COMMUNICATION & SOCIETY

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Understanding the emergence of infectious diseases: Social representations and mass media

Abstract

The present study examines social representations of the threat created by emerging infectious diseases. A free association experiment was carried out in which the stimulus was a news item where the framing of a discourse (human interest vs. attribution of responsibility) was manipulated. Results showed that the human interest discourse sparked off representations linked to vulnerability, while the responsibility discourse produced representations concerning preventive health care promoted by the authorities. Even so, the effect of the discourse was limited and showed that the new information is anchored in previous interpretive schemes. Implications of mass media on health communication are considered.

Keywords
Emerging Infectious Diseases, Framing, Mass Media, Risk Communication, Social Representations Theory.

Health crises caused by emerging infectious diseases (EID) are relatively frequent in our societies. Indeed, epidemics are particularly feared because they expand rapidly and involve both a physical and a symbolic threat to citizens. After the influenza pandemic of 2009–2010, the information management of this crisis by the media and institutions was questioned. But what is the nature of the lay knowledge that exists in our society about these kinds of crises? Do the media influence the way people understand emerging infectious diseases? And, further, how powerful is the impact that the discourse used by the media has on people´s everyday thinking about EID? In this article, we attempt to give an answer to these research questions. The Social Representations Theory (SRT) is used to gain a better understanding of the impact that mass media information has on the perception of EID.

1. Social representations of emerging infectious diseases

The Social Reprtesentations Theory (SRT) describes how people understand phenomena in their daily lives (Moscovici, 1984). In other words, social representations are the system of beliefs, meanings, attitudes, and images through which people organize and give meaning to the world they know. Thus, this theory argues that beyond scientific knowledge of a particular topic, people understand and share common ideas through representations. The theory assumes that scientific

knowledge about reality is often not comprehensible to the lay public. And even if it were readily comprehensible, people would often not be motivated enough to examine it closely (Joffe & Lee, 2004). That is why social representations constitute the key process for explaining how people understand science and, in the present case, an emerging infectious disease.

Social Representations are adaptable to the crisis moments because they are rigid but flexible, stable and mobile phenomena thanks to their structure (Abric, 1994). Abric (1994, 2001a) defines social representations as "socio-cognitive constructions" which have both cognitive and social components. The meaning of a social representation is determined by the discursive and social context. The structural approach of social representations emphasizes that social representations have firstly a central core (called nucleus) which is composed of a few cognitive elements responsible for the stability and rigidity of the representation (Abric, 1984a, 1984b, 1989). The central core has two functions, first the generating function through which the significance of the constituent elements of the representation is created and transformed. By means of this function the elements of the representation have a value and a sense. Secondly, the organizing function of the central nucleus that determines the ties that unite the representation, this is how the representation is unified and stabilized (Abric 2001). These elements are resistant to change because they are strongly linked to the collective memory and to the history of the group. Secondly, social representations have peripheral elements which are evaluative elements that allow flexibility, mobility and inter-individual differences to the social representation. Therefore, peripheral elements enable a particular social group's integration of individual stories and experiences and support its evolution and diversity. Moreover, the peripheral elements allow us to understand how that social representation favours adaptation to concrete social practices, for example in a crisis moment. Another function of the peripheral elements is to protect the nucleus from transformations due to social circumstances (Pereira de Sa, 1996). Therefore, for a complete understanding of a social representation, it is necessary to take into account both the content and the structure of the representation (Pozzi, Fattori, Bocchiaro & Alferi, 2014).

With regard to social representations of health epidemics, extensive research (Joffe & Haarhoff, 2002; Joffe & Bettega, 2003; Joffe & Lee, 2004; Washer, 2004) has shown that EID around the world were firstly viewed as being originated by collective actors pertaining to out-groups. In particular, studies found that out-groups were construed as being at fault and accountable for dirty practices and immoral behaviour (Joffe & Staerklé, 2007), or responsible for intentionally and malevolently plotting to disseminate the disease (Joffe, 1999). The problem begins when people such as "ourselves" start to be affected by the new disease. In these cases, without the possibility of blaming "the others", the government, farmers and modern agricultural practices get blamed not only for the emergence of the new threat to human health but, worse still, for the corruption and concealment of the problem which facilitated the spread of the disease (Washer, 2006). Some authors have even pointed out that the decisions of the institutions are influenced by political or economic interests, more than by health interests (Smith, 2006). However, other studies have concluded (Wagner-Egge et al., 2011) that there are still ambivalent emotions towards the authorities, as the health and political authorities tend to receive a positive valuation at the start of a health crisis, but are usually perceived later as ineffective.

In addition, based on the idea of collective actors in relation to epidemics, the principal heroes, victims and villains of EID have also been identified (Wagner-Egge et al., 2011). The heroes of EID are the scientific experts (physicists, researchers, etc.), who are mainly perceived as credible and trustworthy. The villains of health crisis are, on the one hand, the media, accused of using fear for their own interests and, even worse, perceived as being puppets of evil powers at the highest level. On the other hand, the role of villains is also

attributed to private companies and to the pharmaceutical industry. Finally, the victims are seen to be the poorest and least developed countries.

To sum up, features presented by different groups may serve to construct a symbolic representation that enables lay people to make sense (Wagner, Kronberger & Seifert, 2002) of conflicting and discordant pieces of information spread by the media and remarked upon in everyday conversations (Wagner-Egge et al., 2011).

2. Mass media, framing and emerging infectious diseases

The media report on infectious diseases relatively frequently. The reports spread on the risk of these diseases are a key factor in people's construction of perceived risk. The Social Representations Theory suggests that when society is facing a new phenomenon, such as an illness or the outbreak of an epidemic, the risk perception is constructed through shared ideas on the topic with the goal of dealing with it (Washer, 2006).

SRT stresses that shared ideas about threatening new phenomena are particularly channelled by the discourse and framing that the media disseminate in the public sphere. The process in which the media create interpretative frames of events is called framing. More than just hiding or bringing to light certain facts and assigning them more or less importance, framing literally frames the news, creating interpretative schemas of the events in society.

Although not used expressly in relation to the influence of the media, the frame definition established by Goffman (1974) has been commonly accepted. According to this author, frames are interpretation schemes that allow people to organize the events of life into something that has meaning. Frames are thus organizing principles, socially shared and persistent over time, which act symbolically to structure or organize the social world (Reese, Gandy & Grant, 2001). In other words, frames are a way of defining the situation (Pan & Kosicki, 2001). From this perspective, Entman (1993) established that media framing selects some aspects of a perceived reality and gives them more relevance in a communicative text, thus promoting a particular definition of the problem, a causal interpretation of it, its moral evaluation and a recommendation of how it should be treated. Therefore, its consequences can also be observed at a social level, because of its influence on generating socialization, decision-making or collective action processes (De Vreese, 2005; Reese, Gandy & Grant, 2001). Indeed, the specific way in which the media communicate events and social problems affect the interpretation and the attitudes of individuals and social groups towards those events. In fact, knowledge about many facts in society basically takes their dissemination through the media as its principal source.

Regarding the influence of framing on health epidemics, previous studies (Ghang, Faridah & Normah, 2010; Idoyaga, Valencia, Gil de Montes & Ortiz, 2012) revealed that two of the most widely used frames when dealing with this topic are the attribution of responsibility frame and the human interest frame. The frame of attribution of responsibility assigns responsibility for a cause or a solution to the government, to an individual or to a group (Iyengar, 1990). In contrast, the frame of human interest provides a human face and affects the emotional charge of the representation of an event, fact, or problem (Semetko & Valkenburg, 2000).

All in all, the mass media are the main distribution duct of collective threat representations (Renn, 1991). That is, the social representations of EID are built through the mass media, the media message in general and framing in particular construing a key tool in this process.

3. Objectives and hypotheses

The main goal of this paper is to analyse the influence of the mass media discourse in the content and the structure of social representations of a new EID. To this end, this research examines the response of some people facing press news about the threat of a new flu epidemic framed from an attribution of responsibility or from a human interest approach.

First of all, it is expected that media discourse will impact on social representations of EID, but this effect will be specifically constrained to only some elements of the social representations, probably affecting peripheral elements rather than the nucleus of the representation. That is, the frame focused on human interest will set off representations directly concerned with human experience of epidemics. In contrast, the frame focused on attribution of responsibility will call up representations more linked to the role of institutions in the crisis or to guidelines to prevent the disease.

Secondly, with regard to the content of the social representations of EID, people will be likely to attribute the cause of the epidemic to the country where it first appeared, relieving them from any kind of personal or collective responsibility. Moreover, they will probably identify some collective actors whose features may serve to construct a symbolic representation that enables lay people to make sense of the EID. That is, people will be suspicious of the media and the pharmaceutical industry, but will trust doctors and scientists. Furthermore, they will probably hold ambivalent feelings towards the public authorities, following their guidelines but blaming them for following other interests. Finally, people will display pity or concern towards the victims.

4. Method

At the time of empirically researching social representations, various quantitative and qualitative methods have been used both individually and in combination (Flick, Foster, and Caillaud, 2015).In this study, to analyse the impact of news about emerging infectious diseases in social representations the technique of free word association was used in combination of lexical analysis. The theory of social representations argues that analysis of free associations across groups (Pereira de Sa, 1996) and contexts (Wagner, 1997) provides a clear procedure to identify the "figurative nucleus" of the representation of epidemics. Bauer and Gaskell (1999) used the free association technique to analyse social representations based on individual cognitions and then integrated these results with the analysis of the media. Moreover, free association method is also proposed to analyse the structure of social representations (Abric, 2001b). In the present case, the "news" itself was used as a stimulus to perform the free association technique.

The news items describe a new flu epidemic which has appeared in Argentina and has an incidence rate of 10%. Two types of news were created and the framing in each type was manipulated. Both the news items had the same headline and were identical in various parts of the presentation, such as in the mortality rate, the area affected, the possibility of the epidemic spreading, etc. In the paradigm used, the frame was focused either on the experience of citizens affected by a health epidemic (human interest) or on the institutional response to a health epidemic and the guidelines to follow recommended by the authorities (attribution of responsibility) (See Semetko & Valkenbourg 2000).

Alceste software for lexical analysis (Reinert, 1983, 1990) was used to analyse the corpus of text. The Alceste method has been used frequently for the investigation of social representations (Kalampalikis, 2005, Klein & Licata, 2003; Lahlou, 2001), concluding that the results obtained agree with those of other methods used in this field of research (Lahlou, 1996). In fact, by analyzing the lexical universes Alceste will enable the identification of the shared meanings of language, which are fundamental in social representations (Gilles, Bejaoui, Courvoisier & Clémence, 2014).

Alceste method is specially appropriated to analyze discourse because the language or discourse of social representations internalizes and consolidates words and ideas, images and concepts and observations and interpretations, at the same time fulfilling its communicative function (Kalampalikis, 2005). After all, we construct our reality through language and discourse and, therefore, its analysis allows us to study the shared cultural expressions of society (Geertz, 1986).

Firstly, the software creates a dictionary. Alceste analyses "whole words" (nouns, verbs, adjectives, adverbs), while "tool" words' (articles, pronouns, conjunctions) are excluded from the analysis. The initial corpus is broken down into Elementary Contextual Units (ECUs), which have the approximate length of a sentence or two (30-50 words) (Kronberger & Wagner, 2000). The corpus is analysed in terms of their presence in the ECUs. ECUs and the reduced forms are used to create a contingency table, which shows the distribution of vocabulary according to the ECUs. From this contingency table a squared distances matrix is generated, implying that two ECUs are close if they share some of the words analysed (Reinert 1996).

Subsequently, a descending hierarchical cluster analysis is performed on this distance table, which yields classes of ECUs that best differentiate the vocabulary. In so doing, this software assists in the interpretation of texts. It extracts classes of words that co-occur and that are best differentiated from other classes.

Following previous research with Alceste (Vizeu & Bousfield, 2009), the most significant vocabulary in each class was directed under three criteria: 1) how often the words occur (specifically, only those with higher frequency than the average frequency of words from the corpus), 2) proof of association of the Chi-square against the class ($\chi^2 \geq 5.15$; $df = 1$) and 3) the word is mainly in that class with a frequency of 70% or more. Finally, as a complementary analysis Alceste also makes a multiple correspondence factor analysis produced from the descending hierarchical cluster analysis.
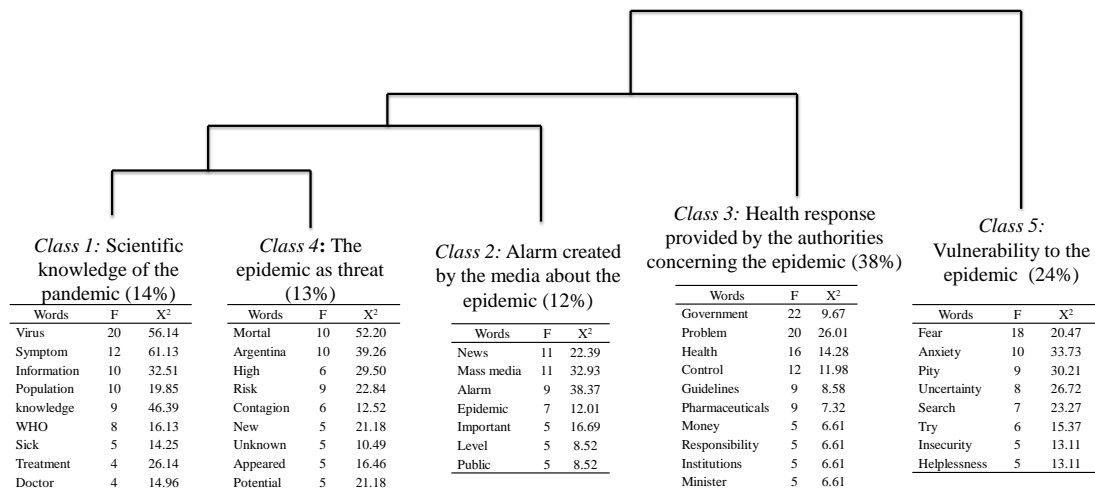
Once these "lexical universes" have been identified, they are associated with 'passive' variables (independent variables). In the present case, the passive variables were the type of discourse (attribution of responsibility or human interest). The text was entered into the Alceste software, and coded according to discourse type, and the participants' age. The software also provided a Chi-Square statistic that illustrates the association between each class and the independent variables.

In this research a group of 334 people from the Basque Country (Spain) took part (55.1% female, mean age of 32.77 years; range 18-80 years). The subjects were randomly assigned to the experimental conditions.

5. Results

The full corpus had 11,239 words, and 2187 were unique words. Specifically, the descending hierarchical analysis divided the corpus into 413 ECUs, 215 (52%) were subjected to analysis, and 5 kinds of ECUs were extracted from the most significant vocabulary in each class. Results of the analysis can be observed in Figure 1.

Figure1. The hierarchical clustering dendrogram with the most frequent words and the words with greatest association X2 (1), p < 0,001.

Class 1: Scientific knowledge of the pandemic (14%)		
Words	F	X²
Virus	20	56.14
Symptom	12	61.13
Information	10	32.51
Population	10	19.85
knowledge	9	46.39
WHO	8	16.13
Sick	5	14.25
Treatment	4	26.14
Doctor	4	14.96

Class 4: The epidemic as threat (13%)		
Words	F	X²
Mortal	10	52.20
Argentina	10	39.26
High	6	29.50
Risk	9	22.84
Contagion	6	12.52
New	5	21.18
Unknown	5	10.49
Appeared	5	16.46
Potential	5	21.18

Class 2: Alarm created by the media about the epidemic (12%)		
Words	F	X²
News	11	22.39
Mass media	11	32.93
Alarm	9	38.37
Epidemic	7	12.01
Important	5	16.69
Level	5	8.52
Public	5	8.52

Class 3: Health response provided by the authorities concerning the epidemic (38%)		
Words	F	X²
Government	22	9.67
Problem	20	26.01
Health	16	14.28
Control	12	11.98
Guidelines	9	8.58
Pharmaceuticals	9	7.32
Money	5	6.61
Responsibility	5	6.61
Institutions	5	6.61
Minister	5	6.61

Class 5: Vulnerability to the epidemic (24%)		
Words	F	X²
Fear	18	20.47
Anxiety	10	33.73
Pity	9	30.21
Uncertainty	8	26.72
Search	7	23.27
Try	6	15.37
Insecurity	5	13.11
Helplessness	5	13.11

5.1. Content of Classes

Results show that two classes (class1 and class 4) form the core of the hierarchical clustering dendrogram and subsequently different branches have been linked to it as a periphery.

Following the division of the cluster analysis, in its core, it can firstly be observed that classes 1 and 4 are linked. The first class, "Scientific knowledge of the pandemic" (14% of the ECUs), reflects that people who are led to cope with a hypothetic health epidemic need to know the scientific characteristics of the virus, its etiology, and the information that health authorities provide about it, as we can see in some of the related ECUS: "I'll take precautions. I would like to read the full report of the WHO and I would like to know where the virus comes from. I would like to know its symptoms and evolution" (ECU319); "I would like to know the specific origin of the virus. The medical professionals have information about what the virus is" (ECU196).

The other part of the core of the dendrogram was the fourth class, "The epidemic as threat" (13% of the ECUs). This class focuses on the health alarm and the threat that it involves and it also concentrates on the geographical location where the disease firstly appeared (Argentina): "Potentially dangerous if it spreads. I'd be afraid to go to Argentina" (ECU297); "There are lots of potential victims but it is happening in Argentina" (ECU232); "Currently the disease and its causes are unknown. There is neither a remedy nor a clear way to avoid becoming infected. It would probably affect a higher percentage of the population than is actually mentioned because the mortality rates are not specified" (ECU249). However, the possibility of the epidemic spreading and creating a global health crisis also appears in this class: "I think that if it has an animal origin, it will also spread to other countries" (ECU8).

The first branch linked to the core of the dendrogram is the second class, "Alarm created by the media about the epidemic" (12% of the ECUs). In this class the mass media explicitly appear as disseminators of information, even though sometimes their veracity and interest are questioned: "I have many doubts about the veracity of the news. Such news is often published by pharmaceutical laboratories to market different kinds of medicine. And it causes great fear in the population" (ECU98). What is more, the mass media are also blamed for creating alarmism: "It suggests to me memories of other news stories in the

world that have already occurred and have caused alarm in the population" (ECU164), "The media can have an influence on social alarm" (ECU410).

The second linked branch is the third class, "Health response provided by the authorities concerning the epidemic" (38% of the ECUs). In this class, the participants deliberate about the response given by the authorities to the pandemic. They point to the institutions, especially the health institutions, as responsible for the management of the crisis (promoting guidelines, giving information etc.): "These situations are very serious. We are often not adequately prepared to deal with such situations. The support and guidelines provided by governments are also scarce; they should have more control and act more responsibly" (ECU218). Participants also mention the pharmaceutical industry in connection with the manipulation of governments, the spreading of fear, and with economic interests: "Transmission of diseases due to lack of prevention measures. They should not take advantage of the health crisis to the benefit of the pharmaceutical industry" (ECU25); "Lack of health control and interest of pharmaceutical companies" (ECU104); "They handle the information. Most of the administrative staff or health policy authorities end up working for private companies in this professional sector" (ECU376). Finally, the last branch is the fifth class, "Vulnerability to the epidemic" (24% of the ECUs). In this class the emotions provoked by the health crisis are described, with particular mention of negative emotions such as fear, anxiety, uncertainty, insecurity and helplessness: "I'm afraid of getting sick or that the disease will come here. Anxiety, uncertainty, feeling unsafe, interest in what might happen, sadness for the dead. Trying to help the country. We should think about vaccinating all the population so that the epidemic does not spread" (ECU236); "Fear... I will be the next, how can I help it? I feel pity for the victims. I hope it does not affect anyone in my family. I hope that the number of deaths will not be so high." (ECU79).

5.2. Links with independent variables

Alceste computes the relation between a lexical class and the levels of an independent variable using independence tests. If there is a significantly greater proportion of ECUs belonging to a class at one level of the independent variable than at all other levels combined, the class is considered to be associated with this level (Klein & Likata, 2003). The programme performs the same analysis for all other classes and levels of the independent variable. In the present instance, the discourses were classified according to framing type (human interest vs. attribution of responsibility).

The results showed that the third class, "Health response provided by the authorities concerning the epidemic", was more likely to appear if subjects read the article with a discourse of attribution of responsibility, rather than with a discourse of human interest $X^2(1) = 3.81$, $p < 0,001$. The fifth class labelled "Vulnerability to the epidemic" seemed more likely to emerge when the news was focused on a discourse of human interest $X^2(1) = 17.14$, $p < 0,001$ rather than on the discourse of responsibility attribution.

6. General discussion

The results of this study have shown the mass media influences clearly part of the structure and the content of the social representations of a new EID, revealing several key aspects.

Firstly, results showed, confirming the hypothesis, that the discourse framing used in the news influenced the periphery of representations rather than its nucleus. To clarify this statement we will first define the ideas linked to the core and the periphery.

Our results suggest that the social representations of it are structured around a nucleus where ideas about the etiology of pandemics are housed. In our case, the nucleus is represented by the first and the fourth classes which represent the "objective" or "documented" information that people have about the epidemic and how they understand

its etiology. Following the ideas of Abric (2001a) the scientific information about the epidemic and its evaluation is what gives value and a sense to health epidemics.

Moreover, this first-hand' and highly credible information (whose goal is to protect people's health) represented in the nucleus is in contrast with the "second-hand" information transmitted by the media and the institutions represented peripheral information which goes beyond that credible and scientific information, and could be motivated by vested interests. In the present case, the periphery provides updated media information, patterns of recommended behaviour and emotional response to cope with the repeated threats of EID that have recently been occurring.

That is, the role of the media and the institutions, and their emotional impact on people are the peripheral elements of the social representation of the epidemic as a whole and they are articulated in opposition to the nucleus system. Further, the frame of responsibility influenced the third class "Health response provided by the authorities concerning the epidemic", the most closely related to attribution of responsibility to the institutions. And the human interest frame influenced the fifth class "Vulnerability to epidemic", associated with emotional response.

So, if the functions of the periphery of the representation consist in the regulation and adaptation of the characteristics of the central system to a specific situation that a group encounters (Pardo, 2007). It may be pointed out that the influence of the discourse and the framing of the mass media will be a crucial point when facing up to similar future health crises.

The second ain of this study was to analyse the content of representations of EID and results also provide revealing results in this area. First of all, it is interesting to note that the geographical origin of the pandemic was mentioned in the same discourse as the threat that it implies (class4): it was depicted in the different ECUs as "Lots of potential victims but it is happening in Argentina"; "Potentially dangerous if it spreads. I'd be afraid to go to Argentina, and similar". Therefore, it seems that people try to find the source of the risk in an external group of "others", even though in our case a blaming process towards them was not observed (Joffe and Staerklé, 2007). This could be because in the other researches the group of "others" which was blamed was usually seen as occupying a lower level (an undeveloped country, from a lower social status, poorer people, etc.). But this may not be the case of Argentina in relation to Spanish people, so that might be the reason why in this case the group of "the others" is not blamed even though the threat focus is linked to them.

Even so, it is noteworthy that in such health epidemics, the fragility of borders is perceived, as can be seen for example in the ECU8 "I think that if it has an animal origin, it will also spread to other countries". This idea is a reflection of the "risk society" (Beck, 1992) where the spread of danger has no geographical limits and society is perceived through a collective social symbolism of risk in a globalized world.

As far as the collective actors of the representations are concerned, the results are in accordance with previous researches (Wagner- Egge et al., 2011). Firstly, as can be observed in the first class, people trust in healthcare professionals and their opinion. Moreover the basic information provided by doctors and scientists is located in the nucleus of the representation, which is more stable and likely to pose little doubt in terms of credibility.

With regard to the people affected by the epidemic in the content analysis of the free association two kinds of victims could be observed. Firstly, the real victims, the people in Argentina who were sick. Participants feel pity towards them. Secondly, participants also see themselves as possible potential victims of the epidemic in the future. That is why they feel fear, anxiety, uncertainty, etc. This fear of a global expansion is another signal of the risk society mentioned before, where threats are seen as potentially global; and that creates fear, anxiety and uncertainty to people from all over the world. What is clear is that the social representations of the victims are strongly linked with emotional responses towards

the EID. In fact, researches in the field of social representations (Smith & Joffe, 2012) and EID highlight the role that emotional context plays in symbolic thought and its importance in making topical issues recognizable and understandable.

Meanwhile, ambivalent ideas about health authorities were observed. On one hand people ask them for guidelines and control strategies to face the new disease. But, on the other hand, people do not really trust them. In the results the interests of the principal health institutions are thrown into question, linking the guidelines provided by governments with the economic interests of the pharmaceutical industry. This mistrust in the real interests of the health authorities may explain why the decisions made by the political authorities in recent health crises have frequently been questioned by the population. For instance, when the H1N1 influenza pandemic occurred in 2009-2010, some governments were widely accused of purchasing vaccines in an abusive way, benefitting the pharmaceutical lobbies. Therefore authorities are blamed for being the puppets of big pharmaceutical lobbies, considered to be villains who only want to make money from the health crisis. So, these ambivalent ideas are becoming more and more critical toward the authorities. This pattern may therefore prove to be really dangerous, because if people do not trust the authorities in a health crisis they will not follow their guidelines and the control of the epidemic will be at risk.

Finally, the dual role played by the media in the coverage of EID is interesting. The media do not only influence the social representations, as mentioned above, but they are also part of them, as shown in the second class. In fact, some authors (Cayla, 2009) already defined these health crises as "media epidemic", accusing the mass media of generating impact with alarming news, in order to gain audience or journalistic kudos. This dual role is also consistent with the theory of social representations, as it states that the media are the key to interpreting new threatening events such as emerging infectious diseases (Wagner, 1998; Wagner, Kronberger & Seifert, 2002). So, as posed by this theory, our results also support the idea that the media are a relevant information source in the construction of the social representation of the threat. Thus, it can be stated that the media form part of both the container of the information, and the information content of the communication process.

Having said this, this study highlights key aspects of the social representations of EID and the impact of the mass media´s coverage of them. Firstly, contextualized in a risk society this kind of health crisis will be represented more and more as a global threat. In addition, in those representations of that global threat the collective actors in the epidemics and the villains in particular (pharmaceutical industry, mass media and authorities) may influence the patterns of response in a crisis moment. Finally, the framing of news about epidemics will also have an influence on social representations of new EID, affecting the periphery of the representation and the adaptive response.

In a nutshell, the role of the media in social representations of EID is crucial, since the media are not only the content but also an active part in the construction of social representations. In fact, these so-called media epidemics could not be understood today without the disease itself being analysed in parallel with the role of the mass media in a global risk society.

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