



ORIGINAL PAPER

Media discourse on epizootic epidemics - a diachronic analysis

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Abstract:

This paper deals with both general and specific aspects of the manner in which Romanian media covered the epizootic epidemics between 2015 and 2020. The analysis was mainly based on the general ground of media framing theory. The media tone used in reporting these animal-specific diseases complies with the pre-crisis, crisis and post-crisis stages as identified by the literature. It should be emphasized that, in general, animal diseases and epidemics have been insufficiently covered by the media, the Romanian media making no exception. Our analysis also indicated that the main frames of Romanian coverage for epizootics are: economic repercussions, leadership, medical and scientific issues, political and legal matters. These frames indicate a detached approach of the subject, with interesting variations regarding the connections between information units and the general norms of media coverage. This research indicates a few remarkable aspects suggesting current changes in the journalistic paradigm. The research also draws attention to the need for an increased awareness for the further communication crisis concerning animal diseases and epidemics.

Keywords: *Epizootic diseases; mass media; animals; media frames; Romania.*

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Introduction

The subject regarding the media coverage of public health crises has often been debated in the specialized literature. Glik (2007), Yu, Frohlich, Fougner, and Ren (2011) showed that, during a public health crisis, the media plays a key-role in the public communication. Moreover, journalists make serious efforts to effectively communicate the risks implied by the epidemics by looking for comprehensive ways to present complex material, that is filled with confusion and uncertainty, thus making it difficult to understand by an ordinary audience (Calman, Bennett & Corns, 1999 ; Berry, 2004).

In general, the specialized literature associates epizootic diseases and zoonosis with the existence of major public health crises (Fink, 1986; Mitroff, 1994; Birch, 1994; Mitchell, 1986; Woodcock, 1994; Ungar, 1998). The cycle of a crisis can be classified in various ways. According to Fink (1986), there are four stages in the life cycle of any crisis: prodromal, acute/crisis break out, chronic, resolution. In an alternative classification, Mitroff (1994) distinguishes five stages in any crisis: signal detection, probing and prevention, damage containment, recovery, learning.

In his classic study regarding the stages of outbreak and spread of an infectious disease, Ungar (1998) considers that there are three phases to any unfolding epidemic scenario, such as: the "alarm" stage, during which fearful claim making prevails; the "mixed messages" stage, during which the threat continues, being moderated by reassurance elements; the "hot crisis and containment" stage, which highlights the efforts to undo the most frightful elements of the pandemic interpretive packages. As far as the media is concerned, in order to become newsworthy, according to Moeller (1999), any disease must satisfy certain standards called "Ebola standards" - defined by: sensationalism, prominence, novelty, controversy, emotional appeal, significance and proximity. In general, the media is interested the problematic of diseases and covers not only human public health crises, but also those of a zoonotic nature (Peters et al., 2006; Roche & Muskavitch, 2003).

Any public health crisis (including epidemics) leads to complex, non-linear interactions between social, political, psychological systems (Seeger and Reynolds, 2008). In an environment characterised by rapid change, such as the epidemics, communication raises a number of challenges for both the public and the media (Coombs, 1999). This is because, as Roche and Muskavich (2003) point out, much of the public's understanding of infectious diseases comes from information provided by the media. Moreover, when people want to learn about disease prevention, they seek medical and health-related information from non-medical sources such as the media (Lewis et al., 2012; Ramirez et al., 2013).

The analysis on the media coverage of public health crises has been primarily based on the general media framing theory (Entman, 1993, 2007; Iyengar, 1994; Semetko & Walkenburgh, 2000). Simultaneously, over time, some studies have developed special categories of frames dedicated to the analysis of media coverage of crises. A typology of frames (consequences, action, uncertainty, reassurance, conflict, new evidence) was used by Birnbrauer, Frohlich and Treise (2015) and Liu and Pennington-Gray (2015) in their studies. A typology of crisis-oriented frames (scientific dishonesty, scientific explanation, criminal activity, political advocacy) was proposed by Bowe, Ohita, Terracina-Hartman and Chao (2014). In his attempt to interpret the stages of crisis as frames, Harris (2016) formulated a typology comprising three categories of frames: pre-crisis, crisis and post-crisis. In terms of how diseases have been categorized

by the media, the specialized literature shows that dominant health-related frames have a wide variation, ranging from social responsibility, to conflict, to medical discoveries, causes, prevention and treatments (Andsager & Powers, 1999; De Vreese, Peter & Semetko, 2001; Park & Reber, 2010; Viswanath & Emmons, 2006).

Even in the case of a single epidemic, the type of media coverage can influence the ways in which the disease is presented. Thus, according to Gao, Zhang and Sadri (2011) in the US, the H1N1 outbreak was pictured by traditional media and blogs using the following frames: blame and responsibility, action, economic consequences, new evidence, conflict, severity, reassurance. In Singapore, according to Lee and Basnyat (2013), the same disease (H1N1) was covered by the media using the following main frames: basic information, preventive information, treatment information, medical research, social context, economic context, political context, personal story and others.

In recent years, a number of studies have been concerned with the media coverage on topics related to agriculture, food safety and farming. This is the case for studies devoted to biotechnology, EColi infection, or analysis of the way in which a number of food-borne or zoonotic diseases have been presented in the media (Smith, Young & Gibson, 1998; Nisbet & Lewenstein, 2001; Ten Eyck, 2000; Fisher et al., 1994). Media's interest in these topics is strictly related to the fact that the audience members feel as insecure in case of a food-related or zoonotic disease as they feel in case of a strictly human-transmitted disease. In addition, information about agricultural crises or of a zoonotic nature are far more ambiguous (Mitchell, Bakewell, Jackson & Heslin, 2015). At the same time, analyses of media coverage of zoonotic diseases show that the media (especially the newspapers) have not fully reported the risks associated with these diseases (Dudo, Dahlstrom, & Brossard, 2007; Roche & Muskavitch, 2003).

The media coverage of public health crisis epidemics of an epizootic and zoonotic nature differed very much, depending on a number of political and geographical factors. As far as the media coverage of health is concerned, some researches show that the use of a negative tone is commonplace in the presentation of news stories and more than half of health-related news stories have a negative tone (Brodie, Brady & Altman, 1998; Marcantoni et al., 2011). The negative nature of health-related news either implies a discourse in which governments are blamed for the crisis (Kuttschreuter et al., 2011) or involves news delivered by journalists in a purely sensationalist tone, focused on words such as: "deadly", "scare", "panic" (Carslaw, 2008). Zoonotic outbreaks have thus often been analysed as dramatic events (Grabe, Zhou, & Barnett, 2010; Vettehen et al., 2005; Dudo, Dahlstrom, & Brossard, 2007). However, it is unclear whether this type of media presentation is also specific to diseases of an epizootic nature, given the extremely low number of studies of this type.

A second direction that we identified in the analysis of specialized literature is the lack of clear results regarding the relationship between textual information and the formal features of the media coverage (images, language, personalized narratives included in media presentations or photographic effects) (Klemm, Das & Hartmann, 2016). As far as the media coverage of epizootic diseases is concerned, we considered such an analysis essential because the two families of textual elements influence risk perceptions both in terms of information processing and subsequent assessment of the situation (Vischers, Meertens, Passchier, & De Vries, 2008; Zillmann, 2006). By using the already existent analysis on epizootic diseases, the present article aimed to discover the specific aspects of the way in which the Romanian media presented diseases of a strictly animal nature between 2015 and 2020.

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Methodology

Given the lack of previous studies related to the way in which epizootic diseases have been presented by the media, our study focused on an inductive approach of the topic. The advantage of this perspective lies in the ability to capture the diversity of ways to present animal diseases that can be identified in the sample of analysed articles. The research focused on the following question: "What were the particularities of the way in which the Romanian media covered epizootic diseases during 2015 and 2020?"

In our analysis, we included all the online media articles that addressed the issue of epizootic diseases in Romania and were published during January 1, 2015 and December 31, 2020. Unlike other studies (Roche, 2002; Hellsten & Nerlich, 2010; Shan et al., 2013; Rim, Hong Ha & Kioussis, 2014), in analyzing the Romanian media, we did not have access to Lexis Nexis Academic. Therefore, like in other studies (Birnbauer, Fröhlich & Treise, 2015; Meisner, 2017), we used the Google Chrome search engine to identify articles by using keywords. As keywords, we had the epizootic diseases included in the official documents of the Romanian Ministry of Agriculture, Food and Forestry, such as: "Foot and mouth disease (FMD)"; "Classical swine fever (CSF)"; "African swine fever (ASF)"; "Swine vesicular disease (SVD)"; "Newcastle disease (ND)"; "Bovine fowlbrood"; "Peste des petits ruminants (PPR)"; "Vesicular stomatitis (VS)"; "Blue tongue disease"; "African horse sickness (AHS)"; "Equine viral encephalomyelitis"; "Teshen disease"; "Avian influenza"; "Sheep and goat pox"; "Lumpy skin disease"; "Rift valley fever"; "Contagious bovine pleuropneumonia" (Ministry of Agriculture, Food and Forestry, 2002).

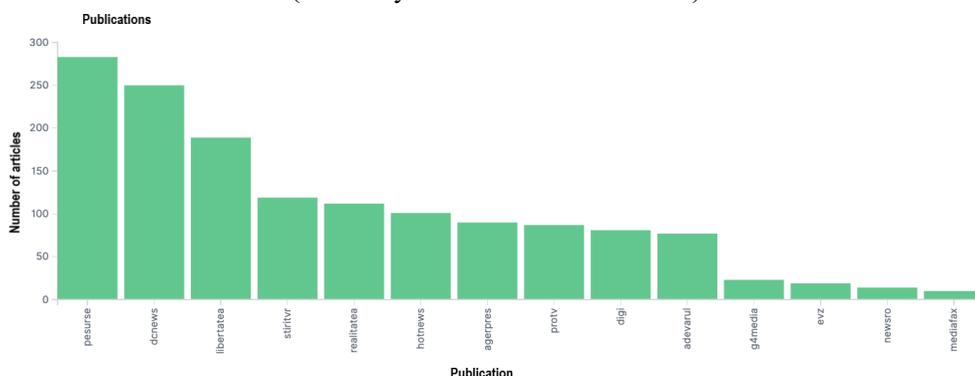
Sample

Our analysis consisted of 1455 articles published in the Romanian online media during January 1, 2015 and December 31, 2020.

Data analysis

According to our analysis, the highest number of articles related to animal diseases were published by the "Stiri pe surse" website, followed by an adjacent website - "DC News" - and the "Libertatea" newspaper (See Figure 1).

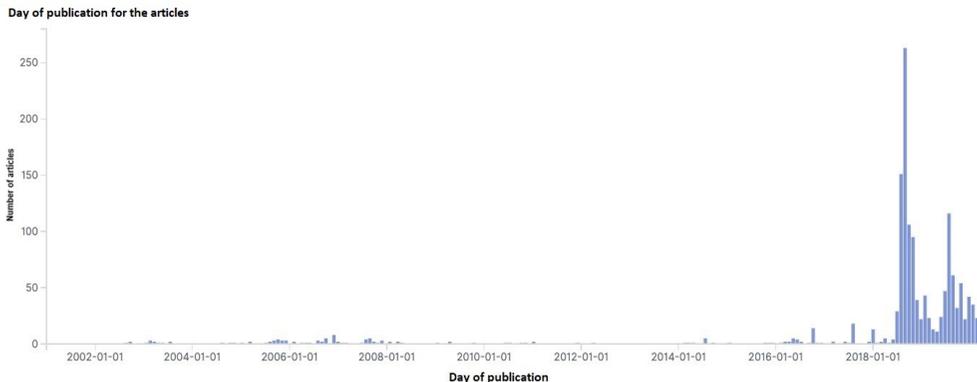
Figure 1. Frequency of epizootic disease coverage by different Romanian media (1 January 2015-31 December 2020)



Regarding the period of time during which the Romanian media published articles on epizootic diseases, the dataset indicated that during 2015 and 2017, the

frequency of their appearance was extremely low, with the number of press materials reaching its peak during 2018 and 2019 (see Figure 2).

Figure 2. Time period during which the Romanian media published articles on animal diseases (1 January 2015-31 December 2020).



The African swine fever epidemic was the main reason for an exponential increase in the number of articles published by the Romanian media regarding the epizootic diseases, at the end of the analysed period (2018-2019). This had direct consequences on the number of pigs in peasant households and Romanian farms as well as major economic and social implications. In our analysis, we were also interested in identifying the main terms used in the titles of articles on epizootic diseases. The results thus indicated that the phrase "food safety" appeared with the highest frequency, being followed at a great distance by the names of cities ("Subpadure", "Craiesti"; "Paucisoara"; "Abus"" etc.) or by the names of politicians ("Sorina Pintea"; "Ludovic Orban") (See Figure 3).

Figure 3 - Frequency of occurrence of certain words or phrases in the titles of articles on epizootic diseases (1 January 2015-31 December 2020)

Frequency of occurrence of certain words in the titles of the articles



A question that we also sought to answer through our analysis was: "What was the vocabulary used in these articles?". According to the collected dataset, the most

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frequent words encountered in media materials related to epizootic diseases were "DSVSA" (acronym for "Veterinary Health and Food Safety Directorate"), "ANSVSA" (acronym for "National Veterinary Health and Food Safety Authority") and "ASF" (acronym for "African Swine Fever") (See Figure 4).

Figure 4- Frequency of occurrence of certain words or phrases in articles related to animal diseases (1 January 2015-31 December 2020).

Frequency of occurrence of certain words in articles



Discussions

From a current, broad social perspective, epidemics are not a problem that strictly subscribes to a crisis in public health, but can, and should be decoded as a specific narrative based on the iconic image of the medieval plague (Alcabes, 2009). In the case of the zoonotic epidemics (as was the case of the mad cow epidemic), Ten Eyck (2000) shows that the link between a disease that is deadly to humans and food seems to make this type of disease an ideal media story even in the absence of clear scientific evidence of virus transfer from animals to humans. This also becomes obvious in the case of the sample included in our analysis where "food safety" has had the highest use in the Romanian media headlines as these diseases, by excellence, manifest themselves mainly in animals without being transferred to humans.

On the other hand, as some studies show (Powers & Gong, 2008; Wallis & Nerlich, 2005), the media covers diseases in different ways, these differences being conditioned by political, economic, social and geographic factors. For example, SARS has been pictured as a Hong Kong government failure, and blame has been placed on human agents (Powers & Gong, 2008). However, in the UK, it was portrayed as a "killer", a deadly and uncontrollable force of nature (Wallis & Nerlich, 2005). In our case, there is a clear imbalance in the presentation of diseases of an epizootic nature, with the impact of African swine fever taking way bigger proportions compared to other animal-specific diseases.

Conclusions

As Reynolds and Seeger (2014) show, during epidemics, mass communication is the main source of information for the public. In the event of an epidemic, the media plays the role of a risk amplifier (Kasperson, Kasperson & Pidgeon, 2003). Moreover, from a communicational point of view, epidemics tend to become newsworthy because they are mysterious, dramatic, spread rapidly, lead to a high number of deaths, and have the capacity or potential to create economic and political catastrophes (Lee, 2008).

Infectious diseases are increasingly important to both scientists and the public, especially the zoonosis (Wobeser, 2006). In a study conducted on 335 infectious disease events between 1940 and 2004, Jones et al. (2008) found that 60.3% of them had a zoonotic origin, out of which 71.8% originated in wild animals (such as SARS and Ebola). The increased incidence of these diseases over time is due to a number of factors, out of which the most important being the following: the demographic explosion, an increased frequency of natural movements of humans and animals, the destruction of natural habitats for wild animals due to urban development (Chomel, Belotto, & Meslin, 2007; Wobeser, 2006).

From the point of view of the relationship between zoonotic crises and the agro-food industry (Ashlock, Cartmell & Kelemen, 2006; Caplan, 2000; Miller, 1999), the negative impact of the animal-borne diseases topic is emphasized as an industry crisis. For example, as the UK studies show, the media coverage of the BSE crisis contributed to a decrease in beef consumption (Caplan, 2000), with a reduction of 28% in 1990 and of 40% in 1996 (Miller, 1999).

As far as our analysis is concerned, it is obvious that the frequency of media coverage of epizootic diseases in Romania has depended on the occurrence and manifestation of these phenomena in the real world, and the majority of press materials on the subject were published along with the outbreak of African swine fever epidemic in our country (2018-2019). At the same time, the vocabulary used in the articles included in the studied sample was focused on the impact of epizootic diseases on humans and less on animals.

The structural ambiguity of media coverage of agriculture-related crises partly derives from the specifics of the work that was conducted by professionals in the field. Thus, in the US, the studies conducted by White & Rutherford (2009) and King, Cartmell and Sitton (2006) show that most journalists have low levels of agricultural literacy, which influences the way they present information in the field. One possible outcome of this state of affairs that has not previously been explored in the specialized literature is the influence of this low level of agricultural literacy over biased or incomplete coverage of agricultural issues. Thus, in the case of epidemics directly related to the agricultural sector (e.g. Bovine Spongiform Encephalopathy), research by Peters et al. (2006) and Roche and Muskavitch (2003) show that there has been a distortion and misrepresentation of information related to the public health crisis covered by the media.

In the case of our analysis we can observe that a future development in this direction can be done by conducting a study on the level of knowledge and understanding of epizootic diseases in the Romanian publishing houses.

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