history of half a century, politicians still focus on short-term economic growth, and people in developed countries are continuing their lifestyles as usual. In comparison, the pandemic suddenly came, and we hardly knew anything about it, and yet national governments acted with unprecedented agility, and the public were also cooperative. Typologizing the two crises from the media's point of view [13], the bushfires constituted a surprising event that had happened previously, so the media was poorly prepared, but had a good familiarity; while the pandemic was both new and surprising, so journalists had to comment without any preparation or familiarity, but seemed to communicate more effectively. The common point between the two issues is death, which has a vast effect on public perception and

hysteria [14]. Hence, analyzing the media representations of these issues presents a new research gap and a promising field for social science scholars, since the media is the dominant source of our environmental knowledge [15], and media communication is able to influence the perception, engagement, and action of people in the broader sense [16].

Following this central aspect of our study, we conducted a case study, comparing the news media coverage of the 2019 Australian bushfires related to climate change [17] and the COVID-19 pandemic. Two popular online news sites were selected, one from Australia, the scene of the bushfires and one from a sufficiently distant country, Hungary, which presented itself through the affiliation of the authors.

Although the media coverage and journalistic norms are similar in the cases of different crises [18], we witnessed immediate and intensive anti-epidemic policy responses worldwide, however this was not the case for the climate change emergencies declared by numerous municipalities and other political and civic bodies. Our aim is to reveal the similarities and differences of how these crises, these dangerous and risky issues are brought closer by the media, how they are represented: framed, narrated, explained and illustrated. Hence, our analysis may provide a significant contribution to the understanding of crisis communication, also possibly offering some useful lessons on how to report climate change.

2. Scientific Background

2.1. The Importance of Framing

In the following sections, we argue that the linguistic and visual modes of news coverage are important parts of crisis communication. The framing of news and images should be highlighted as being of central importance. Framing gives meaning and structure to the world around us [19], as these frames represent 'organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world' [20]. While narratives are about how stories, i.e., news items, are told [21], framing helps us understand how the communication process of an issue requires the selection of a viewpoint, and how it makes these aspects more salient [22]. However, it is not insignificant that framing tends to limit the participation of other actors in a debate, and also the quantity of media coverage an issue receives when specific, mostly unchallenged frames dominate the narratives [23]. Issue framing is determined by many factors, such as by organizational pressure related to advertising, the pressure of interest groups, social norms and values, journalistic routines, and the journalist's own ideological and political orientation. In the case of controversial issues, when there is no consensus in terms of the facts and main arguments, these factors really do matter, since the elite media acts as a validator of science.

Nevertheless, science also influences media; for example, the assessments of the Intergovernmental Panel on Climate Change (IPCC) created an important 'climate catastrophe' frame, claiming that our climate is rapidly changing due to anthropogenic forcing [24]. This frame convinced climate skeptics to create their own counter-frames, presenting climate change as an unproblematic topic, which contributed to balanced reporting of climate change in the U.S. press [25,26]. However, a follow-up study found that news coverage mostly supports the dominant IPCC frame and the position of anthropogenic climate change, while climate skeptical news had less space in media coverage [27], and these frames are opposed by the 'economic opportunity' frame of 'green' environmentalists and politicians arguing that global warming would boost the economy in the long term [28].

It must be emphasized that the identification of frames is a subjective action and relies on the observer's viewpoint and language. Hence, we can find numerous framings in the literature, ranging from 'mainstream' understandings of climate or energy policy through ecology to sustainable development [29–31].

As antecedents to the pandemic, media coverage of the Brazilian zika virus epidemic from 2015 to 2017 demonstrates how media framings influence public understanding and sexual behavior to avoid infection [32]. Another example, Mayrhuber et al. [33], analyzed

Liberian online news coverage of the Ebola virus disease in West Africa from 2013 to 2016, and found that almost half of the articles had a frame of stigma reduction, which played a crucial role in the reintegration of Ebola survivors.

2.2. Images, Imagery, and Representation

Images make complex arguments understandable to the public, and create a willingness to achieve ethical norms [34]. Facilitating comprehension is crucial in reaching the audience, because 'visualizing the environment in order to comprehend it is a constitutive aspect of making the environment meaningful' [35]. Scientific images aim to show objective information that prevents the evoking of emotions, while images with a wider cultural charge are able to provoke affective responses and trigger lines of identification with visual subjects [36]. Many believe that without personally relevant, vivid, and concrete images implying emotions, the public will not be engaged in climate change. Attention-grabbing images are used by digital culture journalists to elicit an effect, since 'effective' images influence audience choices, i.e., what content readers read and share on social networks [37].

Images can also be thematized through visual framing analysis. Barthes [38] defined three levels of meaning. Firstly, denotation is an objective descriptive level that has the same meaning across cultures; this level thus makes articles comparable. Secondly, connotation is the subjective meaning and association with the picture. For example, a forest fire from the viewpoint of an ecologist may be a natural event that facilitates ecosystem renewal, but a threat and tragedy for Australian victims losing their homes. Thus, connotation also influences people's emotions and engagement. Thirdly, mythology carries the ideology of images and highlights a deeper meaning, for which background knowledge is necessary.

2.3. Climate Change in the Media

Anthropogenic climate change became a popular environmental topic in the late 1980s [39]. This growing attention was also evidenced by the many quantitative media analyses [40], and as the public controversy became more colorful in the following decades, climate change media coverage significantly increased in many countries [41].

This progress also underscores that climate change is no longer solely a scientific question or a physical issue, as it has also expanded into a serious social and political problem that requires urgent intervention [24]; however, inaction often characterizes both the public and the organizational spheres [42,43]. As laypeople acquire knowledge and information mainly from mass media instead of scientific articles [44], and despite the popularity of social media and other new alternative media outlets, people still rely heavily on mainstream news media [45], although its role regarding climate change is intensively debated [26]. The news media bears a great deal of responsibility, as it can strongly influence public perception by determining and filtering the kind and amount of information reaching the public [16]. In addition, news media also has the opportunity to stimulate public engagement and policy responses [46]. Focusing on framing and imagery, research into the media coverage of climate change has become central [47]. Journalists must consider the proximity of an event, and also how the audience is affected when choosing the language and images of articles [48].

2.4. Media Communication in the Pandemic Emergency

Epidemics have also generated studies on their media coverage [33,49]. Public health crises may emerge from the spreading of new or recurring diseases, where crucial measures need to be taken to reduce harm and slow down the spread of an epidemic. These steps require crisis communication techniques, such as warnings, notifications, assessments, and information about symptoms and medical treatments, and this is where the media plays a role [50].

Communicating risks to people can be problematic for many reasons. Professional communication is mainly technical, but public imagination is somewhat emotional. Furthermore, it may be difficult for laypeople to understand crisis information, since public

perception, response, and opinion depend on framing, and the quantity of epidemic news can influence risk perception. Taken together, these aspects will determine whether people take precautionary measures or not [51].

The direct life-threatening effect of the SARS-CoV-2 virus made it very important for the news media to communicate in a way that did not cause panic; however, at the same time, did not downplay the problem. Similarly, as people usually acquire health information from non-medical sources, like media and the internet [52], mass media operators and communication experts have a huge responsibility in informing the public properly [53]. Indeed, Google COVID-19 Trend data indicated that web-based searching depended more on media coverage than on epidemic trends [54]. Therefore, the challenge of communication is greater in the case of an emergency, as messages involve risk when people are faced by extreme, sudden danger [55].

2.5. Research Gap and Questions

Although crisis communication and media coverage of climate change are widely studied, many aspects have remained debated. To highlight one of these, the communication of fear, i.e., fear appeal, has received remarkable attention in recent climate change literature, particularly how fear arousal works in communication to persuade people to increase their motivation and action. However, significant evidence is still lacking as many believe that catastrophe language can cause climate anxiety, which may lead to avoidance and reduced personal engagement [56]. Other studies have argued that fear appeal, or anger and worry could result in personal action, but mostly if these emotions were communicated through unequivocal messages on how to conquer the problem and fear at the same time [57].

The emergence of the pandemic opened up new research perspectives in these aspects of climate change communication, since the effectiveness of climate communication was far behind that of the pandemic, although journalists are more prepared for natural catastrophes connected to climate change than for new pandemics [7,8,12].

In this study we focused on the following questions: (a) What is the difference in the media representation of these two crises? (b) How is climate change used in the bushfire narratives? (c) What might the communication of climate change learn from the pandemic emergency?

3. Materials and Methods

Based on the literature review and in line with the research questions posed, we conducted a purely quantitative analysis, which showed the daily number of articles, a quantitative frame analysis of texts, and images supplemented with a qualitative narration analysis to determine the differences in the news coverage of the two crises. We chose two news magazines for this case study that complied with various criteria: political independence, free access, digital-only form, and a similarly wide audience (relative to the country's population). The two news magazines were from Australia and Hungary: the Melbourne-based and emerging *The New Daily* (TND) and the popular *Index* established in 1999 [58,59], respectively. Australia was obvious, as this country was hit by the bushfires. In addition, with the choice of Hungary, it was also possible to examine the effect physical distance had on the framing and visual representation of a crisis. This choice matched the goals of the study well: investigating how these emergency situations were followed and covered by two news sites on the opposite sides of the globe, and how climate change was used to interpret the story. While the fires are a common but controversial subject of discourse in Australia, where TND took a government-critical position in the Australian media-landscape [4,60], the bushfire issue was a rare topic for Index before 2019 (45 articles in 20 years).

During the sampling procedure, we used two keywords, 'bushfire' and 'forest fire', for the Australian bushfire news and collected all the relevant articles between 31 October 2019 and 15 March 2020 from both news magazines. For the pandemic articles, we used the keyword "Coronavirus" with TND, while on the Index website, news about the pan-

demic was collected in separate folders, and gathered all the news items in these folders from 3 January 2020 to 30 April 2020. We took all news into consideration for the pure quantitative analysis, which focused solely on the daily number of the articles. For the quantitative frame analysis all the bushfire news items were used, but only one in ten of the articles concerning the pandemic, since the number of coronavirus articles was an order of magnitude higher [40]. In addition to these, we collected 15 articles from each source and topic using a random sampling method in order to perform the narration analysis (Table 1).

Table 1. Number of articles at the different levels of analysis.

	Full Sample	Sample for Frame Analysis	Sample for Picture Analysis	Sample for Narration Analysis
The New Daily—Bushfire	496	496	494	15
The New Daily—COVID-19	2012	175	175	15
Index—Bushfire	72	72	55	15
Index—COVID-19	5754	574	403	15

Irrelevant articles were excluded from further analyses. Articles without images were not relevant for the image analysis, while main images were studied, i.e., the cover.

Conducting the frame analysis, the first author coded the thematic frames of the articles ignoring the picture, if included, and used categories that suited both topics, i.e., Ecology, Economy, Fear, Meteorology, Politics, Problem-solving, and Society. The categories were first based on the literature, but were revised later. Furthermore, articles that mentioned human or animal death tolls or personal stories were also listed. Then, we determined the denotative (objective) meaning of the pictures in the articles, namely: Experts, Fire/Virus, Humans, Impact/Consequences, Machine/Electronics, Nature, Science, Symbols. Subsequently, the connotative (subjective) frames of the pictures were also specified into six categories: Devastation, Expertise, Hazards, Hope, Incompetence, and Joy (Table A1). The reliability of the coding was tested by the second author on 5% of the sample used for the frame analysis. The level of agreement was 95%.

4. Results

4.1. Dynamics

TND started to report the bushfires two months earlier than Index, and did so more frequently. However, the dynamics of article fluctuation show correlation between the news sites (Pearson-correlation: 0.58, 95% confidence interval: 0.46, 0.67, $p < 0.01$). Coronavirus articles emerged earlier on the Index website; the first article was published on 3 January 2020, and on 11 January 2020 on TND. From March 2020, the number of articles published each day on Index significantly exceeded the number of articles on TND right up until the end of the studied period; the daily number of news articles issued by TND leveled off at around 35 per day (Figure 1).

4.2. Thematic Frames

On both sites, the three most prevalent thematic frames of the bushfires were Society, Fear, and Meteorology, while Problem-solving was rare (Figure 2). The main differences between the two sites were Economy and Politics, which were more frequent on TND than Ecology, which, in turn, was more popular on Index. The framing of the pandemic on the two websites was more similar. Society and Problem-solving stood in first and second places. On TND, Economy was the third, and Fear was the fourth most prevalent thematic frame, where on Index Fear was the third and Economy was the fourth. Politics and Ecology were rare on both sites.
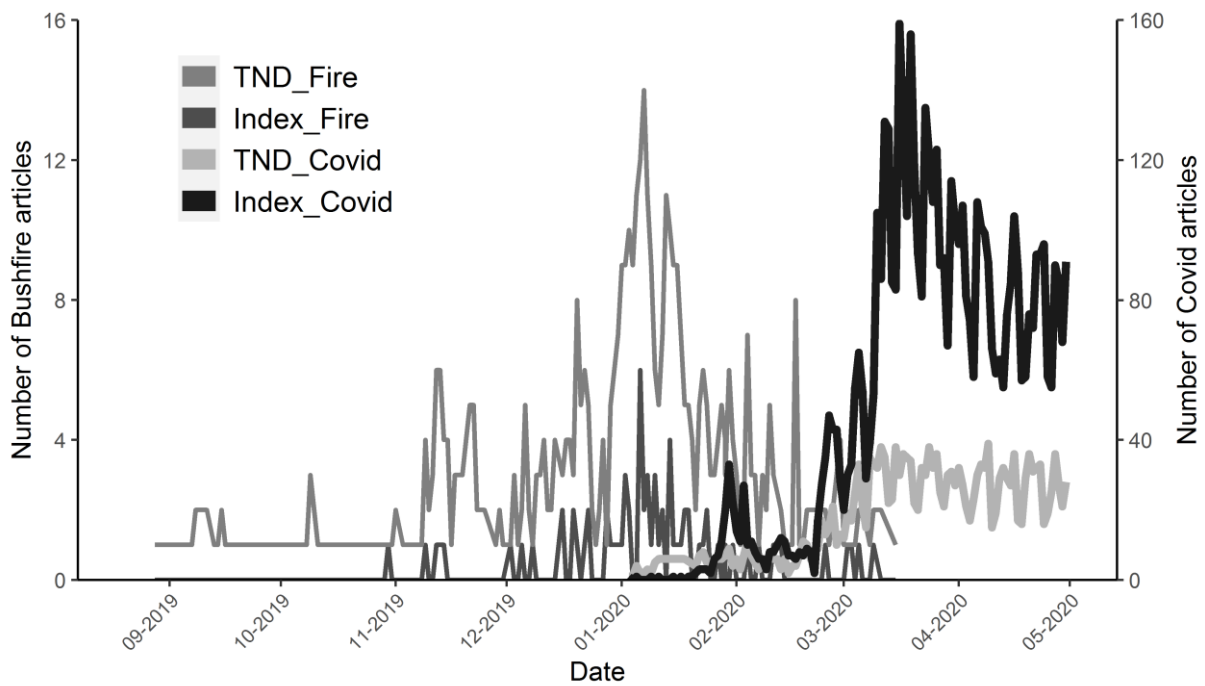
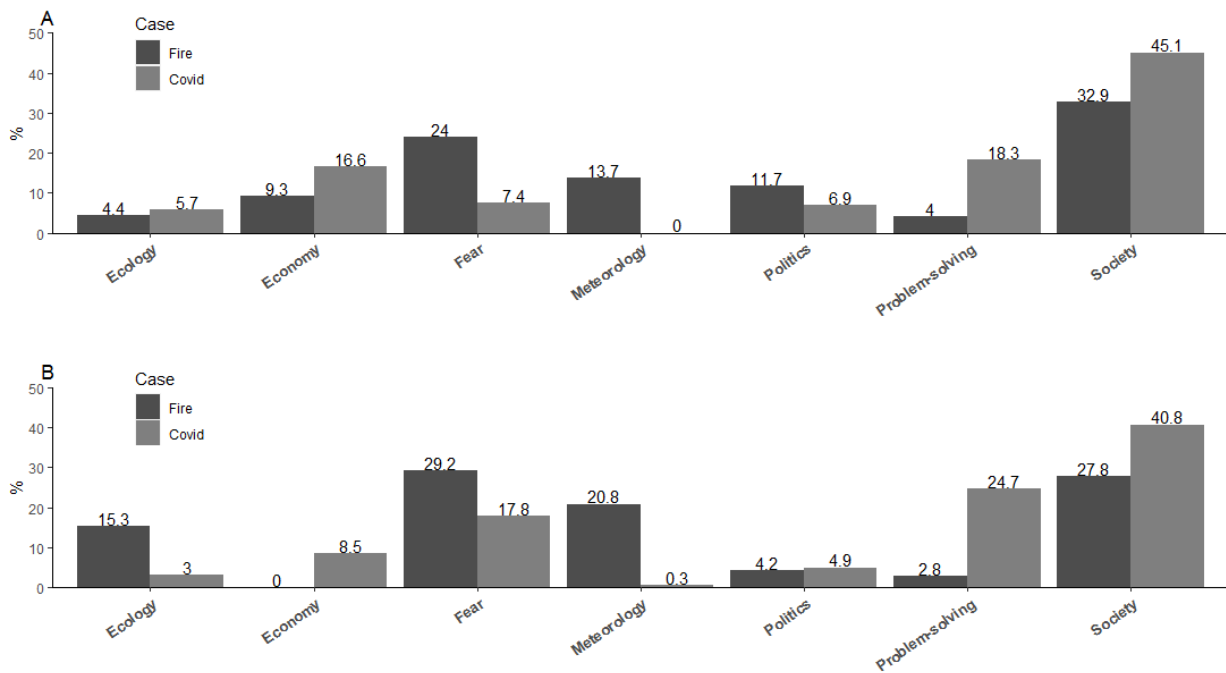**Figure 1.** Daily number of articles: bushfire and COVID-19 pandemic.

Figure 2. Thematic frames of the articles, The New Daily (**A**) and Index (**B**).

Most thematic frames were unevenly distributed over time (Figure 3). On both sites, the bushfires were at first framed by Fear and Meteorology and, on TND, ended up with almost the whole range of frames, except Fear. On Index, the last few news articles were framed by Problem-solving, Meteorology, Fear, and Ecology. Although the pandemic was framed on TND first, Fear, Society, Problem-solving, and Economy soon outnumbered the other frames. On Index, the first article about the pandemic was framed by Problem-solving, and, in terms of frequency, Society was followed by Problem-solving and Fear.
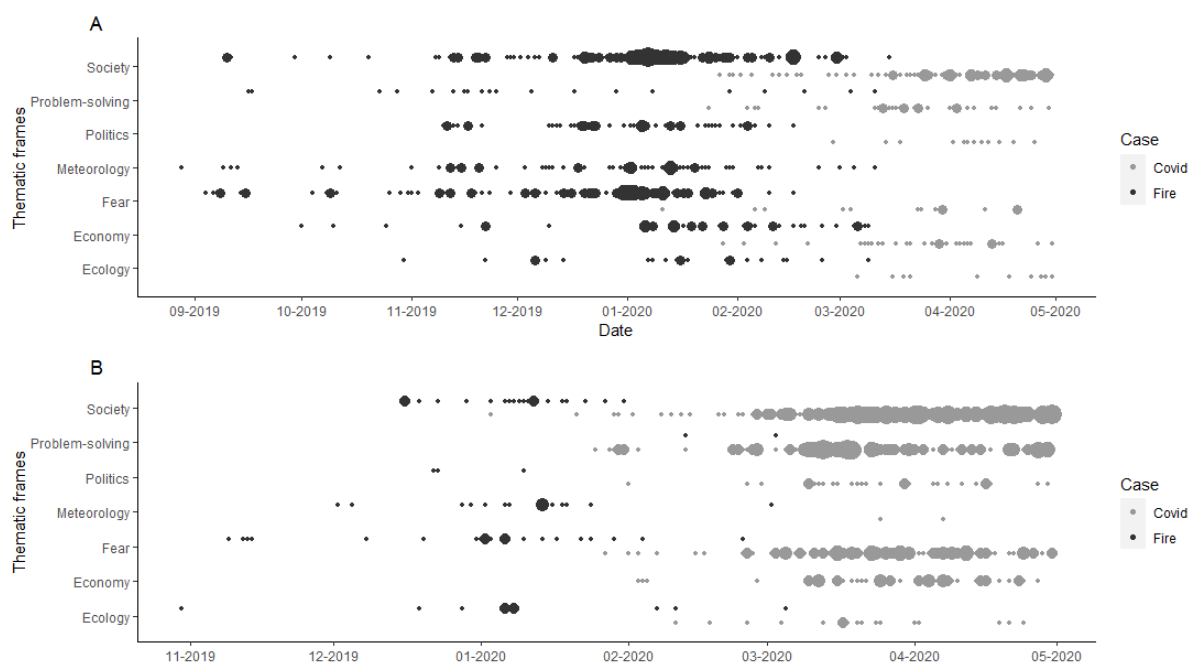
Figure 3. Distribution of thematic frames during the study period, The New Daily (**A**) and Index (**B**). The size of the spots is proportional to the number of articles.

4.3. Narrative Analysis

On the TND website, climate change, e.g., climate policy and activists, was a topic often casually mentioned, along with politics and social issues. Conversely, as highlighted in some news items, climate change, air pollution, and ecological impacts were portrayed as a matter of political controversy and scientific authority: *'Hotter days, less rain, more drought, worse air quality, that is what the scientists have told us climate change looks like'* [61]. Index attributed great importance to the discussion of the climate change-bushfire link: *'Many see the unprecedented drought as a consequence of climate change, which has led to much greater bushfires in parts of the continent in recent days.'* [62].

Interestingly, the death toll was mentioned at a higher rate in connection with bushfires, while personal stories were more common for the pandemic, particularly in the articles published by TND. In addition, climate change was highlighted in 23% of all news articles on TND, and in 32% of the coverage on Index (Table 2).

Table 2. Ratio of articles including death toll, personal story, and climate change (only in the case of bushfires) on the TND and Index news sites.

	TND	**Index**
Death toll—Fire	20.0	54.2
Death toll—COVID-19	17.7	27.5
Personal story—Fire	12.1	5.5
Personal story—COVID-19	17.1	6.6
Mention climate change	23.0	32.0

However, as the narrative analysis revealed, another tool used was to bring the readers closer to the fire events by embedding the article in an objective style with frequent personalization and, sometimes, emotional emphasis: *'Dangerous bushfire conditions are forecast for NSW, with high temperatures and dry winds set to again make firefighters' lives miserable in coming days.'* [63]. TND also used abundant expert quotes, and the emotions in these reports expressed mainly tragedy, hopelessness, and struggle: *'There was a fireball that came through, it was this huge roar and that's when it just hit everybody and we had to leave'* [64]. Altogether, the TND bushfire articles were mainly characterized by pessimism, where

victims played the most common narrative role, followed by firefighters and philanthropists as heroes.

According to Table 2, TND may be characterized by placing more focus on personal experiences, first-hand stories, and coping strategies, and less on panic. These aspects were differently reflected by the Hungarian news website; Index focused on reports that were newsworthy even from a great distance. Although many Index bushfire articles were also written in an objective style, emotionalization and tragic genre were more frequent, e.g., reporting ecological tragedies and news where the death toll had an important function: *'The bushfires [. . .] have claimed the lives of at least 28 people and destroyed 2000 homes, caused massive damage to wildlife, killed up to a billion animals and covered the cities with dense smoke'* [65]. Weather and climate change also emerged partly in the political frame, and Index had more pronounced reporting on victims with roles in the narrative, and on failure after struggle as the theme of narration. Index did not deal with political or economic issues; instead, it reported the human or animal death toll, sometimes publishing detailed stories about victims, thereby providing more in-depth information for Hungarian readers.

Additionally, concerning the pandemic, Index usually mentioned the actual number of deaths, at least in one sentence at the end of the articles. Furthermore, Index often reported summaries on the spread of the virus with the number of deaths per country. Although the coronavirus claimed more human victims, both websites wrote more about the death toll related to the bushfires, although this difference was only 2% on the TND site. TND mainly concentrated on Australia in the coronavirus news, where societal problems, economic aspects, and criticism of the government were the main themes, which indicates the political position of the news portal. For example, *'Now, when Australia is facing a potential financial crisis courtesy of the coronavirus, Scott Morrison is only sloganeering about possible "targeted, modest and scalable" financial assistance for the economy'* [66]. Most of the articles were low-mimetic, i.e., simple, in their narrative character, although mourning also appeared, as well as hope: *'Workers who lose their jobs during the crisis will have access to the "Jobseeker Payment" [. . .], in addition to a temporary coronavirus supplement of $550'* [67]. Frequent expert quotations made the news reliable: *'We would have gotten to 58,000 infections per day at the peak. So literally, hundreds of thousands infected if we had just had isolation and quarantine in place'* [68], which was also true for Index news. Similarly, social problems were also reported on the Index site, e.g., different opening hours of tobacco shops and bars, and politics and economy also emerged, but with a far more pessimistic tone expecting failure after the struggle of the agents: *'According to national chief physician Cecilia Müller, the coronavirus is currently registered in 27 nursing homes'* [69]. Index was concerned more about prevention, death toll, and foreign cases, and when it came to emotions, readers were faced with overwhelmingly tragic news: *'In such a situation, many Hungarians are stuck abroad trying to get home'* [70].

4.4. Imagery

TND mostly used the denotative frames of Fire and Experts (mainly firefighters) to depict the bushfires (Figure 4). On Index, more than a third of the images portrayed Fire, while the second most frequent denotative frame was Nature, and the third, Experts. The news about the pandemic mostly contained images regarding Experts on both sites, and frequently medical staff and politicians; however, on Index, the ratio of such imagery was much higher. The second most frequent image subject was Humans, mainly concerning the wearing of face masks, and the third was Symbols, e.g., the logos of companies affected by the pandemic.
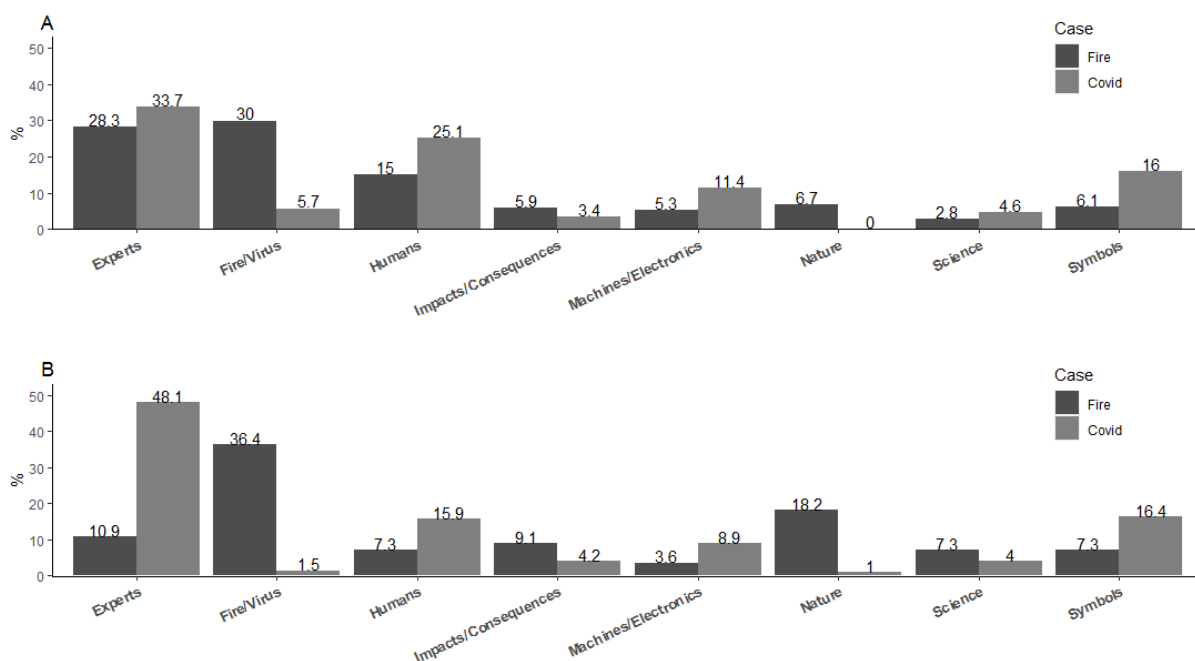
Figure 4. Denotative frames of the images, The New Daily (**A**) and Index (**B**).

Concerning the bushfires, Hazards was the leading connotative frame on both sites; however, there was no correlation between the other frames (Figure 5). On TND, Expertise, Hope, and Joy were portrayed in around 10% of cases, Incompetence in almost 6% of cases, and hardly any picture suggested Devastation. In contrast, on Index almost a third of the pictures were about Devastation and a fifth about Hope; but the other frames were hardly represented.
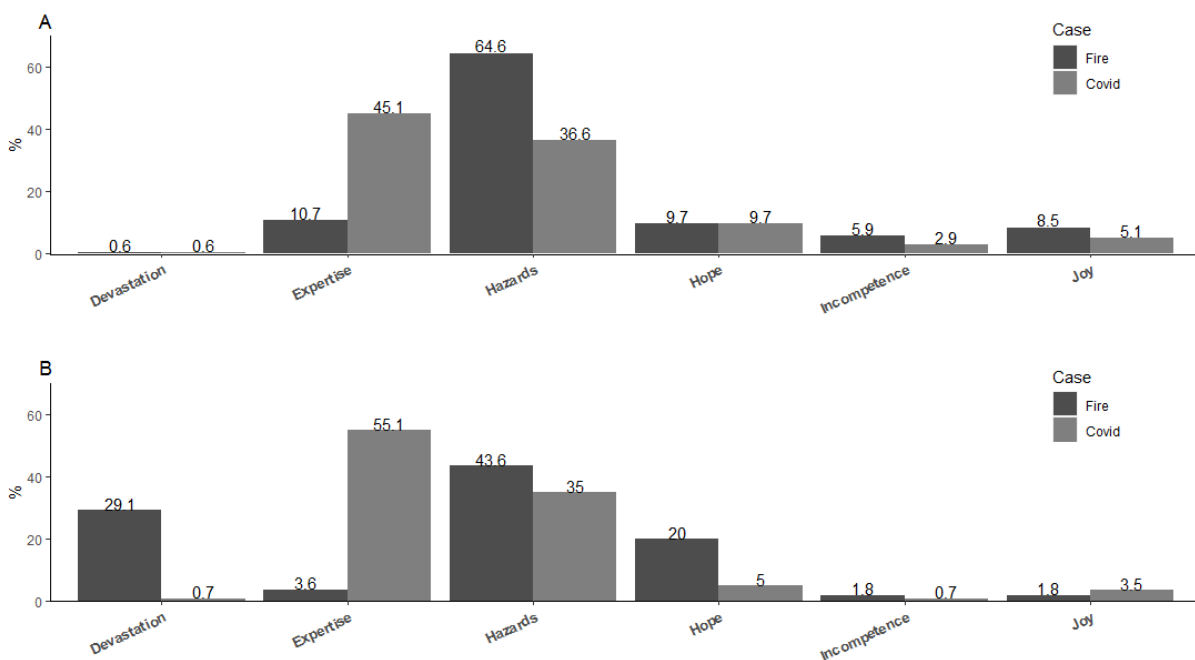

Figure 5. Connotative frames of articles, The New Daily (**A**) and Index (**B**).

Connotative framing of the pandemic was similar on the two sites. Around half of the pictures suggested Expertise, and more than a third, Hazards. Additionally, it was striking that, on TND, Incompetence was twice as frequent in news items about the bushfires compared to those about the pandemic.

5. Discussion

Before interpreting the results, it must be pointed out that the study was conducted based on limited empirical material in terms of countries, media outlets, and types of crisis. Therefore, the study should be treated as a case study, on the basis of which wider conclusions may be drawn through further investigation and the use of more resources.

Since the Australian bushfires were much closer for TND journalists and more remote for Index, it is not surprising that TND started reporting on this issue earlier. On the other hand, the virus arrived in Australia more than a month earlier: the first case was confirmed on 25 January 2020 [71], whereas in Hungary the first infection was reported on 4 March 2020 [72], and during the first wave there were not many infections in Hungary, and yet Index reported about the pandemic earlier and to a greater extent.

The thematic framing of news items suggests that we cannot be as effective against fires as we can be against the pandemic. In the case of the bushfires, weather had a greater role in subduing the flames than firefighters, while there were many opportunities for fighting against the pandemic, like social distancing, careful hygiene, facemasks, vaccines, etc. We should see that the role and impact of communicating fear differed in the two cases, as fearful news about climate change may have led to an avoidant emotional reaction [73]. In contrast, quarantine measures helped reduce the spread of the virus without the reward being significantly delayed [74]. Apart from this, mass media had to deal with infodemics, resulting in panic and conspiracy theories [75].

In line with the frame of Problem-solving, the Society and Economy frames were much stronger in the coverage of the pandemic. The importance of 'economy' for TND could be particularly explained by the fact that the pandemic came right after the bushfires in Australia, causing a longer and deeper recession [76]. This may be the reason why fear was not so important in the TND-sample; hence, Australians were frightened more of the lack of money than the threat of the virus. In contrast, Index served as a fear communicator throughout the first wave. A greater amount of 'problem-solving' news first appeared in connection with measures against the pandemic. As the initial panic began to subside and increasingly stringent restrictions were introduced, greater emphasis was placed on the Economy frame (Figure 3).

It should be pointed out that the perceptions of Hungarian readers were mainly shaped by the media, but journalists must also follow the interests of their audience; the threatening, ecological impact of the bushfires had greater importance for Hungarian readers than the harm caused to the Australian economy or the political debates [77]. This confirms that physical distance involves psychological distance from certain frames when an emergency arises in a remote area [78].

Although scientists formed close connections between the bushfires and climate change, less than a third of news items highlighted climate change. This may have been because understanding communication about climate change is hard for the public as its effects are not plausible [74], so it is often discussed in connection with other topics; the term 'climate change' is not specifically mentioned in many news articles [79].

The differences in framing and rhetoric can also be observed in the reporting on the death toll and the telling of personal stories. The death toll could be seen as a fear appeal device, while personal stories may represent struggle and success, but sometimes also failure. Altogether, the TND bushfire articles were characterized mainly by pessimism, where victims played the most common narrative role, followed by firefighters and volunteers as heroes. The narratives on the Index website were similar; hence, our results did not support the conclusion of Ellis and Muller [80]; i.e., geographical distance prevents the media from addressing the whereabouts of the victims. Nevertheless, Index did successfully portray the bushfires as an ecological and human disaster.

The difference between the visual imagery of the two issues is clear. More experts, humans and machines on the pandemic side, but less casual agents (=virus), while more fire and nature on the bushfire side. Therefore, the bushfire appeared as a disaster for nature where one could only see the problem (Fire); compared to this, the pandemic was

communicated as a crisis for humans, which Experts were able to deal with. Although, TND used more 'Experts' to depict the bushfires as denotative frames, the connotative meaning slightly modifies the implications of the denotative content as only some of the depicted experts demonstrated expertise. There are two reasons for this. Firstly, pictures of firefighters often carry a sense of hazard or devastation. Secondly, the Australian prime minister caused a lot of outrage with his vacation during the bushfires; therefore, many of the pictures he appeared in were mocking. The differences between the two news sites revealed again that Australians were part of the bushfires with more 'tangible' expertise and hazards, while Hungarians (here: the Index journalists) only cared about them from a distance [81], creating a different visual discourse about the fires with much more devastation and hope. Hence, more than half of the images depicted rescued animals (koalas, kangaroos) and the recovery of nature, which again referred to the ecological narrative. In contrast, both nations directly suffered from the pandemic; hence, the meaning of the emergency was similar in the imagery.

Finally, it is reasonable to mention that the imagery of the news articles on many occasions did not reflect the content and the main message of the story. This is the explanation for the relatively high ratio of pictures about Joy and Hope; many of them depicted rescued animals and sportspeople who rejoiced in victory. The latter pictures were linked to news items commenting on the postponement of a sporting event due to the bushfires or the virus.

6. Conclusions

Our results provided evidence that the two crises were differently covered and illustrated. Bearing in mind that the two samples are insufficient for drawing general conclusions, our results do have some important implications for consideration. We examined the Australian bushfire season as a potential instrument for the communication and visualization of climate change. For a distant news portal engaged in environmental issues, it was an obvious option. Therefore, distance may have a key role in media coverage. In contrast, the bushfires–climate change link has been politicized in Australia for decades; hence, the exceptional bushfire season was not capable of putting this issue on the agenda either, as reflected in the sample. Furthermore, although the Australian news media in our sample strove to portray and narrate a crisis under control, compared to the pandemic, it was not so effective.

According to our investigation, the news media played a different but more effective role during the pandemic emergency, since the large quantity of articles warned the public, provided up-to-date information about the possible mitigation methods, and dispelled misconceptions about the virus. The distinct governmental and social engagement behind the two crises should be considered: bushfires are an enemy outside, where there is not too much space for social and political action in the short term, and related climate change mitigation for long term effects is debated regarding the fires. In contrast, the virus is an enemy inside, literally inside us, where solutions with obvious short-term effects are in our hands. Governmental engagement met with social engagement in the first wave, but the story is still being written.

This was reflected in media coverage, where the focus was more on intervention. Political and economic aspects were dominant in the case of the pandemic, where fear appeal was a working tool for social mobilization and media and governmental messaging went hand-in-hand [10]. Although climate change and related extreme events had direct and occasionally fatal effects on humans, the extent of media coverage did not even come close to the coverage of the coronavirus. These were different emergencies, with differences in the framing of the stories, imagery, and narration, which probably played an important role in public engagement. Our results suggest that the economic and political context are key factors in mobilization and, instead of ecology, reporters should highlight the social aspects of the issues; reporting needs to focus on solutions and less on fear, because fear cannot help in the long term. News imagery is as important as the content shaping public

perception. Bushfire articles were suffused with pictures depicting the devastating fires and the hopeless struggle against them, which strengthened fear. Contrary to some studies, our results indicate that emotional climate change communication could go awry [36,51,82]. Showing experts instead would be more efficient, as journalists did in connection with the coronavirus, by frequently depicting medical workers. Although experts emerged during the bushfires as well, most of them were incompetent and criticized politicians. O'Neill [83] suggested that portraying elites, such as celebrities or 'climate champions', would be a more efficient way to implement the journalistic norm of personalization, instead of using politicians with their greater sense of distance from the public.

Although climate change is here, in terms of perception, it is still a distant problem for the majority. Paradoxically, until it is framed and narrated as a physical or ecological issue, people cannot directly link to it in the same way as the pandemic. As a conclusion, we suggest that mass media should report climate change as a local crisis, which is not only close to us, but that we are all threatened by its impacts. News about the epidemic provides an example to be followed; issues affecting everyday life and frightening consequences should be highlighted. Accordingly, climate change news, ecological implications, and emotional narratives should be framed in contexts directly affecting us, i.e., impacts on the economy and our everyday life.

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Appendix A

Table A1. Meaning of the applied Thematic, Denotative and Connotative Frames.

Type	Frame	Content of the Text/Image
Tematic frame	Ecology	animals, plants, forests, virus spreading and properties of the COVID-19 disease
Tematic frame	Economy	financial issues, funds, pricing of stocks or rentals
Tematic frame	Fear	spread of the fire and the hopeless fight against it, new infections by the virus, symptoms of and potential death by the virus
Tematic frame	Meteorology	hot and dry weather, climate and air pollution
Tematic frame	Politics	policy making, political debates, criticism of politicians
Tematic frame	Problem-solving	evacuations and emergency caused by the fire, restrictions caused by the virus, defending methods
Tematic frame	Society	sport, celebrities, social events, deaths and other issues concern or affect the public and do not pass in the other frames
Denotative frame	Experts	people with known status or profession, e.g., politicians, financial experts, policemen, firefighters, celebrities, medical workers

Table A1. *Cont.*

Type	Frame	Content of the Text/Image
Denotative frame	Fire/Virus	in the case of bushfire, fire or smoke from the fire emerges on the picture; in the case of coronavirus, a pictogram or microscopic image from the virus is on the picture
Denotative frame	Humans	people from the public, who are not famous or known people
Denotative frame	Impacts/Consequences	burned properties, empty streets caused by restrictions
Denotative frame	Machines/Electronics	vehicles, production lines, aeroplanes, electronic gadgets
Denotative frame	Nature	animals, plants, forest without any threat
Denotative frame	Science	vaccines, satellite images, maps, diagrams, graphs, medical tools
Denotative frame	Symbols	not the picture itself has the meaning, one has to abstract
Connotative frame	Devastation	burned properties or forest, deep poverty, dead animals
Connotative frame	Expertise	pictures from experts, factories, buildings
Connotative frame	Hazards	fire, smoke, firefighting, people with mask, medics in protective wear, people in quarantine
Connotative frame	Hope	nice cityscapes, food delivery, rescued animals
Connotative frame	Incompetence	mocking pictures about politicians
Connotative frame	Joy	feasts, firework, smiling people, winning a sport event

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