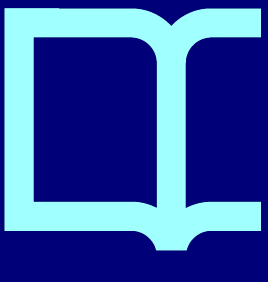

THE EMERGENCY MODALITY: FROM THE USE OF FIGURES TO THE MOBILIZATION OF AFFECTS

Francisco Tirado, Enrique Baleriola and Sebastián Moya

Introduction

So-called "Global Health", has meant, among other things, opening a field of reflection that has problematized in a novel way both the notion of health and of health intervention (Lakoff and Collier, 2008; Weir and Mhikalovskyi, 2010) Thus, it has been posed, firstly, that the processes of globalization constitute a new source of risk since the accelerated movement of people, animals, technologies and merchandise of all kinds contributes to the rapid dissemination of new biological threats (Peckham & Sinha, 2017). Secondly, the aforementioned phenomenon puts on the table the problem of competencies in the regulation and attention of new threats; What institutions or governments are responsible for acting in the context of a global threat? Who is responsible for coordinating the intervention in such threats? Questions such as these are regularly formulated by experts and laypeople and have not yet received clear and convincing answers. Finally, and this is the element that we will interrogate in this chapter, global threats share an interpretative approach called the "emergency modality of intervention".

This modality does not suppose a long-term intervention in the cultural, social, political or economic dimensions associated with the appearance of outbreaks of infectious diseases. Instead, it is committed to fast-acting medical practices, the use of standardized protocols for each biological emergency and the massive dissemination of surveillance and data recording systems that are easy to implement and maintain. Mobility is the essential characteristic of such techniques. They can be deployed quickly, with low economic cost, anywhere in the world regardless of their idiosyncratic local characteristics (Collier and Lakoff, 2008).

Several factors are used to justify the application of an emergency modality in the health field. First, its measures quickly attract the attention of public opinion and generate broad political acceptance. Amongst other characteristics, it can be said that they are easy to describe and demonstrate in the media with some assiduity. Secondly, its implementation is relatively easy to perform in contrast to major measures that seek to transform cultural or population habits. Finally, all these measures avoid the complex webs of significances and local uses that can be found in each specific territory, by imposing a set of standardized protocols that have general application.

Our work aims to deepen this line of analysis. Starting from postulates inherited from philosopher Michel Foucault and actor-network theory (Latour, 2005), we will make a nominalist approach to the notion of "emergency modality". We will argue that there is no univocal meaning to the concept of "emergency", the meaning of which depends directly on technology and the set of practices that accompany the use of the word. In this way, we will argue that an emergency

modality is not the same when the threat is treated with the old technology of risk calculation, than when modern protocols or scenarios are used. In each case, the notion of emergency acquires a concrete and differentiated meaning that redefines the biological threat in a very specific sense. Our intention is to carry out this exercise by examining three concrete sets of practices that have been put into operation in well-known historical bio-threats; *risk calculation*, the use of *protocols* and *action through scenarios*. We will begin by reviewing the meaning of the word "emergency" in the field of global health. Next, we will consider what the notion means when working with classical *risk calculation* in epidemiology, using the example of SARS and the A(H1N1) epidemic. Third, using the example of Zika, we will examine the meaning of “emergency” when *protocols* and action guides are used. Finally, drawing on the example of the Ebola epidemic in 2014, we will pay attention to the meaning acquired by the notion of biological emergency as produced through *scenarios*.

1. What is a biological emergency?

The notion of an epidemic has always been considered an example of what Dupuy (1999) calls a "panic phenomenon". When the news of a possible mass contagion breaks out, the masses become individualized and the social order is fragmented. Irrationality, fear and, finally, panic appear. This reading has two great foundations. One is etymological. The Greek word epidemic (epi-demos) admits the translation of "against the people". That is to say, the epidemic is an event that hits human life as a collective life or aggregate of individuals, and destroys it. Therefore, we must fear it. In that sense, it is interesting to note that for Hippocrates (1983) an epidemic did not exactly refer to the phenomenon of an infection in itself, but, rather, to the condition in which such an infection begins to be suffered by a collective, affecting not only individuals but the whole village (demos). The second foundation is historical. Along these lines, Michel Foucault (2003) puts forward that the epidemic is something more than a particular form of disease. For instance, in the bilious fever outbreaks of Marseilles in 1721, Bicêtre in 1780 or Rouen in 1769, what occurred was the emergence of epidemiology as the ‘autonomous, coherent, and adequate evaluation of disease’ (Foucault, 2003: 23).

Furthermore, Foucault emphasized that a medicalization of epidemics could exist only if supplemented by the police: to supervise the location of mines and cemeteries, to get as many corpses as possible cremated instead of buried, to control the sale of bread, wine, and meat, to supervise the running of abattoirs and dye works, and to prohibit unhealthy housing (Foucault, 2003: 25). Intervention to manage them quickly became an official matter and contributed to the construction of what we know as the Modern State (Maureira et al., 2018).

This link between epidemics and panic continues today and has been generalized to every biological threat. In a broad sense terms, emergency is defined as a serious, unexpected, and often dangerous situation requiring immediate action (Oxford Dictionary, 2018). In epidemiological and technical terms, a “public health

emergency" is defined as an occurrence or imminent threat of an illness or health condition, caused by bioterrorism, an epidemic or pandemic disease, or a novel and highly fatal infectious agent or biological toxin, which poses a substantial risk of a significant number of human fatalities or incidents of permanent or long-term disability. This includes, but is not limited to, an illness or health condition resulting from a natural disaster (CDC, 2001).

There are several global institutions that participate in the management of these emergencies. The most well-known is the World Health Organization (WHO), which has developed an Emergency Response Framework (ERF) to establish its functions and responsibilities in these cases and provide a common approach to the work it must accomplish during an emergency, as well as its obligation to act with urgency and predictability (WHO, 2013). This framework incorporates various levels of action conforming to the degrees of emergency (1,2, and 3), which are defined according to their consequences to public health and the demand of the World Customs Organization (WCO) and the WHO response.

Let us take one example of an emergency response. In 2018 the WHO and The Democratic Republic of Congo (DRC) worked together to contain an outbreak of the Ebola Virus Disease (EVD) in Bikoro, Equateur. There were 34 reported cases in five weeks between October and November that year, including 2 confirmed cases, 18 probable cases (deceased) and 14 suspected cases (WHO, 2018a). When the emergency response mechanism was activated, these institutions were able to generate a response that included multiple and diverse actors (Fig. 1) (WHO, 2018b). That is, a rapid response entails mobilising different actors affected by the outbreak and what is more, ensuring that these actors align as a single entity.

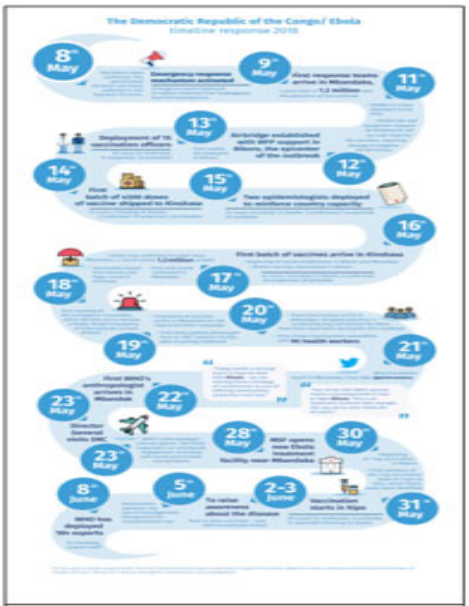

Figure 1: The Democratic Republic of Congo, Ebola timeline response 2018 (WHO, 2018b)

This pattern of action or logics can be identified from the beginning of the twenty-first Century. Thus, we could add to the aforementioned examples of global health emergencies the Severe Acute Respiratory Syndrome (SARS) in 2003 or the Influenza A(H1N1) pandemic in 2009. The first appeared in Guangdong, China, and affected 26 countries with more than 8000 cases (WHO, 2003) and the second was first detected in the United States and it was estimated that between 151,700 and 575,400 people worldwide died during the first year (Fig.2) (WHO, 2017).

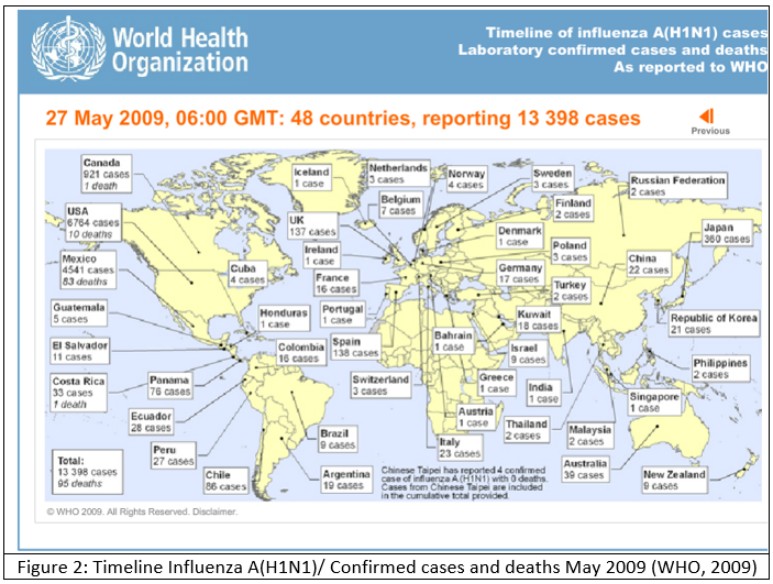

Figure 2: Timeline Influenza A(H1N1)/ Confirmed cases and deaths May 2009 (WHO, 2009)

An emergency, therefore, is a situation of danger that demands a quasi-immediate response. In the case of biological emergencies, the risk of their extension to a global scale is undoubtedly assumed and it is argued that an adequate response must be a coordinated action that brings together multiple actors. Therefore, the notion of emergency recalls what was affirmed by Foucault (2003): an emergency is much more than a situation of risk or danger, since it involves the creation of a playing field in which: a) A scientific (medical) authority appears that is not restricted to one authority of knowledge or expert. On the contrary, it refers to a social institution that makes decisions that directly affect people, cities and even countries; b) A field of intervention is defined that usually goes beyond the mere biological problem: air, water, cultivated lands, infrastructures, etc. This becomes the focus of regulation and intervention by the aforementioned authority; c) Medical administration mechanisms are introduced, such as data recording, comparison of statistics, obtaining samples, etc.; d) An analytical economy of health and care that will be applied to the affected areas is sketched and will operate as an internationally legitimated form of foreign intervention.

These general characteristics define the notion of emergency that governments and international agencies, experts and media use. However, despite these common denominators, the "emergency modality" that operates through interventions into biological threats articulates different universes of meaning depending on the technical devices that is deployed and its associated practices. Let us consider, first of all, what happens when the biological emergency focuses or deals with the tools of the classical risk assessment.

2. SARS, H1N1 and classical risk assessment. We are not satisfied with less than eradication

The SARS crisis occurred in an interconnected world with an integrated economy, and was considered a global threat of a type not seen before (Tan and Enderwick, 2006). It had a range of impacts, from affecting the emergency services with a reduction in patient care (Huang et al., 2005) to affecting the economies of China and Hong Kong mainly due to the impact of the disease on the behaviour of people (Lee and McKibbin, 2004).

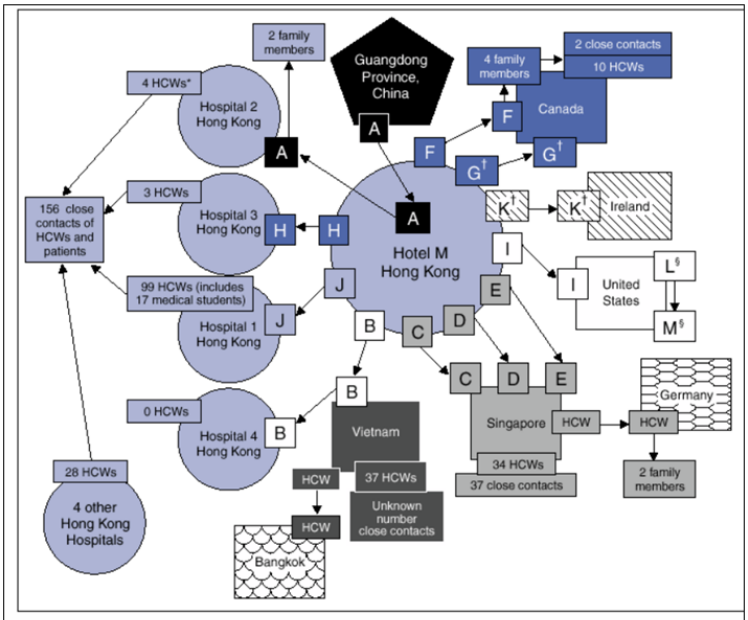

Figure 3: Chain of transmission from Hotel M (CDC, 2003)

SARS was contained in less than four months due to unprecedented international cooperation, from the WHO and Global Outbreak Alert and Response Network (GOARN) together with 115 national health services, academic institutions, technical institutions to individuals. This response started with the notification of a case of atypical pneumonia in Guangdong (Nov. 2002). The WHO then issued a global alert and activated the chain of steps provided by the Emergency Operations Center (EOC) of the CDC, publishing provisional guidelines for state and local health departments on SARS (https://stacks.cdc.gov/view/cdc/25031). Subsequently, a "health warning notice" and associated precautions were issued for the spraying of patients suspected of SARS in hospitals and specially in crossing borders (Mar. 2003) (CDC, 2013). In respect to the notification of the first case, there is a theory that transmission between humans did not occur until February 21 when a doctor (case A; Fig. 3), whose illness began on February 15, stayed at the Metropole Hotel in Hong Kong, generating the spread of SARS (CDC, 2003).

After the SARS crisis, different models about SARS transmission pattern were published in order to identify patterns that could be used in the future to compare and be employed with a new SARS crisis. But these models had limited impact because no reliable projections were provided to the authorities that incorporated the impact of overestimated management that possibly contributed to media misunderstanding. Following this logic, previously, models about SARS spreading were based on the modelling of smallpox (2002) and anthrax (2003), and their forecast was not met mainly because SARS was a new and not well-known human disease (Glasser et al., 2011). Since then, China has built effective public health emergency management systems (PHEMS) based on protocols and drills about previous epidemics and has made comprehensive progress and

improvements in preparation, readiness, response, and recovery (Sun et al., 2018).

The SARS emergency was immediately followed by the arrival of the Influenza A(H1N1) pandemic, which generated various responses to contain the emergency very similar to the previous SARS outbreak. These operations are described in the WHO document "*Human infection with pandemic (H1N1) 2009 virus: Updated interim WHO guidance on global surveillance"* whose main objective was to guide countries in what is to be done to address this particular threat. This document was presented in four sections that have characteristics common to a wide range of epidemics surveillance protocols of recent decades and which are also explained in more detail in the classic manuals on emergency management (e. g. Lindgrend and Bandhold, 2003): what we term the emergency modality of classical risk assessment. Following this document, classic emergency modality can be summed up as follows: a) it is a process focused on taking *prophylactic measures* against emergent threats that are already occurring, b) it is based on the employment of statistical data and decision trees or chains, in order to manage risk *on the basis of what was previously known*, c) it is addressed to calculate the consequences after outbreak through *the use of statistics* from countries reports, and d) it is a process managed through it's representation, that is, by *bringing to the present past statistical d*ata and related knowledge and displaying it in graphs, diagrams or maps.

According to classical risk assessment, the systems modelling SARS and H1N1 were based on the transformation of causal maps into mathematical representations that can be simulated (Lindgren and Bandhold, 2003:119), dragging (bio)risk from the sphere of uncertainty to the realm of objective reality. The result of this modelling is a diagram graph built through data collected from different sources and producing a piece of knowledge that is a copy of a parcel of reality (Fig. 2 and 3). This operation has important consequences. First, it means that it is possible to substitute a fragment of reality with its correspondent graph. Secondly, the substitution allows elements of reality to be managed and for current knowledge to be produced and stored such that, when a new risk arrives, it can be managed with the previously accumulated knowledge. Thus, representation is considered a precondition to intervene and to change reality, but, at the same time, representation is the final justification of the knowledge produced. So, investing large amounts of funding in representational technologies is considered by experts, politicians and stakeholders as crucial to prevent new outbreaks. This fragment of a report from the WHO illustrates the essence of the emergency modality of classic risk assessment:

> "WHO will use the information provided to inform global risk assessments, including mathematical modelling of the epidemic, to better understand the spread of the pandemic and the effectiveness of mitigation measures. Scientists from countries providing data will be invited to participate in the development of, and be co-authors of, publications that draw on their country specific data. Countries will always be consulted in the development of any articles in which their data has been used. WHO will report and visualize the surveillance data provided. Reports will include

alerts, situational summaries, tables, charts and maps of the evolving pandemic situation. The following graphics are examples of the outputs of WHO's global data collection" (WHO, 2009:7).

Summing up, the use of classical risk assessment gives the notion of emergency a very clear and simple definition. It alerts us to a threat that can be located with more or less effort and, more importantly, that must be eradicated. The deployment of human actors, technologies and intervention practices is driven by a risk calculation where the objective is to detect and eliminate the factor that has triggered the danger based on prior knowledge. In this logic, notions such as case zero, origin, chain of transmission, etc., have a major relevance. However, since it is not always possible to eradicate the factor of origin, it is often very expensive to invest in detection technologies and to monitor cases and, as we have previously seen, the calculations made on the intensity and speed of transmission are often unreliable. In addition, classical risk assessment offers a series of operations that face a biological threat based on its objective reality In other words: the scientific knowledge of what is being discovered about the concrete threat is articulated with the knowledge of what has been done previously with similar risks.

3. Zika and protocols: the promise of containment

The Zika virus was identified in humans in 1952 in Uganda and the United Republic of Tanzania. Its first major outbreak was on the Island of Yap in 2007, its second in French Polynesia in 2013 and its third in Brazil in 2015. In this outbreak, the virus was associated with Guillain-Barré syndrome and microcephaly. Currently 86 countries have reported infections by Zika transmitted by mosquitoes (species *Aedes Aegypti*) (WHO, 2018c).

Figure 4: Zika Strategic Response (WHO, 2016)

The WHO has given support to various countries to properly manage the new threat through a Zika Strategic Response Framework. The support has consisted of means of detection, prevention, care and research (Fig. 4). To undertake these actions, the WHO has involved different types of protocols or guidelines addressed to different agents. In fact, there are currently more than twenty documents produced by the WHO dealing with different topics around Zika, such as those related to diagnoses by analytics (e.g. Guidelines for the serological diagnosis of Zika virus infection), to transmission (e.g. WHO: Prevention of sexual transmission of Zika virus Interim guidance), to risk groups (e.g. WHO: Pregnancy management in the context of Zika virus), and to scientific studies (e.g. Prospective longitudinal cohort study of newborns and infants born to mothers exposed to Zika virus during pregnancy). All of these involve agents and actors corresponding to different levels and scales, from local and international institutions (e.g. Zika Strategic Response Plan, for coordination and collaboration among WHO and its partners) to laypeople and small towns.

There are several clinical guidelines specially designed for the use of laypeople: pregnant women, infants and children or women in reproductive age. For instance, in the first case, the guide outlines why it is not recommended to travel to areas with severe risk of Zika and, if the trip is inevitable, important steps to avoid mosquito bites (CDC, 2017a) and protocols for after traveling (Fig. 5). In addition to the WHO's guidance, private associations or NGOs such as MotherToBaby, offer information (web details, FQA, phone numbers, etc.) that can be consulted in case of doubts. As Rosa et al. (2017) point out; these protocols proved useful in the (Brazilian?) Zika emergency in several ways. First, they offered information about prevention, through geographical data of risk localities, and advice to avoid mosquitos. Secondly, they created a unified protocol allowing the channeling of suspected patients to a single pathway. Thirdly, they allowed coordinated actions among different countries. Finally, they showed unified and standardized information that contributed to eliminate confusion and panic.

During this emergency, the mass media played an important role in the dissemination of the aforementioned information.

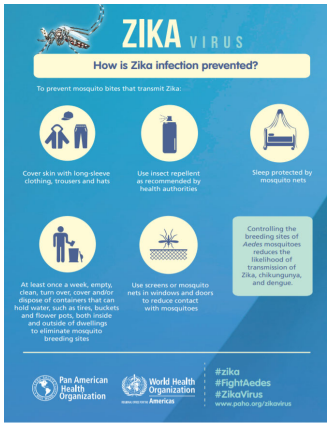

Figure 5. Preventing Zika. (PAHO/WHO, 2016)

There were various collaborations between national institutions (e. g. Ministries of Brazil) and agencies (e. g. Prefectures and Universities) focused on detecting and controlling mosquitos (e.g. https://www.youtube.com/watch?v=7CPHkPEvBCA and https://www.youtube.com/watch?v=ObM0wZGGvQ0) and newspapers and digital resources. In a similar way, the information movement amongst various professionals and experts working in institutions was also relevant, as Baker (2016) points out: "(...) in the last 2 months, I have received at least one email a week that includes information about the Zika virus; over the past several weeks, that has increased to at least one or more per day. The titles of these stories included "Fears Over Spread of Zika Virus Grow in the Caribbean," "CDC Guidelines on Preventing Sexual Transmission of Zika Virus Issued," "CDC Updates Interim Zika Virus Guidelines for Pregnant Women and Women of Reproductive Age," "CDC Issues Updated Zika Guidelines for Health Care Providers," "EU Drugs Agency Sets Up Zika Task Force to Speed Vaccine Work,"

“Zika Virus a Global Health Emergency, W.H.O. Says,” “Zika Virus Isn't the Only Concern for Rio Olympics” and “Public Health Agencies, Hospitals Prepare for Potential Zika Spread” (...)". And, unlike other emergencies of this type, digital social networks also played a key role in spreading information among the population (Chandrasekaran et al., 2017).

The notion of emergency that is deployed through the use of protocols and guidelines is different from the one we found in the case of risk calculation. It is assumed that the cause of a threat may not be eradicated or that such an operation would require considerable time and effort. Instead, the universe of containment unfolds. Before the most negative effects of a biological threat are spread, the mobilization of the necessary resources for stopping them is considered. In its maximum aspiration, prevention before the appearance of such a threat in the future would be the ideal objective of any protocol or action guide. In this new logic the calculation of risk has not disappeared. On the contrary, it continues to exist and plays an important role. However, now it is subsumed in the parameters of performance and interpretation that mark these protocols. This new logic has received the name of preparedness and has been well described by various authors (Anderson, 2010; Collier, 2008; Fearnley, 2005).

The development of protocols and guidelines for action has become so important in the last two decades that their format has changed. Their structure has gone from being a mere form that established a small chain of relationships in which the steps of an intervention were ordered and hierarchized, to become a compendium of instructions (sometimes with hundreds of pages) that establish true grammars of life (Tirado, Castillo and Gálvez, 2012). This logic of complexity has led to the evolution of preparedness and the massive use of scenarios has been added to its complicated protocols. As we will argue in the following sections, such incorporation supposes the establishment of a new logic to think about the biological emergency. In fact, we consider that this new tool converts the so-called preparedness into a different situation that demands its own detailed description and analysis.

4. Ebola Scenarios: mobilizing affects

Scenario building has been used in many fields to produce knowledge about very different future uncertainties (such as pandemics, environmental disasters and biological accidents). In a very naive sense, a scenario is simply a play or performance that is focused on a possible future event, used in order to be better prepared in case it actually occurs. Scenarios have been implemented across a range of realms such as war, terrorism, economics, decision-planning, organization, psychology, sociology, physics, and health. For instance, in the opinion of several authors, scenarios have become the most important way to obtain information about future health issues (Adey, Anderson and Graham, 2015; De Goede, 2008; Kaufmann, 2016; Krasmann, 2015), displacing other classical means such as statistical calculation (Anderson, 2010).

Let us introduce a couple of quotations from documents about scenario planning in communicable diseases, where the aim is to prevent and prepare for epidemics; and a graph predicting cases of Ebola in 2014 (Fig. 6):

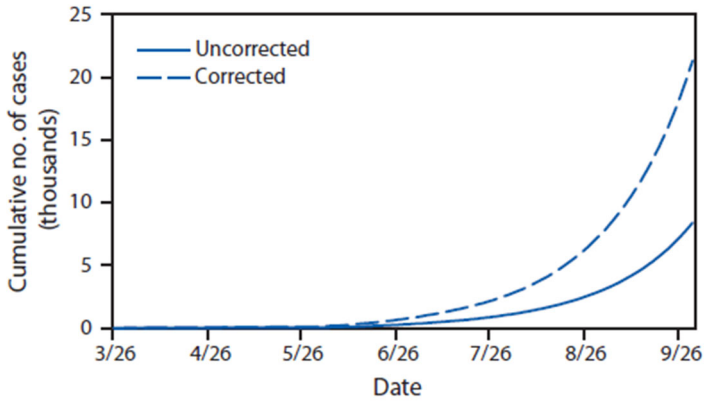

Figure 6: Estimated number of Ebola cases, Liberia and Sierra Leone combined (CDC, 2014)

The objective of this preparedness work is to perform a prospective assessment of different vaccine efficacy designs under different scenarios. Experts agreed that it is important to provide researchers with a framework and a trial simulator to guide quantitative and qualitative assessments of the pertinence of trial designs in view of various epidemic scenarios for each priority pathogens[1].

Ebola is a new risk in our country. [...] So, a lot of preparations for a potential Ebola patient involved simulation which then fall on my hands[2].

These samples are interesting because they show some common features of scenario-planning logics. First, we find semantics about the future. This is always the topic of every scenario we can imagine. Second, the data and statements that appear in the samples are based on and endorsed by institutions and experts. These have the function of providing a burden of veridiction to the aforementioned semantics about future. Third, scenarios join together different scales in a unique and logical claim (global institutions, citizens, countries, local hospitals, airports, physicians, nurses, families, etc.). Finally, they share an attempt to represent a very specific situation. 'Represent' must be understood in a common sense; that is, displaying the knowledge either gathered or created by experts in their performance with charts, graphics or decision trees. In all cases they bring to the present some future information to prevent or be prepared against new epidemics, thereby representing or simulating the future. Thus, Lindgren and Bandhold (2003), poses that system modelling is a key element defining

[1] From the document '*An R&D Blueprint for Action to Prevent Epidemics. Plan of Actions May 2016*', (WHO, 2016). Available at: http://www.who.int/csr/research-and-development/WHO-R_D-Final10.pdf

[2] From the video-scenario 'Ebola Simulation Drill | The Little Couple' made by the TLC television and performed by some experts at the Texas Children's Hospital. Available at: https://www.youtube.com/watch?v=x50SzazSjoY

scenarios because this method is based on the transformation of causal maps into mathematical representations that can be simulated.

This is the classical logic as attributed to scenarios: to build a representation. However, scenarios diverge from other representational forms. That is, a graph is produced through data collection from different sources and a piece of knowledge is generated and considered a copy of a fragment of reality. It is possible to substitute the graph for this reality and manage and change elements of the reality thanks to the capacity of the graph to enable the further production of knowledge about reality. However, scenarios are much more.

4.1 Scenarios are existential territories

The French historian Patrick Zylberman (2013) considers that scenarios are a tool that operate beyond mere representation. In his opinion, the great novelty that they contribute is that they manage to convey emotions that are offered to their users. No matter what content we give to a scenario, its significance lies in delimiting an emotion and exploring how it develops and is lived by the user. This analysis rejects reducing scenarios to a form of representation. However, Zylberman's work responds to the coordinates of a historical analysis and cannot go beyond affirming the inclusion of certain emotions and affects in the scenarios that he has diachronically analyzed. If we combine their perspective with a synchronic one, that is, an analysis of social and cultural elements (obtained through individual and group interviews, image examinations, etc.) we can identify something further and altogether more exciting: that scenarios go beyond the delimitation of affections, as they build what we have called, borrowing a concept from Guattari (2008), *existential territories*. That is, the current scenarios open spaces for doubt, reflexivity, tension and conflict, offer clues to define emotions and, what is more, they establish coordinates so that the actors re-signify their relationship with the scenario itself and with the other actors, services or institutions included within it. In the following section, we look at these claims in more detail.

4.1.1 Scenarios open reflexivity

The statements and quotes of the following sections are based on the results of a research carried out in the Universitat Autònoma de Barcelona, Spain. The research gathered the following empirical data: a) documentary materials from institutions like Centers for Disease Control and Prevention, World Health Organisation or the Food and Agriculture Organisation; b) hospital, laboratory, and veterinary protocols; c) laws and regulations from the European Union and different Spanish cities; d) 12 focus groups with different society cohorts from Barcelona, Bilbao and Almería like data experts, veterinary researchers, university students, elderly people, feminist groups or activist groups; e) a great variety of images and photographs related to epidemics from diverse sources: newspapers, international health institutions, hospitals or laboratories; and f) interviews with researchers and lab technicians.

The first point we found in the analysis of our results was that frequently, current scenarios contained images, audio-visual elements accompanied and interacting with text, a video, or even infographics, that were not mere graphs based on statistical calculation (examples included a global map, a person with a containment suit, a naked body opened up to show the different infected tissues, virus on a microscope scale, etc.). And the second was that these scenarios were not addressed to experts, but to laypeople (they are published on YouTube, they appear in newspapers, and some others are fostered through public participation)[3]. So, scenarios pursue forms of engagement and an interpretative relation between the scenario and everyday people. For instance, we encountered statements like these:

> "(The scenario) makes me think that diseases are invented by laboratories; they are in fact, science-fiction, because they seem to be diseases made to control the world. It makes me think there are some powers that are trying to control us." (young woman in the activist group from Barcelona).

Upon a certain scenario, any citizen interprets its origin, its motive and positions themselves before it. Conspiracy theories are frequent, but not the only theories. Speculations about its usefulness and possible social application, about who has created them and why, are also common. The important thing, however, is not so much the content of such an interpretation as the emergence and realization of it. At the moment when a citizen is in front of a scenario and must make the effort to interpret it, s/he has been captured by it. Immediately, the interpretation gives way to the unfolding of a set of emotions that accompany this exercise of interpretation.

4.1.2 Emotions

> "(researcher): In any moment, do you feel you could be infected, either by Ebola last year or H1N1 in 2009? (Group in general): No […] (One of the people): Yes, I do, because I was in Argentina and one person I know was infected and I was going to her house, and I was living with her. That was the moment I was afraid […]. I remember their flat mates were washing their hands all day with alcohol." (young woman from a feminist group in Bilbao).

Fear, then, was a clear emotion deployed in scenarios about Ebola, Influenza or any kind of virus. And with fear a complex social and symbolic universe appears:

> "(interviewer): How would you react if the media announces that this unknown virus has arrived in Europe? (one of the people in the focus group): There is not so much scope for action […] if the case is very close maybe I would become paranoid and I would put a mask on. (just before, another person): Sincerely, if there are some alerts […] it would scare me. I don't know if you are like 'Action Man' or made of ice. If I am told that

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[3] For instance, see this one about Ebola appeared in the Daily Telegraph: https://www.youtube.com/watch?v=-tCTh4AsZ9Y&t=3s or the GleamViz project (http://www.gleamviz.org/case-study/).

> Ebola arrives in Spain, it would scare me because it is to realize that: 'oh, it is here!'". (students from the University of Almeria).

The aforementioned emotions can be interpreted as affects because they realized what Rancière (2007) calls a redistribution of sensitivity. That is, they determined what behavior had to be carried out, how to approach the threat, define it, manage our relationships with other actors and what to demand from institutional actors. They offered a concrete experience of reality. Therefore, the fiction created by the scenario is able to redefine how we engage with the world around us: cleaning and hygiene, self-care, fear, washing our hands, wearing masks, worrying about our peers, dealing with proximity to the virus, claiming for social services, and even thinking about our death.

4.1.3 Engagement with actors: from global to local and vice versa

A third important result is related to the role of institutions and actors. Throughout focus groups, participants talked about very different institutions and actors with which they would engage with if they were in the epicentre of an epidemic: from hospitals to the World Health Organization, police, nurses, laboratories, governments, universities, or social psychologists, among others. Let's see several examples:

> "(interviewer): From the moment the virus is detected, what do you think is the pathway in order to contain it? (group): In the case of animal outbreaks, a farmer detects something suspicious and calls the vet. The vet then, reports to the veterinary official systems. Next, the official vet goes and gather samples that are analysed in a laboratory […] In a severe case, the Generalitat (the Catalan government) and the Spanish Ministry of Health are the institutions that may decide how to act." (Veterinary group, Barcelona).

> "I don't know if the Army would act how they are expected to. I think if a serious pandemic arrives, soldiers could not repress the population. If I were a nurse in Africa and I was infected […] I think I would run away (another participant) I think when you are infected, you are isolated from the rest of humankind […] because people interact with you through a special suit…] this thing that a physician touches you and can comfort you […] is lost. You interact with a body from which you don't want anything." (focus group of data experts from Barcelona).

What stands out extensively in the quoted fragments is the production of scales of activity and the relationship between them. The actors are able to define local scales and scales that link these with global ones. The conformation of scales is more relevant than it seems at first sight since it determines how our subsequent courses of action will be and how they will be articulated with those of other actors. For example, it is not the same to think about how to survive in a city besieged by a virus in which there are certain social services as it is to imagine the same from a small locality that requires you to move to get help.

5. Scenarios as existential territories

The French philosopher Jacques Rancière insists that images do not represent, that they are not manifestations of the properties of a technical meaning (Rancière, 2007). Rather, they are operations: relations between the whole and the parts; between a visibility and both a potential signification and affect associated with them. They are operations between the expectations and that which executes them. In this sense, understanding scenarios as images means to put forward that these are mediators, engagements of effects, meanings, and expectations. In fact, as Rancière (2005) shows, an image is not the creation of an imaginary world in opposition to the real world. It is an action that creates dissension, which changes the modes of the distribution of sensibility, and the forms of enunciation, by changing frames, scales, or rhythms and building new relationships and ways of seeing and feeling. Thus, we can sustain that scenarios are tools to produce existential territories.

Nevertheless, they do not create any kind of territory; they work with risk (risk of infection, risk of an outbreak, risk of danger for the country, etc.). Thus, the sense of risk in scenarios is precisely what surrounds everything (emotions, behaviours, ideas, etc.). Risk is not a probability or number, but a frame of details where action and preparedness are blurred. Scenarios teach or show us new visibilities, sensitivities, and forms of life that become possible and thinkable and a new existential option emerges in its definition.

Something that must be clear is that the use of mathematical models in strategic decision-making has not been excluded, they are simply subordinated to a broader objective: to 'think the unthinkable' (Gosselin and Tindemans, 2016). This means, first, to broach sensitive topics that could not have been discussed before by approaching abstract concepts; second, to become an open tool for risk work; and finally, to use a powerful and research-based method for approaching unpredictable and complex environments with a capacity to involve actors and knowledge from a range of domains by ‘resocializing disciplines’ toward a global health equity (Farmer, Kim, Kleinman and Basilico, 2013). That is, with the scenarios we move beyond the definition of the emergency as a containment or prevention exercise. Now, it appears defined as an existential territory that affects all facets of our daily activity.

It could be argued that scenarios are a tool at the service of the logic of preparedness. This is correct, but it does not include all the effects that the widespread use of scenarios is producing. This supposes the opening of a new intelligence or logic to think about health. In this logic we find the following features: a) The scenario uses fiction to create a kind of play or role play. However, that fiction is loaded with data and elements from science that gives it a strong burden of veracity. b) Each scenario can be developed from free interpretation or, as is usually the case, presented as a kind of graphic script in which both experts and citizens can improvise. c) The scenarios are represented in different sets: one will be a scenario where the best of the possible cases will happen, another will be the worst-case scenario, and others will be a mixture of both situations. d) The scenarios provide diagrams and equations that aim to "capture" human behavior, the rational or emotional variables that determine individual and collective behavior.

7. Conclusions: the reality of fiction

Classical risk assessment, as we have seen, puts the focus on the reality of the (bio)risk: what we know about it, what we have done coping with similar epidemics, and on the basis of both, what can we do now. Certainty, specifically the aim of "dragging" the risk to the light of objectiveness, and the sphere of what we already know (and already know how to handle), is the key feature of this first emergency modality. In order to achieve this goal different techniques are employed: diagrams, decision trees or chains, and statistics are some of them. Next, we explored how protocols, as they articulate courses of action in a hypothetical future opened, in some way, the epistemic reflection to certain fictional content. Finally, fiction was shown to be key to scenarios.

Improvising in scenarios the actors immerse themselves in an imaginary world and through that mimesis become familiar with the attitudes, knowledge, techniques and points of reference that will take them to the centre of a situation like a tense and difficult epidemic crisis, an environmental disaster or a planetary contingency. Therefore, through fiction, experience and learning are generated. However, this fiction oscillates continuously between parameters that clearly show that we are not dealing with real facts and data or elements that give verisimilitude or veracity to the lived experience. In the case of scenarios, the threat is perceived as a different universe, where the danger is transcendent and unpredictable. In this it is not possible to perform an internal injury of a determined socio-technical system. On the contrary, risk is always open: we know what will happen, but not how or when. It is the ineffable and always external to the system.

Doubtless, scenario planning is a practice that is building a new regime of conceptualization of the future. This is no longer understood as an anticipation, a forecast or a figure that indicates a trend. Now, the future becomes a life experience of wide uncertainty that can and should be experienced in the present. The future opens as an experience in all the breadth of sensations and meanings it can offer. It is based on a specific risk (Ebola, terrorist attack, water shortage, etc.) but is deployed as if a plant, avid for light in the form of the integration of emotions, relationships, interpretations and, ultimately, close experiences that make up our day to day. That is, fiction becomes the main organizer of our present.

CODA. The emergency modality and COVID-19: real time and biosurveillance citizenship

Practically since the moment it emerged, the COVID-19 pandemic has sparked analysis and interpretation from leading authors in the sphere of Human and Social Sciences. A notable example was to be found in the columns published by Giorgio Agamben (2020), in which he argued that the state of emergency declared in places like Italy and Spain was simply a logical development of the

way industrialised countries had been going about the exercise of governance for decades. According to this particular author, their approach had been legitimised by the fear of indiscriminate terrorism, but once this threat was neutralised, these governments sought legitimacy for their actions in the panic generated by biological emergencies. The writings of the philosopher Slavoj Zizek (2020) are also worth citing. He works with two basic ideas; the first relates to how, thanks to this new virus, humanity has remembered that it is totally interconnected, while the second is that overcoming this crisis can only lead to a world which will take a more united and collectivized approach to problems and their solutions. Finally, we might also mention Byung-Chul Han`s (2020) analysis of the relative success of different countries in the medical fight against the virus, and the influence of the type of culture and traditions dominant in their historical contexts, be they Asian or European.

Though unquestionably interesting, these analyses all apply old frameworks of reflection to a present phenomenon which supposedly corroborates them. Thus, the COVID-19 pandemic is simply an event which serves to illustrate and give substance to warnings, ideas, cognitive frameworks, hunches and so on that we were already aware of. None of these interpretations, nor indeed the many other interpretations currently being made, invoking notions such as biopolitics, climate change or voracious capitalism, provide any analysis of the novel and idiosyncratic aspects that have been thrown up by the pandemic. In this sense, we are witnessing the curious paradox of a situation which is claimed to be entirely new and unknown, unparalleled in history, being described with old instruments, and the empirical data produced by the pandemic being used to endorse or justify the continued use and reliability of these concepts.

We believe that this paradox should be ended. As an event, the so-called COVID-19 pandemic has its own genuine and completely new and unexpected dimensions and features, which necessitate fresh analyses and conceptualisations of biosecurity. In this respect, the current pandemic offers us elements to rethink the issues that we have raised regarding the notion of “emergency modality” in our chapter, but the particular aspect which clearly sets it apart from the emergencies experienced in the cases of the Ebola virus, SARS and H1N1 flu is that it has been followed, broadcast and assessed live, practically in real time. Day after day, we have seen images of our hospitals at saturation point, data on the numbers of people infected and deaths, growth charts tracking the expansion of the virus, and comparisons of countries and continents. The press, meanwhile, have offered computer applications that trace the advance of the virus both locally and worldwide, comparing it and making projections of future scenarios. Our local and national leaders have felt compelled to make almost daily public appearances to provide updates on all the latest developments. In short, this is the first pandemic to be broadcast live and with real time tracking. Obviously, this has made possible by the infrastructure now available to us, and the phenomenon points to a future which will see the appearance of categories of reflection that will rely on this temporal immediacy to conceptualise the meaning of a situation of emergency.

Hence, the gist of this opuscule is that, rather more than the mere result of technological deployment, this instantaneousness has ontological effects because it shapes our understanding of a biohealth emergency and our response to it. Moreover, such instantaneousness speaks to two different phenomena that we must distinguish between. As Erik Sadin (2013) has pointed out, the phenomenon of real time is often confused with that of live transmission, but they are not the same thing. When we refer to something that is happening live, we are alluding to a technical configuration which allows events to be relayed in the form of images and sounds at the very moment they occur, a typical example being the live broadcast of a sporting event. The relevance of live broadcasting in everyday life lies in its ability to transcend the limitations of the body, geography and the isolation of populations and collectives. Real time, however, goes far beyond live transmission. The meaning of this phenomenon stems originally from the technical configuration that consists of sending commands to a computer and processing the results of these commands at the moment they occur. Thus, real time implies the absence of any appreciable time lag between a user's action and the demand being met. Real time, therefore, broadly refers to an operation to capture a number of phenomena from 'the real' at the very moment they occur. Thus, real time denotes the capacity to follow a large number of events and activities without delay, and in their dimension of continuous development. The main technology on which real time is based is the large-scale deployment of different types of sensors in our immediate surroundings. As the connected surfaces in our everyday lives continue to multiply and the power of systems just goes on growing, our contact with real time is becoming a rather everyday experience. These connected objects that intercept information at source imply increasingly comprehensive visibility in every aspect of life. Indeed, they will bring about the entry of real time in our very anthropological condition, enabling us to immediately tap into permanently fluctuating information flows from the world, and then act accordingly.

And so we come to a question thrown up by the COVID-19 pandemic which is highly relevant to the notion of "emergency situation", but which none of the aforementioned interpretations has thematised. The pandemic has operated as if we were faced with two completely different emergency situations. For that matter, at times it has felt like contemplating the spread and evolution of two completely different pandemics. On the one hand, we have witnessed the handling and approach of countries like China, South Korea, Singapore, Japan or New Zealand. Going way beyond simply tracking and mapping the infection, these places have deployed an infrastructure of sensors and procedures to literally pursue and monitor it in the quasi–real time of its appearance. The virus has been tracked as it has spread, and attempts have been made to anticipate fresh breakouts. On the other, we have observed how some European countries, in particular Spain and Italy, and at certain times France, have used conventional epidemiological methods, limiting their efforts to dealing with the evolution of the virus live, but not in real time. In other words, these countries have provided constant updates on the pandemic, but in tackling the emergency they have waited for outbreaks to occur before taking action, they have failed to track the movement of the virus, (in fact, the lack of tracing and tracking is seen, at the time of writing, as one of the main reasons why Spain has one of the highest contagion

rates per 100,000 inhabitants in the world) and they have turned to general lockdowns as a last resort to control community spread.

The countries in the first group that we mentioned have defined their emergency situations on the basis of this notion of real time, whereas those in the second group have restricted themselves to a live commentary of the catastrophe. As can be seen, both the treatment and the consequences of the vector of infection have been different. We would like to add that the real time phenomenon is not simply a question of capturing a whole range of emerging phenomena in an endlessly unfolding present but involves a different relationship with the immediate environment. The distance separating bodies from their environment gradually melts away, until we see a snapshot of what was previously opaque now becoming visible, a vector of infection, for instance. A good example of this are the apps on a Smartphone, which allow us to identify elements to be found in our immediate location. Such a feature generates an augmented reality effect which allows us to go beyond the boundaries of the classical science approach to the natural state of things, merely describing and monitoring the course of their evolution. We are now able to alter their course, intervening and, where we can, adjusting things according to our requirements. It is worth mentioning here that Spain somewhat belatedly created a good app to track people infected with SARS-CoV-2, but for various organisational and administrative reasons has been unable to implement it nationwide.

To conclude this opuscule, we would like to mention that the phenomenon of real time action has given us a glimpse of an interesting new sociological and anthropological development that we shall call “biosurveillance citizenship”. It is, like others which will need to be determined and thematised, the child of real time, and is characterised by the capacity to monitor things at the very moment they occur. It is a sort of control mechanism which not only feeds off past or present archives, but also the state of ‘the real’ in the very instant of its conception, eliminating any opacity from experience, its uncertainty and randomness. This biosurveillance citizenship has four features:

1) Life is watched and watchful at the same time. The handling of the pandemic has required that citizens be both watched and watchful. They have become an active and crucial part of the monitoring and surveillance circuits deployed to manage biohealth emergency situations.

2) The quality of citizenship with full rights vacillates and depends on its exercise of surveillance in real time. Controversial tools in European countries, like the health passport or medical tests before or after travelling, show that the condition of citizenship might be shifting from being an absolute status held everywhere and at every moment being an intermittent situation, requiring some mechanism to activate or shut it down. Biological emergencies would provide the framework for this transition.

3) The citizen is a biowatcher. The prerequisite for leading a normal life in the aforementioned emergencies appears to be that the citizen must acquire skills and abilities in the observation and surveillance of the actors involved in these emergencies.

4) The biosurveillance citizen is the producer of information over which s/he has no control regarding ultimate use.

Contrary to what some interpretations of the current pandemic seem to indicate, we are not heading towards a general panopticon that would observe and register even the most trivial aspects of our daily lives. We believe that the sociology and anthropology that has focused on action taken in response to SARS-CoV-2 points to the birth of a device or governance which will have a kinepolitical (cinepolitical) feel to it, in which the management of movement in real time will shape our everyday lives.

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