The Media's Forgotten Animal Link: Species-Patriotism in World Press Coverage of COVID-19

Núria Almiron
Gina Thornton
Gabriela Martins
Department of Communication, Universitat Pompeu Fabra

nuria.almiron@upf.edu
ginathorn8@gmail.com
gabrielamartinsdias@outlook.com

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Abstract

The authors conducted a content analysis of English-speaking media coverage of the COVID-19 crisis during 2020 as available through Factiva. The results show that the social and ethical challenge that lies at the origin of the crisis — the structural drivers of zoonosis as reported by the scientific literature — is all but unaddressed. These social drivers are to a large extent linked to how humans treat other animals. Our analysis of news coverage of COVID-19 strongly suggests that journalism played a largely facilitative and collaborative role, more aligned with a sort of human species-patriotic behaviour than to a radical commitment to mitigating the risks of future health crisis and to consider animal ethics. This quantitative research is an exploratory attempt to pave the way for a qualitative, ethically-oriented analysis of the media representation of zoonosis.

Keywords:

COVID-19, zoonosis, structural causes, social drivers, animal ethics, world media coverage, journalistic role.

1. Introduction

Although the epidemiological details of zoonoses — diseases that are transmissible between human and nonhuman animals — need much more scrutiny, there is ample evidence that their emergence is accentuated by human actions. This brings human behaviour and habits to the forefront of the discussion, and particularly this involves reviewing our relationship with other life on the planet, mainly with other animals. Animal ethicists have long argued for the lack of ethical and rational grounding for the human discrimination and abuse of other animals (e.g. Gruen 2011), while sociologists have long stressed the vested interests — not needs — linked to animal discrimination and exploitation (e.g. Nibert 2013). The COVID-19 crisis provides further evidence for the fact that discussions of zoonosis must not be constrained only to an epidemiological angle, but also incorporate and challenge the anthropogenic structural causes of zoonotic diseases.

The scientific literature clearly points at a number of anthropogenic social drivers of zoonosis including diet, demographics, environment/climate change, socioeconomics, politics, science, entertainment and globalisation (UPF-CAE 2021). Overall, the literature is clear about the fact that these social drivers increase the conditions for zoonoses mostly for two reasons: first, because they provide increased opportunities for pathogens to acquire new genetic combinations, and thus to turn into novel diseases to which neither humans nor domesticated animals have developed immunity (Andiman 2018). Second, all these social and behavioural variables multiply the risk of exposure that increases the interface and/or the rate of contact between humans, domesticated animals, and populations of animals in nature (Field 2009). Of all social zoonotic drivers, diet and science appear as the most relevant. The diet driver points at intensive

agricultural practices, hunting, and deforestation as potential sources of zoonoses. The animal-based diet link is found in a large number of papers in the literature about zoonosis. On the other hand, the scientific driver points mostly at the case of laboratory spillovers through accidents in research involving animal experimentation. This is a rather unpublicised and obscure topic, only mentioned by some literature, but we certainly know that the species barrier is breached in laboratories in ways that radically defy nature (Quammen 2012) — particularly in the research for certain drugs, like vaccines.

The degree to which we are willing to confront and rethink these anthropogenic drivers is something we can examine through public discussions of zoonosis in critical moments, like the one created by the COVID-19 crisis. The COVID-19 outbreak produced a massive media output from the beginning of 2020. This paper is a preliminary attempt to address this by analysing how much media coverage was focused on socio-structural drivers as compared to mere epidemiological basics (what we know about the virus and its functioning) or epidemiological causes and consequences (how infection occurs and how we can prevent it or fix the problems it instigates). Analysis of journalistic coverage of the social drivers of diseases and, particularly, of the link between zoonoses and our treatment of other animals, has typically been a blind spot in the media coverage literature. To fill this gap, we conducted a content analysis of the 2020 world press coverage using the lens of journalistic roles, with a special interest in identifying whether a behavioural/ethical discussion had taken place.

Our results show the media collected by Factiva did not engage in a substantive discussion of the socio-structural causes underlying the crisis. They only scarcely and superficially addressed the social drivers of disease and almost totally neglected the ethical issue linked to these, i.e. the human treatment or disregard of other animals for our species' interests. Due to the lack of self-criticism of our species behaviour, the use of the war/unity metaphor and the overwhelming mention of governmental sources, we conclude that the media did not adopt a radical stance towards the pandemic and its causes, but rather assumed a type of facilitative and collaborative role that we define as *species-patriotism*. While patriotism is the devotion to one's homeland, with "species-patriotism" we refer to a type of media coverage that shows devotion to our species by denying any responsibility on our species' part and any urgent need to discuss our anthropocentric stance toward the planet. Patriotic journalism is a well-documented practice during national security threats. For instance, during wartime there is typically a — forced or voluntary — absence of any type of criticism of the homeland's decisions and actions in media coverage; while there is a strong effort to building unity in order to confront the enemy. In the case of patriotic speciesism, species replaces homeland in the fight and the struggle for unity against the virus/enemy.

2. Communicating Zoonotic Diseases: Journalistic Roles

The social and behavioural nature of the structural drivers of zoonotic diseases prevents the problem from being fixed simply through technical solutions or by addressing only the consequences of the outbreaks. While developing drugs and

taking protective measures are relevant steps in stopping the spread of the virus, structural and systemic changes for prevention are even more crucial in order to mitigate future risks. By way of analogy, treatment of intestinal parasites with medicines and a diet that avoids certain foods are essential to caring for those afflicted with these parasites, but working to eliminate the conditions these parasites thrive in is ultimately more effective. In this respect and referring to the way COVID-19 has been framed, Bodenheimer and Leidenberger argue for the need to "make clear the connection between the coronavirus outbreak and unsustainable behavior" by humans to "explain that continuing unsustainable behavior could cause further crises of a similarly debilitating scale" and to frame the event "as a timely occasion to change direction and to prevent future crises" (2020, 61).

Whether societies engage in addressing the structural causes of zoonotic outbreaks or not, and thus preventing humanity from confronting the societal and behavioural challenges, depends to a large degree on how the public opinion discourse about the topic unfolds. The role of media in the framing of the topic is not only very relevant, but crucial in times of crisis, with policy decisions and citizen reactions being shaped or redefined according to the perceived fears and threats portrayed in the media coverage. This role of the media has been widely discussed for previous health crises. Lubens (2015), for example, finds the three primary functions of journalism during health crises to include disseminating accurate information; acting as a go-between for the public, decision-makers, and health and science experts; and monitoring the performance of institutions responsible for the public health response. In alignment with Bodenheimer and Leidenberger, for Lubens the journalist's principal goal during health crises is "to responsibly inform the public in order to optimise the public health goals of prevention while minimizing panic" (2015, 59).

Lubens' functions also resonate with the monitorial and facilitative roles of journalism outlined by Christians et al. (2009). The latter describe the monitorial role as the natural role of journalists, that of a "vigilant informer". The facilitative role refers to the access the media provide to relevant voices in society — the public, decision-makers, and health and science experts' voices in the case of health issues. But Christians et al. also suggest two other roles for journalism: the radical and the collaborative. The radical refers to how the media can provide "a platform for views and voices that are critical of authority and the established order" (2009,31), a role that is essential for participatory democracy according to these authors. Finally, the collaborative role refers to media cooperation with political, civil, or even military authorities against threats. This collaborative role can involve journalism in supporting the national interest or even being patriotic.

Patriotic journalism is also a well-documented practice during scenarios of international violent conflict or in response to national security threats. Ginosar proposes four indicators of patriotic journalism: adoption of governmental/elite framing, avoidance of criticism of their government, expression of solidarity with their national community, and a disregard of the narratives and positioning of the other side ("the enemy") (2015, 292). For the purposes of this paper and its consideration of COVID-19, Ginosar's latter indicator can be understood as being associated with active disregard of the social drivers of zoonotic diseases (the

enemy), and disregard of the voices and narratives associated with these structural causes (in this case, voices calling attention to the social drivers). This makes particular sense if we consider how common the use of a war frame is in the coverage of infectious diseases, as we will discuss in more detail later. In contrast, the radical role described by Christians et al. is associated in this paper with the stress on human behaviour as the primary cause of the situation, since this behaviour can be understood as the "established order".

While some previous research focused on media coverage of emerging infectious diseases, to our knowledge none have analysed media framing of zoonotic diseases using the journalistic roles as defined above; neither have we found any that consider media coverage of the social drivers of zoonosis. Brown (2020) claims that the central discussions of the COVID-19 pandemic have been around probabilities (mostly mortality rates and rates of infection), and thus have mostly been kept within an epidemiological frame. Brown's paper, however, is not an empirical work. Two examples of empirical research that address ethical issues of media coverage of zoonotic spillovers are Hooker, Leask and King (2012) and Degeling and Kerridge (2013).

Hooker, Leask and King (2012) studied the case of Australian journalists' perspective on their coverage of the Avian Influenza and showed that, while they were critical about their work, they "remained uncritical of the status quo" and continued to deploy a logic embedded in the contemporary news media production process. Degeling and Kerridge (2013) included an animal perspective that is even more scarce in the literature. They studied the framing of flying foxes in the media during a Hendra outbreak in Australia and how these types of bats were portrayed — at first, as an environmental factor, but due to successive outbreaks, the last in 2011, as an invasive plague in a stigmatising and pathologising manner.

Typically, the existing literature on media coverage of zoonotic diseases shows that the media's role is extremely complex due to the difficulty of striking a balance between reporting correct information and not reporting it in excess; the risk of "infodemics", or a saturation of information, was considered evident in COVID-19 coverage in Spain, for instance (Masip et al. 2020). During the COVID-19 crisis, the general online media have played a key role in informing the general population, and news consumption has risen dramatically (Casero-Ripolles 2020). This, however, has posed a challenge, what Tabbaa (2010) called "two-footed driving": the need to be concerned, but not too concerned; that is, informing the general population with factual information rather than imposing a fear rhetoric. The media have been shown to have used alarmist framing and sensationalist perspectives in their coverage of recent zoonotic episodes (Dudo et al. 2007; Vasterman and Ruigrok 2013; Klemm et al. 2014) and the COVID-19 crisis is certainly no exception (Masip et al. 2020, Ogbodo et al. 2020).

The literature also shows the common use of war metaphors (e.g. Larson et al. 2005; Nerlich 2011) to describe the arrival and spread of these diseases, especially when the threat is more prominent on a personal or national level; a shift in this linguistic framing is that of the virus as a "killer" (Wallis and Nerlich 2005). The war frame can of course very easily connect with patriotism, as it has

happened in the case of COVID-19 coverage in Malaysia where "the spirit to fight the virus war together can be described via patriotic values" (Basir et al. 2020). The war frame has also been highlighted for the Chinese coverage of the COVID-19 (Gui 2021).

One last approach in the literature relevant to our research is that of the studies focused on the blame caused by "othering" in the news. In the case of the 2003 SARS outbreak, studies show blame was focused on the Oriental community and their living habits, which the Western press portrayed as lacking hygiene and in close relationships with live animals (Washer 2004). During the swine flu epidemic, Mexican pig farmers were blamed and stigmatised in the U.S. (McCauley et al.,2013). A discriminatory bias has also been identified in media coverage of the COVID-19 pandemic (e.g. Darling-Hammond et al. 2020; Wen et al. 2020).

3. Methods

The main goal of this research was to examine whether world press coverage of COVID-19 addressed the structural social drivers of zoonotic infectious diseases (and thus adopted a radical role), or whether these drivers tended to be ignored in favour of adopting a more collaborative, or even patriotic role, or by adopting just a facilitative role through focusing on the epidemiological issues and reflecting on the consequences of the disease and the measures taken to fight the crisis, as facilitated by the health public services.

To this end, we conducted a search in Factiva for English-speaking articles published for the period from 1 January to 31 December 2020, including all publications (more than 32,000 sources) and all sources (publications, web news, blogs, and pictures and multimedia). We conducted two different searches: one in the full articles and one in headlines and lead paragraphs (the former to obtain all mentions and the latter to obtain the articles likely to focus on the topics pointed at by the keywords).

From the scientific literature about the socio-structural drivers of zoonosis (UPF-CAE 2021) we were able to create a list of categories for coding the social drivers (the radical role). In this case, the full list of categories searched includes:

Animal link: "COVID-19" AND "zoonosis OR zoonoses OR zoonotic", "animal NOT vaccine", "animals AND diet", "wet market", "farm/farmed", "animal rights", "animal ethics", "wildlife", "hunting", "bushmeat", "lab-leak", and "lab accident".

Demographics: "COVID-19" AND "urbanization/urbanisation", "industrialization/industrialisation", "human expansion", "overpopulation", "human migration", and "demographics".

Socioeconomics: "COVID-19" AND "poverty", "scarcity", "socioeconomics", "famine", "hunger", and "unemployment."

Environmental: "COVID-19" AND "climate change", "climate crisis", "climate emergency", and "global warming".

Globalization: "COVID-19" AND "globalization/globalisation" and "mobility".

Entertainment: "COVID-19" AND "entertainment" and "tourism".

We also coded as a transversal keyword "COVID-19" AND "human behaviour/behaviour".

To identify the articles likely to adopt the other two journalistic roles, that is to say, with a focus on epidemiological issues (the facilitative role) or those adopting a unity frame (including a war frame), we coded the appearance of:

Epidemiological drivers (facilitative role): "COVID-19" AND "vaccine", "medicine", "lockdown", "immunization", "mask", "death", and "infection".

Unity frame (patriotic role): "COVID-19" AND "solidarity", "unity", "patriotism OR patriotic", "fight against the 'COVID-19' OR fight against the virus OR fight against the coronavirus", and "war against 'COVID-19' OR war against the virus OR war against the coronavirus".

We considered hits in Factiva, without filtering them, as a preliminary indication of what roles were most present throughout the sample. For the social drivers in particular, this means we might have missed the assessment included in the mention and thus also missed, for example, an article mentioning a human behaviour in a positive way, not problematising it in relation to COVID-19. In addition, the hits may include not only a discussion of our keywords for COVID-19 (e.g., how globalisation impacts COVID-19) but a discussion of the impact of COVID-19 on our search topics (e.g., how COVID-19 impacts globalisation) or no relation between the two keywords whatsoever, in spite of appearing in the same text. Although we cannot accurately know the impact of these limitations on the content analysis, their extent varies considerably depending on the categories searched; we took this into account in the presentation and discussion of the results. To further minimise these limitations, we conducted searches of headlines and lead paragraphs and gathered complementary information as provided automatically by Factiva, including subjects, sources, regions, and industries. We used this information to build a list of mentioned stakeholders that helped us to identify what voices were facilitated through the coverage, and also to confirm our own analysis. Our results proved to be consistent with the automatic results provided by Factiva and with previous literature regarding journalistic roles.

As for further limitations of the method, we acknowledge that Factiva cannot provide comprehensive detail of all types of publications, since many non-mainstream publications are not included in the database. This produces a bias regarding the ethical approach, since a number of publications concerned about the ethics of human behaviour, and particularly about the ethics of our treatment of other animals, are independent outlets that do not appear in Factiva. However, Factiva does include all major newspapers and websites and, therefore, it is useful for getting a glimpse of the coverage of the most widely-read English-speaking outlets in the world. Other limitations, however, persist — for example, the fact that coverage may vary according to language.

4. World Media Coverage in English of COVID-19

The 2020 world news coverage in English of the COVID-19 crisis, as available in Factiva, was clearly massively engaged with epidemiological issues: lockdowns, deaths, infection, medicines, masks, vaccines, and immunisations were concepts found in more than 3.1 million articles, twice the number of articles that include mentions of social causes in the full text. When headlines and lead paragraphs are observed, what means more likelihood the concepts were central topics in the articles, the mentions to epidemiological issues are 4.5 more abundant than that of social causes (Figure 1). The reliability of these results is high regarding our research goals, since the stance adopted by the media is of no relevance to the finding — whether coverage was for or against the use of masks, for instance, is irrelevant. Lockdowns, vaccines, deaths, and infections are by far the most frequently found concepts in the sample, which can reflect either controversy or just saturation of information (Figure 2). Immunisation is the least frequently found concept both in full texts and headlines/leads. It must be noted that for epidemiological issues, we conducted searches for only seven keywords, compared to the 33 keywords used to identify articles that likely address the social causes. Whatever the reasons for the focus of media coverage of the outbreak, it seems clear that in 2020 the news predominantly discussed epidemiological issues.

Figure 1: Number of articles per category in full texts and headlines/leads (in Factiva 2020)
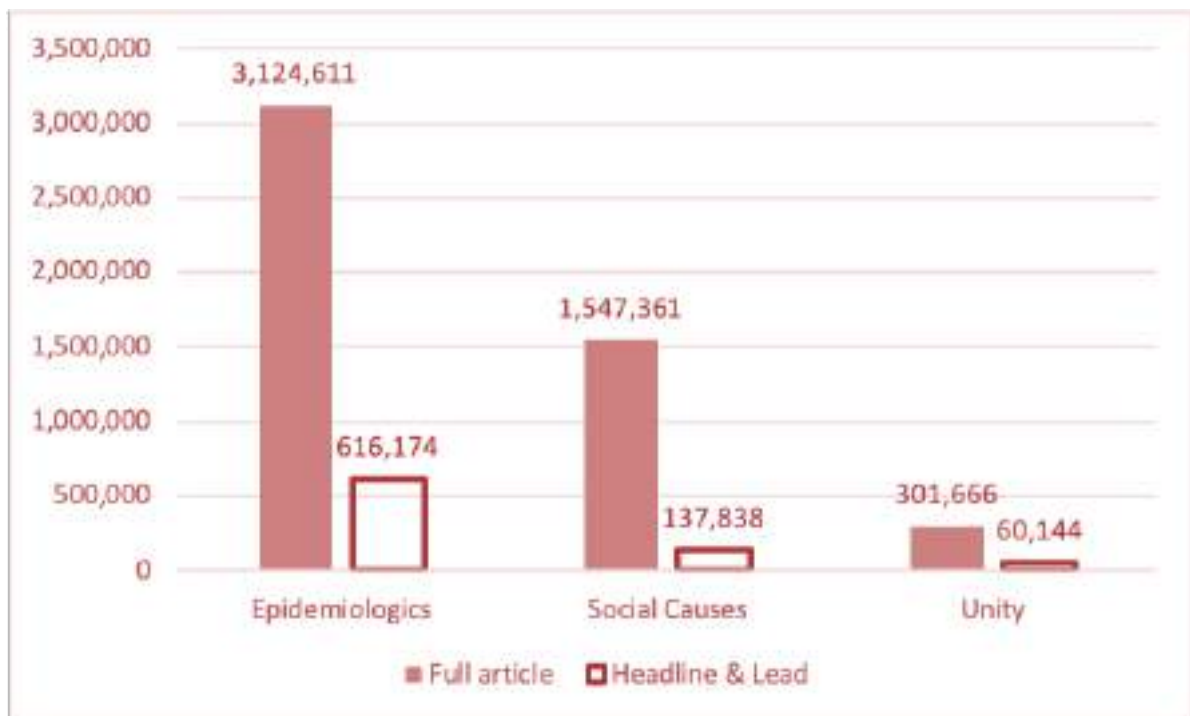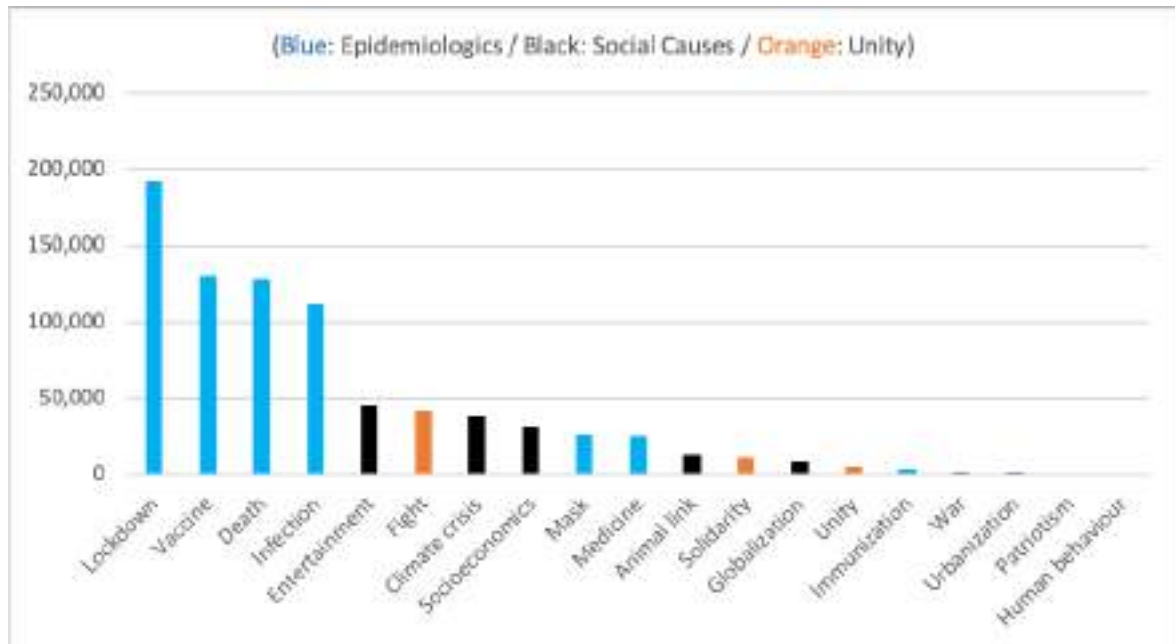
Figure 2. Number of articles per keyword in headlines/leads (in Factiva for 2020)


Note: "Fight" and "War" were searched in a compound manner (see Methods section). Social causes keywords were combined into categories. Words with double spellings (e.g. globalization/globalisation) were searched using both spellings.

Figure 3. Distribution of articles with mentions of social causes in headlines/leads (in Factiva 2020)
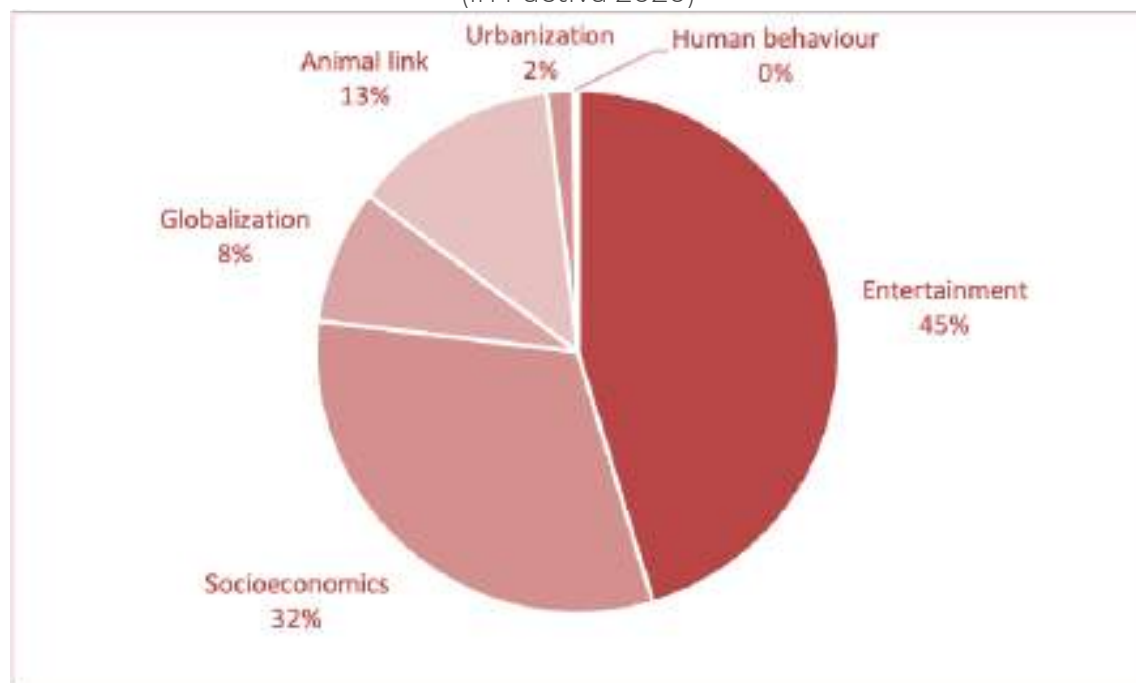
As for the social causes, our confidence in the results is weaker. In the case of the three most recurrent concepts — socioeconomics, climate, and entertainment (Figure 3) —, which show the highest degree of frequency of all social triggers, the stance taken by the outlets is of relevance to our purpose. Therefore, because this information is missing from our content analysis, we can only take these very frequent mentions with caution, since they probably involve a high percentage of correlation that is of no interest to us — that is, a high number of articles may not be mentioning these factors as structural causes of COVID-19, but rather the opposite, discussing the impacts of COVID-19 on socioeconomics, entertainment, and the climate. This weak confidence reinforces the media coverage's focus on epidemiology, since the number of articles discussing structural causes might be much lower in comparison.

Figure 4: Distribution in of articles with mentions of the animal link in headlines/leads (in Factiva 2020)
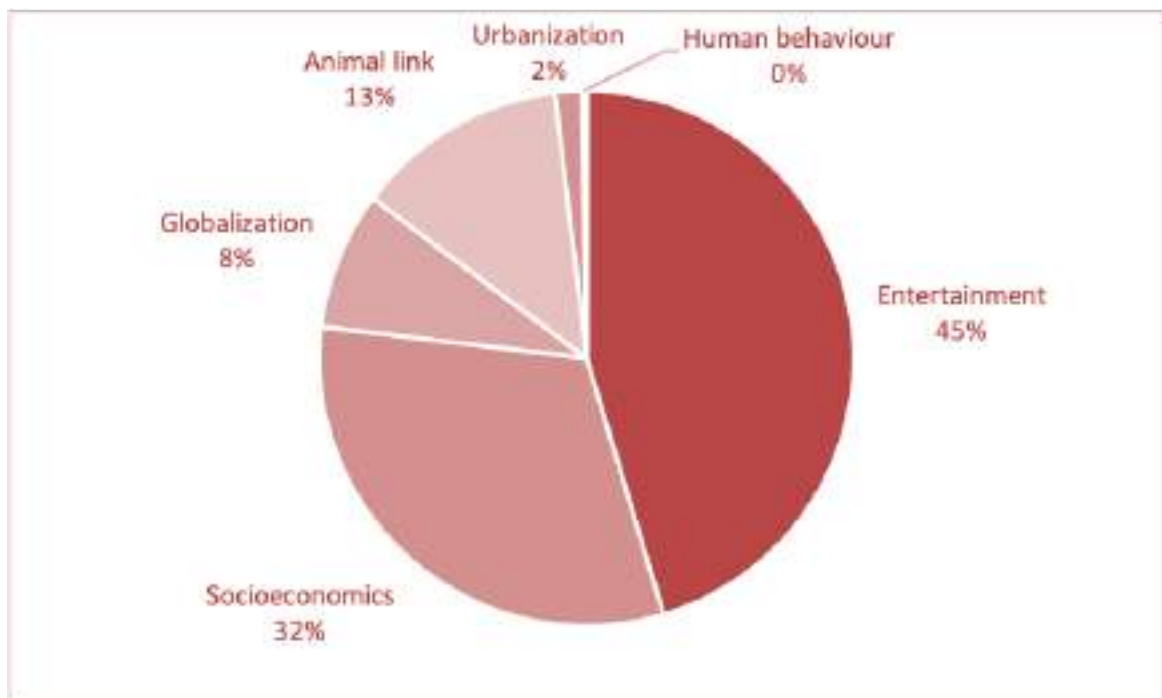
As for the rest of key concepts coded for social causes, only the mentions of the animal link and of globalisation hold a meaningful presence (9.30% and 6.02%, respectively, of all the mentions of social causes in headlines and lead paragraphs), while urbanisation and human behaviour are scarcely mentioned at all (Figure 5). However, this group of concepts may be more informative. For instance, a random look at the articles including mentions of "human behaviour" shows that most of them seem to discuss two interrelated main issues: how the virus will change future human behaviour and how human behaviour during the crisis is crucial to mitigating the risk of transmission and deaths. These two stances do not present human behaviour as a structural cause of the pandemic,

but implicitly accept the important role of human behaviour in the event. However, mentions of human behaviour appear only in 303 headlines/leads, which makes them almost statistically imperceptible.

Figure 5: Sectors of the most-mentioned industries in % (elaborated after the automatic analysis by Factiva for 2020)
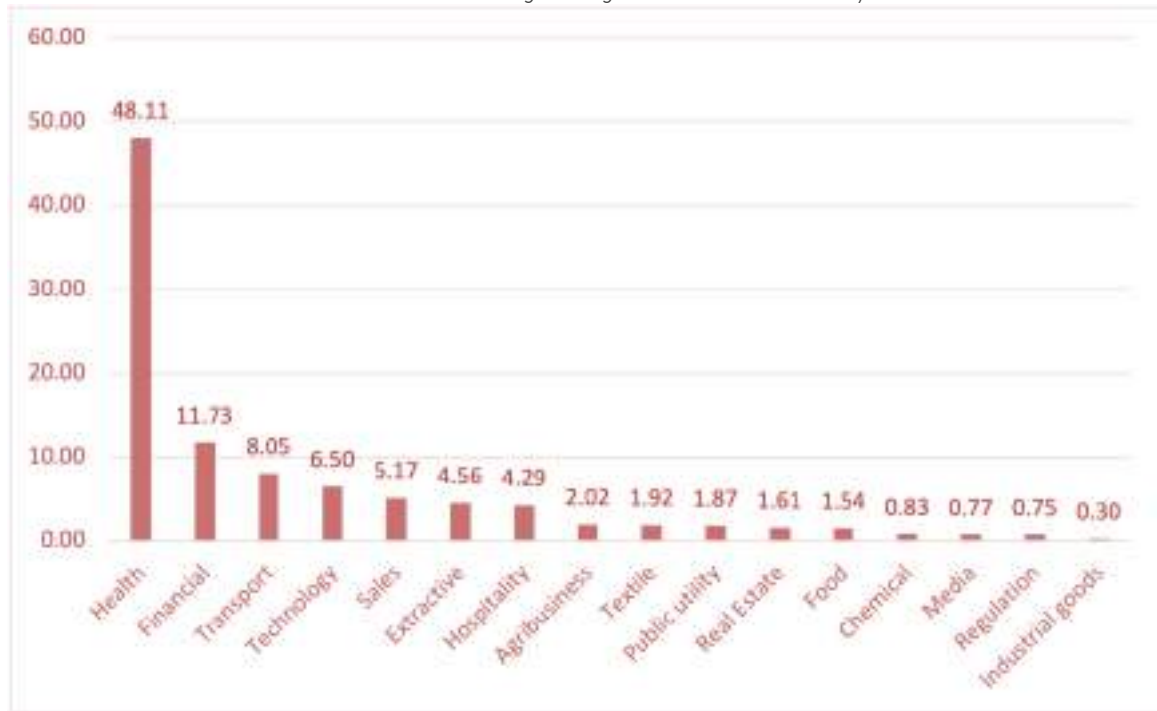

As for the "animal link", the results show a meagre attention to this important driver. Only 12,798 articles included keywords related to it in their headline/lead paragraph, compared to the 600,000 articles with mentions of epidemiological issues in headlines and lead paragraphs. In these results, a direct mention of nonhuman animals (not linked with vaccine tests), is found in 6,159 articles, while the second most important mention is of "wildlife" (2,623 articles, 20.53% of all the animal link results) (Figure 4). In only 1,570 articles do we find a mention of ethics, while the rest of the keywords obtain negligible results. Other mentions of the original social source of the pandemic (such as "hunting" or "wet market") or of potential drivers of future pandemics (such as "farm/ed animals" or "bushmeat") are anecdotal. As for a link to diet in general, only 36 articles included the word "diet" in their headlines or lead paragraphs together with a mention of COVID-19. However, by far, the least discussed topic is the link of zoonosis with laboratory accidents — only 20 articles included this topic in their headlines/leads (0.32% of the articles included in the animal link search).

These mentions of the animal link in headlines and lead paragraphs may reflect some sort of discussion of the animal-based diet in relation to COVID-19. However, we can't confirm all of them do so, therefore the real discussion of the topics might be even less frequent than our analysis suggests. Whatever the degree of discussion is, however, these results clearly point at a lack of

problematisation of the role of animal exploitation related to zoonosis in the world media coverage in English.

Interestingly, these results are aligned with the automatic analysis produced by Factiva regarding the subjects, industries, and institutions mentioned in the articles. Regarding subjects, Factiva informs that 63.2% of all articles in our search are devoted to health issues, including the following categories: coronavirus, immunisation, health service, medical conditions, research, treatments, geriatric health, and diseases. According to Factiva, the second most addressed subject in the articles is politics (10.44%); the third is business (9.59%) (Figure 5). Also, almost half of all mentions of organisations in the articles are related to the health sector, with the World Health Organization and Pfizer leading the mentions (Figure 6). By contrast, the industries related to sectors involved in the social causes of zoonosis are scarcely mentioned (for instance, industries related to the agribusiness account for only 2% of the mentions). As Figure 6 shows, the most mentioned institutions in the articles correlate with the epidemiological dimension of the pandemic, being mostly public health bodies or private pharmaceuticals (or their vaccines).

Figure 6: Most-mentioned institutions in % (elaborated after the automatic analysis by Factiva 2020)
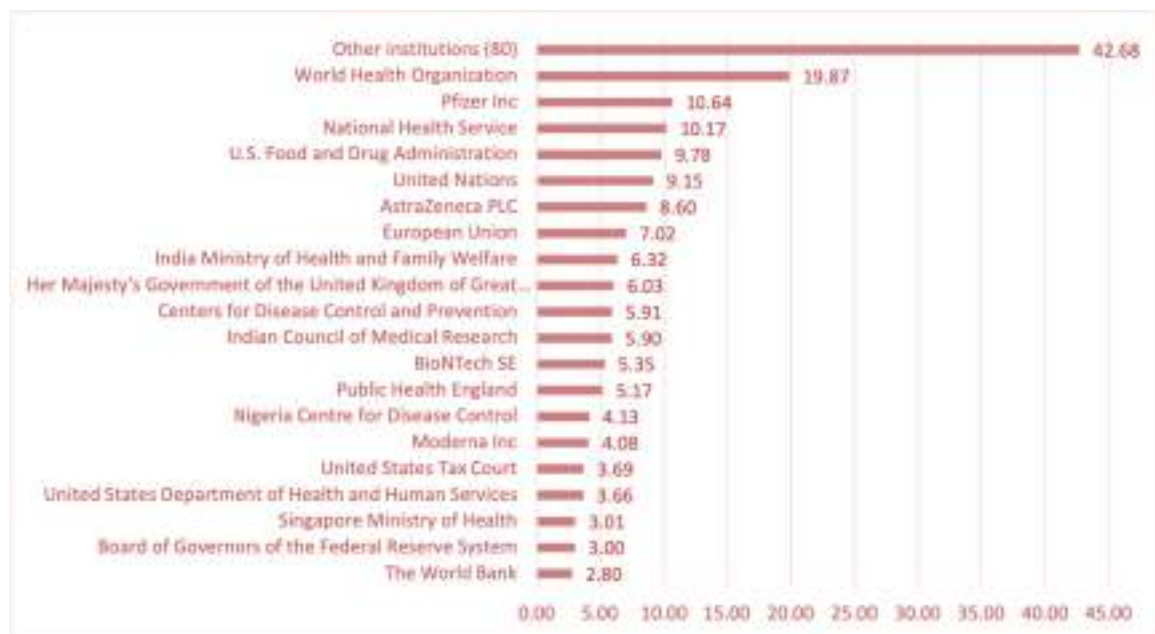
The automatic analysis by Factiva also shows that 40% of all the mentions of world regions were to Asia, with 31% to North America and 16% to Europe (Figure 7). The language bias of our sample may explain these results, along with the fact that COVID-19 spread from China.

Finally, we coded the unity frame to measure the patriotic or collaborative role of the news (Figure 8). We found 301,666 articles mentioning fight, solidarity, unity, patriotism, and war in the full text and 60,144 articles stressing these topics in the headlines or lead paragraphs. Of all, "fight" was the metaphor most used and "war" the least. In spite of the small number of articles using these metaphors,

compared to the articles mentioning epidemiological issues or social causes in general, it is important to note that, overall, mentions of the unity frame were far more frequent than all the mentions of the animal link. In fact, just one unity topic, the "fight" metaphor, is three times more frequent in headlines and leads than all mentions of the animal link, which was searched through 12 diverse codes. Therefore, it seems to be quite clear that the media used the war/unity metaphor much more consistently — not merely more frequently — than they have informed about each of the structural triggers of pandemics.

Figure 7: Most-mentioned regions in % (elaborated after the automatic analysis by Factiva for 2020)
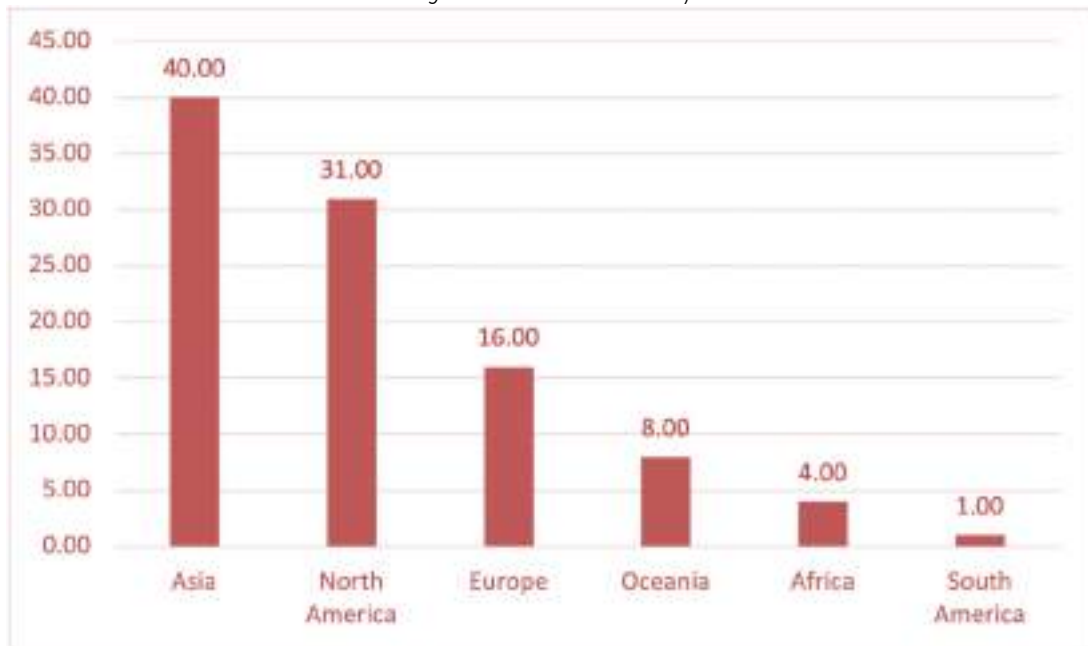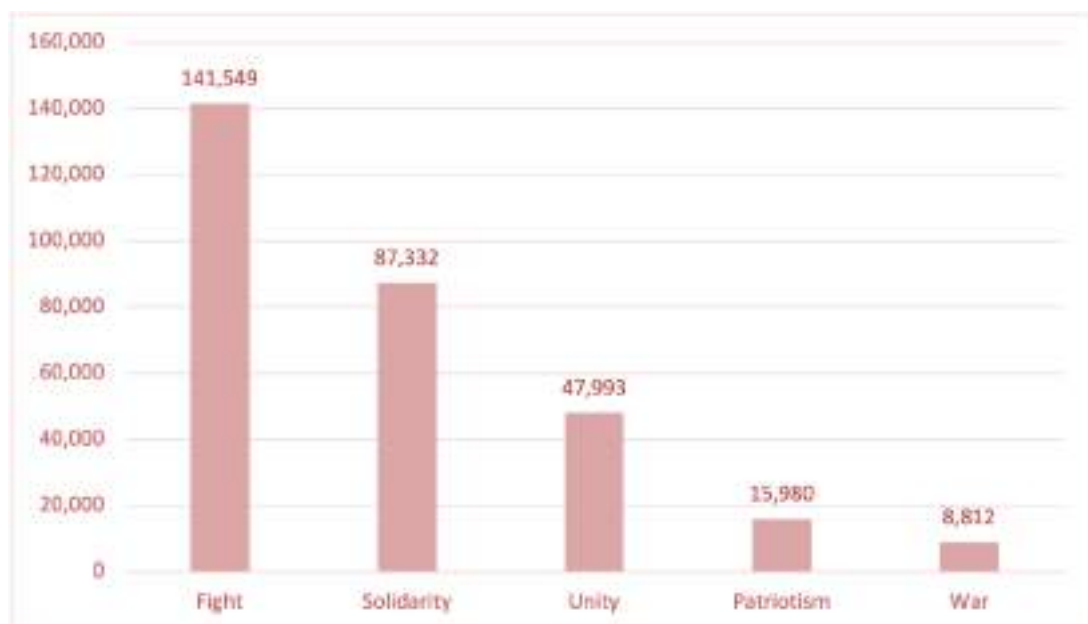

Figure 8: Number of unity metaphors found in full texts (in Factiva 2020)

Furthermore, the unity promoted through the war metaphor correlates with our findings on the most mentioned institutions in the sample (Figure 6). The heavy presence of governmental organisations and public health bodies, along with the total absence of independent or radical voices, point to the media's adoption of the governmental/elite framing, and thus at a patriotic-oriented coverage of the pandemic.

5. Conclusion: The media's forgotten link

The research presented here does not include a qualitative analysis and must be considered only as an exploratory attempt paving the way for future research. However, despite the preliminary nature of our findings, some relevant evidence has been found that suggests a link forgotten by the media.

The 2020 media coverage of the COVID-19 crisis in our sample seems to have been massively focused on epidemiological themes, with social triggers receiving scant attention and unity, war-framed messages being limited but consistently used. Our results point at a media narrative strongly dominated by governments, public health institutions, and private pharmaceuticals, and lacking a discussion of the root, structural causes of the crisis. This aligns with Hooker, Leask and King's study that showed that the media remained uncritical of the status quo during the coverage of one avian influenza episode (2012). In a zoonotic crisis, this status quo may be related to maintaining the state of affairs in which the interests of humans are seen as having a higher priority than the equally important interests of nonhuman animals. This ethical bias is, according to animal ethicists, what allows for the human disregard of other animals and which produces the concomitant consequences for all, both human and nonhuman alike.

The scientific literature shows a robust consensus over the nature of the structural drivers of zoonotic diseases. It also shows that the latter are closely related to human behaviour, and particularly the animal agriculture/diet vector, whether directly or indirectly. Although less mentioned by the scientific literature, the risk of laboratory leaks through accidents is also an issue that definitely deserves public scrutiny. However, the media coverage analysed in our sample scarcely mentions the animal link. It would appear logical that the epidemiological concern attracts much media attention, because of the need to adopt quick emergency decisions in a crisis. However, the year-long duration of the period analysed, seems to be sufficient to allow for some discussion of the structural problems to emerge at some point. This, however, did not happen. The media's attention over the course of 2020 was mostly devoted to the epidemiological impacts, prevention, and short-term measures and cures, with vaccines and the lockdown co-opting a large portion of the COVID-19 coverage. But none of these themes produces any change in the status quo; in fact, they actually reinforce it — vaccine research, for instance, experiments with nonhuman animals, thus reinforcing our discriminatory beliefs toward them, while vaccine shots allow the population to feel they can just go on with their previous habits, with no need for behavioural change. We therefore conclude that the media did not adopt a radical stance, but rather a facilitative and collaborative role. In

addition, the homogeneous use of a war metaphor, blaming the virus but not the most important originator of the situation, human behaviour, are consistent with a patriotic role, here a kind of species-patriotism, that denies any responsibility of our species and of any urgent need to discuss our anthropocentric stance toward the planet. Patriotism is further supported by the overwhelming mentions of governmental organisations.

This species-patriotism is probably the most relevant preliminary conclusion this research contributes to, by expanding the understanding of the literature focused on the use of war rhetoric in the coverage of infectious diseases. This news coverage in no way is reflecting the scientific discussion for the structural roots of the zoonotic crisis. The ecological disruptions we create in nature pave the way for pathogens to further spread and mutate. The encroachment of humans into natural habitats brings human populations closer to the disrupted ecosystems. The socioeconomic and demographic problems triggered by our unequal societies generate large human groups lacking proper living conditions with access to hygiene and public health care. Industrial animal farming generates enormous amounts of stressed and permanently immunocompromised animals, which also facilitates the creation of new pathogens and cross-species transmission. Finally, the role laboratories experimenting with animals may play in the spread of zoonosis remains unaddressed.

Of course, such a situation calls for an urgent ethical reflection on the higher impact of infectious diseases on vulnerable human communities. However, there is an even more pressing discussion missing in the conversation. This is related to the ethical challenges of the causes — not the consequences — of zoonosis. This involves a critical reflection on our practices, which not only propel infectious diseases, but do so by harming billions of beings, in farms, laboratories and nature.

Because of the relationship of zoonotic risks with affluent habits, rather than to hunting for the survival of poor human communities, the animal-based diet and the hazards of animal experimentation need to be problematised in the first place. Likewise, the socioeconomic circumstances that usually force vulnerable human communities into practices related to disease transmission also need to be urgently addressed, and these communities not blamed, but assisted toward a transition toward safe practices. Despite this, our findings show that the media are neglecting the structural drivers and not problematising the link between human behaviour and zoonotic diseases, and even less so the link between our treatment of other animals and zoonosis. Therefore, the media is not playing the radical role that is needed to challenge the status quo, which would actually point at the fact that the legacy media included in Factiva may be part of the problem rather than the solution.

The aim of this paper was to open a door for scholars interested in the media coverage of zoonotic diseases from a critical, structural standpoint, which ethically problematises the role played by human behaviour in the emergence of zoonoses. Further research, including research using qualitative methods, can contribute to our understanding of the reasons for the media's tendency to forget

this link, which seems to render invisible the primary responsibility of the human species in zoonotic crisis.

References

Andiman, Warren A. 2018. *Animal Viruses and Humans. How Lethal Zoonotic Viruses Spill Over and Threaten Us*. Philadelphia: Paul Dry Books.

Basir, Siti N. M., Mohd Zaini Abu Bakar, Fauziah Ismail and Junainor Hassan. 2020. "Conceptualizing on Structure Functionalism and Its Applications on Patriotism Study during Covid-19 Pandemic in Malaysia". *South Asian Journal of Social Studies and Economics* 6, no. 4: 1–7.

Bodenheimer, Miriam and Jacob Leidenberger. 2020. "COVID-19 as a window of opportunity for sustainability transitions? Narratives and communication strategies beyond the pandemic". *Sustainability: Science, Practice and Policy* 16, no. 1: 61–66.

Brown, Patrick. 2020. "Studying COVID-19 in light of critical approaches to risk and uncertainty: research pathways, conceptual tools, and some magic from Mary Douglas". *Health, Risk & Society* 22, no. 1: 1–14.

Casero-Ripolles, Andreu. 2020. "Impact of Covid-19 on the Media System. Communicative and Democratic Consequences of News Consumption during the Outbreak". *El Profesional de la Información* 29, no. 2: 1–11.

Christians, Clifford G., Theodore Glasser, Denis McQuail, Kaarle Nordenstreng and Robert A. White. 2009. *Normative Theories of the Media: Journalism in Democratic Societies*. Illinois: University of Illinois Press.

Darling-Hammond, Sean, Eli K.Michaels, Amani M. Allen, David H. Chae, Marilyn D Thomas, Thu T. Nguyen, Mahasin M. Mujahid and Rucker C. Johnson. 2020. "After 'The China Virus' Went Viral: Racially Charged Coronavirus Coverage and Trends in Bias Against Asian Americans". *Health Education & Behavior* 47, no. 6: 870–879.

Degeling, Chris and Ian Kerridge. 2013. "Hendra in the News: Public Policy Meets Public Morality in Times of Zoonotic Uncertainty". *Social Science & Medicine* 82: 156–63.

Dudo, Anthony D., Michael F. Dahlstrom and Dominique Brossard. 2007. "Reporting a Potential Pandemic". *Science Communication* 28, no. 4: 429–454.

Field, Hume E. 2009. "Bats and Emerging Zoonoses: Henipaviruses and SARS". *Zoonoses and Public Health* 56: 278–284.

Ginosar, Avshalom. 2015. "Understanding Patriotic Journalism: Culture, Ideology and Professional Behavior". *Journal of Media Ethics* 30, no. 4: 289–301.

Gruen, Lori. 2011. *Ethics and Animals*. Cambridge: Cambridge University Press.

Gui, Lili. 2021. "Media framing of fighting COVID-19 in China". *Sociology of Health and Illness* 43, no. 4: 966–970.

Hooker, Claire, Julie Leask and Catherine King. 2012. "Media ethics and infectious disease". In *Ethics and Security Aspects of Infectious Disease Control,* edited by Christian Enemard, and Michael J. Selgelid, 161–78. Farnham: Ashgate.

Klemm, Celine, Enny Das and Tilo Hartmann. 2014. "Swine Flu and Hype: a Systematic Review of Media Dramatization of the H1N1 Influenza Pandemic". *Journal of Risk Research* 19, no. 1: 1–20.

Larson, Brendon M. H., Brigitte Nerlich and Patrick Wallis. 2005. "Metaphors and biorisks: The war on infectious diseases and invasive species". *Science Communication* 26, no. 3: 243–268.

Lubens, Pauline. 2015. "Journalists and public health professionals: challenges of a symbiotic relationship". *Disaster Medicine and Public Health Preparedness* 9, no. 1: 59–63.

Masip, Pere, Sue Aran-Ramspott, Carlos Ruiz-Caballero, Jaume Suau, Ester Almenar, and David Puertas-Graell. 2020. "Consumo Informativo y Cobertura Mediática Durante El Confinamiento Por El Covid-19: Sobreinformación, Sesgo Ideológico y Sensacionalismo". *El Profesional de la Información* 29, no. 3: 1–12.

McCauley, Michael, Sara Minsky and Kasisomayajula Viswanath. 2013. "The H1N1 pandemic: media frames, stigmatization and coping". *BMC Public Health* 13, no. 1116: 1–16.

Nerlich, Brigitte. 2011. "The role of metaphor scenarios in disease management discourses: Foot and mouth disease and avian influenza". In *Windows to the Mind: Metaphor, metonymy and conceptual blending*, edited by Sandra Handl, and Hans-Jorg Schmid, 115–42. Berlin: De Gruyter Mouton.

Nibert, David A. 2013. *Animal Oppression and Human Violence: Domesecration, Capitalism, and Global Conflict*. New York: Columbia University Press.

Ogbodo, Jude Nwakpoke et al. 2020. "Communicating health crisis: a content analysis of global media framing of COVID-19." *Health promotion perspectives*, 10, no. 3: 257-269.

Quammen, David. 2012. *Spillover: Animal Infections and the Next Human Pandemic*. London: The Bodley Head Ltd.

Tabbaa, Darem. 2010. "Emerging zoonoses: responsible communication with the media-lessons learned and future perspectives". *International Journal of Antimicrobial Agents* 36, no. 1: S80–S83.

UPF-CAE. 2021. *Zoonosis. Informative and Scientific Resources*. Barcelona: UPF-Centre for Animal Ethics. https://www.upf.edu/web/cae-center-for-animal-ethics/zoonotic-pandemics

Vasterman, Peter L. M. and Nel Ruigrok. 2013. "Pandemic Alarm in the Dutch Media: Media Coverage of the 2009 Influenza A (H1N1) Pandemic and the Role of the Expert Sources". *European Journal of Communication* 28, no. 4: 436–453.

Wallis, Patrick, and Brigitte Nerlich. 2005. "Disease Metaphors in New Epidemics: the UK Media Framing of the 2003 SARS Epidemic". *Social Science & Medicine* 60, no. 11: 2629–2639.

Washer, Peter. 2004. "Representations of SARS in the British Newspapers". *Social Science & Medicine* 59, no. 12: 2561–2571.

Wen, Jun, Joshua Aston, Xinyi Liu and Tianyu Ying. 2020. "Effects of misleading media coverage on public health crisis: a case of the 2019 novel coronavirus outbreak in China". *Anatolia* 31, no. 2: 331–336.

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