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Future strikes back

Global health crises and the rise of preparedness

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Summary

Since the 9/11 attacks, preparedness has become the dominant way of thinking about domestic security in the United States of America (U.S.). It is also diffusing internationally, through such a sector as disaster management. Similarly, it has been increasingly capturing ideas and practices in the world of global health emergency management, since the late 1990s. This evolution accelerated significantly after the 2009 H1N1 influenza pandemic and the 2014 Ebola outbreak in West Africa, whose international management was widely assessed as succeeding failures. During both episodes, the World Health Organization (WHO) was subject to harsh and widespread criticisms for its perceived inability to uphold its role in leading the international response, during both crises, as the U.N. organization in charge of public health. These sequences pushed the organization to develop its preparedness organizational models, procedures and techniques. This chapter intends to shed light on this process of organizational transformation, by assessing the interactions between a consolidating perception of the future as being deeply *uncertain*, the increasing dominance of preparedness as the preferred approach to the management of risks and uncertainties, and real-life crises

Introduction

Since the 9/11 attacks, preparedness has become the dominant way of thinking about domestic security in the United States of America (U.S.). This emerging form of “security rationality”, caused by a growing sense of a future plagued by unanticipated threats, has resulted in a variety of related activities. In order to foster a “prepared nation” ready to deal with deep uncertainties, laws have been passed, institutions have been created, and preparedness, as a dominant paradigm and as a set of practices, has been organized, promoted and diffused across society. In the process, an increasing range of social activities and “social worlds” (Becker 1984), such as public health, have been reconfigured in order to incorporate preparedness principles.

This dynamic has been analyzed in different ways. Besides rather technical literature mainly concerned with refining preparedness concepts and practices, more critical scholars have located this phenomenon within a broader societal shift, which involves a transforming relationship with the future. Preparedness, it is said, is coincident with a shift in the perception of the future in Western post-industrial democracies, from one of risk, linked to the “insurance” society (Beck 1992), towards one of uncertainty or

even threat. This shift entails important consequences. Indeed, while the idea of risk tends to present the future as a development of current trends, the idea of uncertainty generates a perception of the future as a radical discontinuity (Zylbermann 2013). Whereas in risk thinking the future can still be related to probabilities, uncertainty dissolves this relationship. In this context, an uncertain future (as it is conceived) is only amenable to anticipation through approaches that replace probabilistic thinking, tied to a statistical approach to possible detrimental events, by “possibilistic thinking” (Clarke 2006), which speculates on scenarios no matter the probability of their occurrence (see: Clarke 2006; for a critic of this position see: Furedi 2009). Consequently, in the context of preparedness, only “worst case” possibilities are rationally worth considering, since only they can help prepare for *any kind of threat*.

This approach to the government of future threats is not only infusing the U.S. administrations at all scales of governance. It is also increasingly diffusing internationally, through such a sector as disaster management, culminating in this domain with the release of the 2015 Sendai Framework for Disaster Risk Reduction (UNISDR 2015). Similarly, it has been capturing ideas and practices in the world of global health emergency management, since the late 1990s. This evolution accelerated significantly after the 2009 H1N1 influenza pandemic and the 2014 Ebola outbreak in West Africa, whose international management was widely assessed as succeeding failures. During both episodes, the World Health Organization (WHO) was subject to harsh and widespread criticisms for its perceived inability to uphold its role in leading the international response, during both crises, as the U.N. organization in charge of public health. These sequences pushed the organization to develop its preparedness organizational models, procedures and techniques.

This chapter intends to shed light on this process of organizational transformation, by assessing the interactions between a consolidating perception of the future as being deeply *uncertain*, the increasing dominance of preparedness as the preferred approach to the management of risks and uncertainties, and real-life crises. It does so by delineating the logic underpinning preparedness, as a form of rationality and a coherent set of practices. It then proceeds to analyse its adoption and diffusion in global health. This process is analysed with a specific focus on the effects of the 2014 Ebola episode in West Africa on the reorganization of WHO's emergency capabilities.

The logic of preparedness

Several authors have explored the history and properties of preparedness, as a principle for organizing the government of risks (for a comprehensive overview and literature review see: Zylbermann, 2013), providing ample elements on the genealogy and ruling mechanisms of this particular approach to planning. Thus, we know that preparedness emerged in the U.S., through an innovative assemblage of concepts drawn from different domains of practice, such as strategic military planning -for scenario planning -, disaster management -for the “all hazard” concept (Quarantelli, 1981; Lakoff, 2006; Perrow, 2007, 49) -, firefighting - for incident management techniques (Bigley and Roberts, 2001) -, or environmental systems studies - for the

concept of resilience. This articulation gave rise to an emergent domain of practices, endowed with its own, internal rationality and coherence.

At an operational level, preparedness develops a unitary view of disasters, which promotes the expansion of generic capacities, distributed across society. These capacities are meant to be flexibly assembled to respond to *any type* of natural or man-made catastrophes. As such, preparedness shows an intrinsic tendency to extend and “colonize” all domains of practice and dimensions of society – public and private sectors, communities and individuals, to use current bureaucratic language. Conceptually, preparedness is a product of the increasing preoccupation of capitalist societies with the future (Giddens, 2002, 22) and the growing impulse – or pressure –, for governments, to *take responsibility for the future*. This has led to the extension of the domain of public action, which now encompasses not only the domain of things present, but also the domain of *things to come* (Ewald 1986). Historically, this type of governmentality has taken the shape of different regimes of *risk management*, such as insurance, precaution or emergency planning, which all enmesh with specific “techniques of government” (Lascoumes, 2004). What these approaches have in common is their belonging to a “regime of historicity” (Hartog, 2003) - a certain way, related to a given historical configuration, of articulating the past, present and future – where the future is dominantly framed in terms of risks (Beck, 1992).

Likewise, preparedness is co-emergent with a certain way of dealing with time – exploring the future to organize the present. It points towards a transformation of the prevalent regime of historicity, in post-industrial, “Western” societies, where the dominant perception of the future comes to be shaped in terms of a radical uncertainty, rather than stochastic risks. Preparedness can thus be viewed as a type of governmentality, aiming at protecting the present by managing future, unpredictable and potentially disastrous events (think of the 9/11 attacks in New York, the 2004 Indian Ocean Tsunami, of the Fukushima natural and nuclear catastrophes as timely examples). Under this regime of historicity, preparedness operationalizes an array of techniques aimed at dealing with the present, the past and the future, by articulating risks and uncertainties.

To understand how preparedness shapes the relationships between present, past and future, let look at a widespread practice, in preparedness processes, called “situational assessments”. This type of evaluation reaches into the past and towards the future in order to organize the present. Such iterative evaluations are thus at the core of the temporal processing of preparedness. As they allow delineating current circumstances (according to past events and potential threats), situational assessments are used to define the strategic orientations of preparedness systems, and to keep it up to date and commensurate with identified threats and vulnerabilities. To provide such assessments, two logical paths are available, one backward looking, the other forward oriented.

First, threats and vulnerabilities can be extracted and identified from “real life” lessons imposed by contingent events: in the U.S. administration, the 9/11 attacks or hurricane Katrina acted in this respect as powerful indicators of hitherto “hidden” vulnerabilities. Once identified, these weaknesses are mapped and organized in the form of “after-

action report” and “lessons learned”. This first approach remains within the boundaries of probabilistic anticipations, where the past is relied on to forecast *likely* threats. The past is seen as a vehicle to repatriate and animate likely futures, in order to build relevant response capacities.

Second, flaws and loopholes can be identified through scenarios and exercises. This technique opens the way to the careful drafting of “worst case” narratives, which help design simulations of “low probability-high consequences” events, thus putting preparedness systems to a test. Contrary to real-life events, these plots are only loosely dependent on the past (they must remain *plausible*) and can thus be designed to explore the limits of preparedness systems, regardless of their probability of occurrence. Therefore, these two types of situational assessments are used to draw lessons 1. from past events, and 2. from “imaginative enactments” (Lakoff, 2008) conveying “virtual” catastrophes. Through lessons learned, these two strains of events – actual and virtual -, are used to improve current preparedness capacities.

To understand this process – learning from the past, anticipating, organizing -, it is necessary to underscore a plain and basic fact: that preparedness progresses *in the absence* of its object, considering that, as a domain of practice, it deals with threats located *in the future*, and which are thus, by nature, inaccessible to *praxis* (Bastide, 2017; Anderson, 2010). Hence, this trajectory of organizing relies on ways of “making the future present” in order to fine-tune the ability of preparedness systems to deal with forthcoming events. This “being there of the future” (Anderson, 2010) is realized both through the summoning of past events, and through the careful designing of virtual situations – plausible futures. Thus, it combines a probabilistic stream of thoughts – that which has happened might happen again – with a possibilistic opening – that which has never occurred but must be considered, since its occurring would be so catastrophic as to compromise societal resilience.

The history of planning is replete with examples of the first type of situational assessments, based on classical after-action analyses. To keep with our specific domain of investigation, such practices have been implemented in the U.S., over recent years, following different public health crises. Thus, the large scale, national response to the 2009 H1N1 influenza pandemic was followed, two years later, by the release of the Department of Health and Human Services’ (HHS) *An HHS Retrospective on the 2009 H1N1 Influenza Pandemic to Advance all Hazards Preparedness* (Department of Health and Human Services, 2012). The document is organized along pandemic response domains – surveillance, mitigation, vaccination, communication, and education. For each of these topics, past actions are dissected. At the end of each chapter, successes are then identified and “opportunities for improvement” are listed, which are further elaborated in the HHS’ *2009 H1N1 Influenza Improvement Plan* (Department of Health and Human Services, 2012). The newly released *Pandemic Influenza Plan 2017 Update* (Department of Health and Human Services, 2017) proposes further restructurings of the U.S. public health preparedness system by incorporating lessons from subsequent crises such as the recent Ebola outbreak in West Africa, the 2016 Zika virus outbreak, the Middle East respiratory syndrome (MERS), or ongoing resurgences of the H7N9 influenza strain in East Asia.

However, this type of practice is not specific to preparedness. Thus, let us now turn towards the second, more “exotic” form of anticipation, using scenario planning, which is co-emergent with the shift from risk thinking towards preparedness.

Plausible futures and scenario planning

The rationality of after-action analysis is based on a faith in the possibility to draw useful lessons from the past, in view of managing the present. As such, it is an old practice, which has been systematised in the context of strategic planning. Conversely, scenario planning indicates an erosion of this faith. It is a recognition that this approach, if it should not be discarded, needs to be supplemented, as reality has all too often caught existing emergency management capacities off guard. Therefore, scenario planning is indicative of an important shift in the conceptualization of the future within U.S. preparedness circles.

Historically, scenario planning was first developed as a military tool, in the context of the Cold War, before it spread to other domains of practice, such as corporate planning (Ringland, 1998), the disaster management community (Ericksen, 1975; Alexander, 2000; Tusa, Chin, and Tanikawa-Oglesby, 1996), or public health (Lakoff, 2006). However, this approach gained greater traction following the terrorist threats of the early 2000s. Indeed, the 9/11 attacks created a deep sense of uncertainty in the U.S. administration. The fact that these attacks had been possible at all and that the “unthinkable” had actually occurred was blamed on “a failure of the imagination” (9/11 Commission: p. 304, quoted in Goede, 2008), pushing scenario planning to the fore of the reorganization process of the U.S. preparedness apparatus. Consistently, the 2002 National Strategy for Homeland Security, a White House document setting the principles of national preparedness, called for a greater emphasis on catastrophic threats entailing “the greatest risk of mass casualties, massive property loss, and immense social disruption” (Homeland Security Council, 2002, 2).

Subsequently, scenario planning, as a preparedness practice, has been structured and institutionalized, and the responsibility of the drafting and implementation of scenarios, through exercises, has been attributed to the DHS. This “fictionalization” of strategic planning (Zylberman, 2010), marked by an acute consciousness of being confronted with “fragile futures”, was reinforced with the release of Presidential Policy Directive on National Preparedness (PPD-8) in 2011. While the previous framing of scenarios in Homeland Security Presidential Directive (HSPD-8) annex 1 explicitly demanded that national scenarios be focused on the most dangerous *and* the most likely threats, PPD-8 shifted their focus to the incidents identified as posing the greatest threat to the nation’s security. Craig Fugate, then administrator of the U.S. Federal Emergency Management Agency (FEMA), referred to these incidences, with a capacity to overwhelm all U.S. countermeasures, as “meta scenarios”, to convey the idea of their extraordinary scope (Caudle, 2012). Thus, it was hoped that focusing on events of such scale and implementing through exercises would stress and, therefore, strengthen preparedness systems surge capacity, the underlying assumption being that once they would be calibrated for the worst threats, they would be able to face *any* threat.

Scenarios and exercises have thus become strategic techniques for managing uncertainty, and their organization has grown in complexity. In the latest National Exercise Program (NEP) (Department of Homeland Security, 2013), which sets the national framework for preparedness exercises, the latter are distributed across every governmental scale (all the way from federal institutions to the individual citizen), across the private and public sectors, and are held iteratively. Following previous experimentations in the early 2000s (for a detailed account see: Zylbermann, 2013, 161–64), a first National Level Exercises (NLE) was held in 2009. Such exercises are now implemented on a two years basis. Likewise, scenarios have grown in scope. Besides narratives aiming at benchmarking specific capabilities, such as the anthrax attack or the influenza pandemic plotted in the 2006 National Planning Scenarios (Department of Homeland Security, 2006), FEMA has now engaged in long-term scenario planning. In 2010, the agency launched the Strategic Foresight Initiative (SFI), gathering a broad set of actors who worked together to draft scenarios spanning until 2030. The aim is to achieve “(a)n emergency management community prepared for whatever challenges the future holds; and a common sense of direction and urgency to drive action toward meeting our shared future needs – starting today” (Federal Emergency Management Agency, 2012, V).

In 2013, the SFI released *Toward More Resilient Futures: Putting Foresight into Practice* (Federal Emergency Management Agency, 2013), the implementation plan following its conceptual statement. As quoted from the document, “This step moves us beyond the analytical world of process and ‘theory’ toward the real world of practice.” The report is divided into three sections. The first section is titled “Sustaining Foresight” and is intended as a move “to spark future thinking” in order to understand “what our future needs will be”; this “requires...to stretch our imaginations and explore the underlying forces of change—seeking to be more prepared, regardless of how the future unfolds.” These statements further document the fact that scenarios have become a critical technique for incorporating the future in the context of U.S. preparedness practices, thus broadening the scope of classical risk analysis.

As we showed, scenarios are means of acting in the present *considering the future*, by constructing *plausible* narratives of forthcoming threats. This said, we agree that scenarios do not aim at forecasting the future, contrary to risk assessments. Indeed, their growing prominence in U.S. preparedness practices is inseparable from the perception that risk thinking is too limited to prepare for a future plagued by growing uncertainties. In a context where the future is increasingly conceived of as unamenable to any form of efficient prospective thinking, specific plots are not selected because they are thought to draw an accurate picture of the future (because they represent *likely* occurrences), but because they offer a broad portfolio of possible threats (“whatever challenges the future holds”... “regardless of how the future unfolds”). These portfolios are designed to stretch preparedness systems to their extreme limits. Thus, preparedness is not achieved by *predicting the future*. Rather, it is achieved through the building of broad and flexible “core capabilities” (Department of Homeland Security, 2011), which can be combined in discrete configurations to organize a response and face any possible pattern of disaster. What is to be stabilized is not an accurate view of the future, but consistent preparedness capacities.

From capabilities to “whole of society”

PPD-8 set U. S. preparedness on new tracks, as it shifted the focus from wide-ranging scenarios to “worst-case” narratives aimed at stressing response capabilities to unprecedented levels (Caudle, 2012). This shift marks a heightened consciousness of the vulnerability of current arrangements and of the possibility of “large-scale disasters” which, as it is understood, could overwhelm all government resources and capabilities. As the “scale and severity of disasters are growing” they will thus “likely pose systemic threats” (Federal Emergency Management Agency, 2011, 1). In facing such “wicked problems” (Rittel and Webber, 1973) classical capabilities, located in specialized agencies, are deemed insufficient, be they organized according to the all-hazards approach. The only way to face these looming cataclysms is through the mobilization of all components of the national community. Consequently, FEMA launched a national dialogue on a “whole community” approach to emergency in 2010 (Federal Emergency Management Agency, 2011), seeking to gather inputs from various actors as to the means of organizing relevant response capabilities, in such a fragile environment. This dialogue gave rise to concepts like “whole community,” “whole-of-government,” or “whole-of-society”, which are emerging as a new dominant discourse on preparedness.

This move has two consequences. First, it suggests a shift away from a highly specialized, hierarchized, and centralized national preparedness system, which cohered after the 9/11 events, toward a more diffuse form of organization which relies on the ability to mobilize non-specialized resources and actors in times of crisis. This organization leverages on resources and capabilities that are presumed to be “latent” in society, in order to foster preparedness and tailor new response processes. As phrased by FEMA, the objective is to “understand community complexity [in order to] recognize community capabilities and needs, empower local action, and leverage and strengthen social infrastructure, networks, and assets”.

The second consequence is far-reaching. Beyond the notion of the whole community lies the idea of embedding preparedness in the course of ordinary social processes and practices in order to build resilience “within” communities, within the very social fabric. However, the success of this endeavour is premised upon the ability to mobilize individuals within these communities. In order to foster these finely grained social changes and to socialize ordinary social actors to this cultural shift, a number of initiatives have flourished which seek to involve the “whole of society” (government, the private sector, civil society) through participation in exercises or by encouraging individuals to contribute ideas and advice on the future of preparedness. FEMA, for instance, has developed an online crowdsourcing platform to gather inputs and ideas from the public on its preparedness initiatives and reorganizationsⁱ. In the context of the whole community approach, FEMA also seeks to involve individuals through children and youth education programs on “individual, family and community preparedness”, by leveraging on social media, or by developing recovery plans “with full participation and partnership within the full fabric of the community”. To develop this approach, FEMA has created an Individual and Community Preparedness Division (ICPD)ⁱⁱ, stating that, “Preparedness begins with the individual”. In this context,

“FEMA’s Individual and Community Preparedness Division (ICPD) serves as the main preparedness link to individuals and families. The Division connects science-based research to communications, education, and tools that empower communities to prepare for, protect against, respond to, and recover from a disaster”. Thus, it seeks to create “citizen responders”, able to act before professional agencies can hit the ground.

These techniques of government, as *any* form of government (Foucault, 2004), are thus actively producing *subjects of preparedness* through the exposition and involvement of citizens in/to the preparedness discourse (and hence, to its specific regime of historicity), including in schools, and their enrolment in preparedness practices through disaster scenarios and exercises. These practices participate in framing a particular relationship to the world by diffusing a prevalent, dystopian relation to the future. This subjectivation process – the production of specific subjects of government (Foucault, 1982) – works towards producing citizens amenable and reactive to the preparedness discourse, and responsive to preparedness principles in the context of a catastrophic event.

As we see, there is a logical development between the development of a cultural framing of the future in terms of uncertaintyⁱⁱⁱ, the rise of scenario planning, and the emergence of the whole community approach in the U.S. preparedness system, thus outlining the constitution of a specific form of rationality. This rationality is currently spreading across governments and international organizations, globally. We now turn to the realm of international public health, as this reading will help us understanding its recent developments, in particular during and after the 2009 H1N1 Pandemic and the 2014 Ebola epidemic in West Africa.

The development of global health preparedness

In the field of public health, preparedness emerged in reaction to the rise of a renewed concern with microbes. Since the late 1980s, virologists and epidemiologists had been increasingly worried of emerging (such as HIV-AIDS) and re-emerging (resistant strains of known bugs) diseases (on this subject see, for instance: Morse, 1990, 1993; Berkelman, 1994; Artsob, 1995; King, 2004). In 1992, the U.S. Institute of Medicine released a report entitled “Emerging Infections: Microbial threats to health in the United States” (Lederberg, Shope, and Oaks, 1992). Such mounting preoccupation pushed the CDCs to develop preparedness strategies to address this perceived threat (Centers for Disease Control and Prevention, 1994, 2002). By the late 1990s, the fear of new pathogens was only growing, as this view seemed to be validated and was sustained by recurrent cases of deadly animal-to-human transmission of the H5N1 strain of influenza virus in East and Southeast Asia, and, later, by the SARS epidemic of 2002. In the U.S., this climate of anxiety was only exacerbated by the fear of possible bioterrorist attacks (Schoch-Spana, 2004, 2000; Keränen, 2011) using weaponized pathogens. Clearly, this blending of concepts, borrowing from distinct “epistemic communities” (Haas, 1992) – virologists/epidemiologists, military planners, emergency management experts –, emerged and cohered into dedicated institutions in the U.S., culminating in the structuring of public health as an important branch of the fast

expanding national public health preparedness system, in the early 2000s. From the late 1990s, WHO had followed path, thereafter contributing to the diffusion of this new domain of practice and new type of organization, merging public health and emergency planning.

WHO drafted its first influenza pandemic preparedness framework in 1999^{iv}, setting the stage for international influenza preparedness planning. Influenza was seen as the most likely agent of a potential, deadly pandemic, drawing on memories of the catastrophic 1918 pandemic flu episode (Figuié, 2013) and considering the iterative emergence of new influenza strains in East Asia (Keck, 2010; MacPhail, 2014; Shortridge, Peiris, and Guan, 2003). This dynamic of institutionalization culminated in 2005: while the U.S. DHS released its National Strategy for pandemic influenza (Kamradt-Scott, 2012), WHO revised its 1999 plan to take stock of the SARS lessons and to reflect the growing fear of bioterrorism, after the 9/11 attacks. The same year, the revised International Health Regulations (IHR) were signed, which contained provisions for the development and strengthening of public health surveillance systems and capacity building across member States (Sturtevant, Anema, and Brownstein, 2007). Meanwhile, many countries had started to develop their own pandemic influenza preparedness systems, under WHO's push. In the domain of public health, WHO thus acted as a global "clearing house" for preparedness ideas, concepts and practices, contributing to their quick spread at a global level. However, the U.S. model has been altered in the process. Interestingly, this alteration touches upon the most critical foundation of preparedness: its framing of the future. Indeed, as it spreads internationally, public health preparedness, as embodied within WHO's own organization and objectified in existing instruments promoting the diffusion of preparedness practices, displays distinctive features regarding this specific dimension.

If preparedness is a way of governing the future, or, more accurately perhaps, of governing the present considering plausible futures, then this shift is highly significant. Importantly then, whereas WHO is now in the process of adopting scenario planning and exercises as routine organizing tools, the organization does not seem to replicate the focus of the U.S. systems on "worst case scenarios" for the time being. To be sure, the *WHO Simulation Exercise Manual*, released in 2017 (World Health Organization, 2017b), sticks to *likely risks* rather than "black swans" (Taleb, 2007). Likewise, WHO's approach to preparedness aims at building capacities to deal with: "(...) likely, imminent, emerging, or current emergencies" (World Health Organization, 2015, 20) rather than with low probability-apocalyptic events. Whereas in the U.S. preparedness planning process classical risk thinking is now subjected to the dominant logics of low probability-high impact events, WHO's current frameworks show no such move^v.

Dealing with international health crises under preparedness models

In 2009, the H1N1 flu pandemic put these newly constituted capacities to a test. The handling of the event by national authorities was assessed in rather positive terms in the U.S. and in a few other countries, such as Japan, raising few controversies. In many European countries, it was deemed a semi-failure at best (Flynn, 2010). However, WHO's role was closely scrutinized and the target of the most violent

arguments, being the institution in charge of leading the international response. Its management of pre-established pandemic phases (Time, June 10 2009), the opacity of its decision-making processes during the crisis, its declaration of a Public Health Emergency of International Concern (PHEIC) for a disease which proved, in hindsight, rather mild (Washington Post, March 10 2011), its poor performance in terms of crisis communications (Barrelet et al., 2013), and its putative collusion with “big pharma” (Cohen and Carter 2010) were all pointed out in harsh terms in the international media. Consequently, WHO thoroughly revised its preparedness framework. In 2011, it released a revised pandemic plan, the Pandemic Influenza Preparedness (PIP) framework (World Health Organization, 2011) which is since then (re)evaluated and updated on a regular basis.

International public health preparedness was to reach a new turning point with the 2014 Ebola outbreak in West Africa. The crisis shed light on the risks involved in too narrow a focus on influenza, as the crisis took WHO and other organizations by surprise. This lack of preparedness shed light on a double “tunnelling effect” (Taleb, 2007)^{vi}: first, an oversized focalization on influenza, as the most likely “coming plague” (Garrett, 1994); second, an entrenched conceptual association between Ebola and Central Africa. Thus, the international community was neither ready to face Ebola as a potential pandemic threat (a status it nearly reached with quickly contained domestic transmission cases occurring in the U.S. and in Spain), nor to deal with it in West Africa, where people were unfamiliar with the disease. Interestingly, our investigations at WHO headquarter, at the US CDCs, with Switzerland’s federal and cantonal authorities, at the Geneva cantonal hospital and at the Swiss branch of Doctors Without Borders, have showed that, during the most heated period of the crisis (March 2014-January 2015), existing emergency systems and procedures were of limited help. Individual initiatives, informal social networks and interactions played a significant role in keeping the response afloat before more permanent structures could be stabilized (see also: Bastide, this volume).

As a whole, the international response to the event, and, all the most, WHO’s lead during the episode were abundantly criticized (Moon et al., 2015; Gostin and Friedman, 2014; Gostin, 2015; Clift, 2015), pushing new restructuring of the organization’s emergency capacities. In response to the following performance assessments and after-action reports – to date, over 40 different assessment reports have been published (Moon et al., 2017), WHO created the Health Emergency Programme in 2016, along with a large contingency fund^{vii} to allow the fast projection of response capabilities. Unlike its other programmes, the new department cuts through the three levels of the organization, from its Geneva headquarter to regional and national offices, thus aiming to align practices and create a unified chain of command. These evolutions indicate the broadening scope of public health preparedness within WHO, while it consolidates as an overarching principle, exceeding pandemic influenza or humanitarian emergencies *per se*. This move is supported by the release of a series of new preparedness-related frameworks, which import and adapt many organizational elements readily available in the U.S., such as the Incident Management System (Department of Homeland Security 2008), or preparedness exercises. In 2017, WHO released *A strategic framework for emergency preparedness* (World Health Organization, 2017a), which broadens the scope of public health preparedness to any

type of emergency with a significant health component. Additionally, the institution is promoting the same type of reorganization on the international stage, through such programs as the Country Health Emergency Preparedness & international health regulations (CPI). Located under the Health Emergency Programme, it supports the development of preparedness capacities in member countries, mainly through technical assistance^{viii}.

A significant aspect of this circulation and scaling up of preparedness concepts and models is the surfacing, in WHO's 2017 framework, of the whole community approach to emergency planning, which is pervasive in the document. As stated : "(c)ommunities are critical to effective emergency management. Community members are the first responders – and the first victims – of any emergency and, as such, essential members of the preparedness process. They should be represented in all activities around developing and implementing plans for emergency preparedness" (World Health Organization, 2017, 3). Considering this move, it is important to remember that the most significant impediment to the efficient deployment of the international response during the recent Ebola episode rested in the resistance of affected populations to emergency interventions (Niang, 2014, Bastide, 2018, Bastide, this volume). This difficulty made the necessity to involve affected individuals and social groups in the response painfully clear. In the context of such emergency interventions, considering at-risk populations as mere targets of the response had not only proved ethically questionable, but also operationally detrimental (Le Marcis, 2015; Faye, 2015, Calain and Poncin, this volume). Building up the "acceptability" (a term in use among emergency communicators) of such extreme public health measures as confinement, quarantine, triage, or safe burials supposes the voluntary and active participation of affected individuals and local social, political and cultural agents.

Similar to the U.S. preparedness system, we can thus analyse the surfacing of the whole community approach as a way of co-opting reluctant populations into the emergency management process. Just like in the U.S., governing disaster situations requires the constitution of "subjects of preparedness", ready to act and re-act according to the requirements and injunctions of preparedness institutions and procedures. Yet, scaled up at the international level, the task appears daunting, if not squarely out of reach. In the U.S. alone, the H1N1 pandemic has underscored the need to tailor specific approaches and interventions for minorities and disadvantaged population (Department of Health and Human Services, 2012, 31; Uscher-Pines, Maurer, and Harris, 2011). However, international public health preparedness deals, by nature, with considerably more heterogeneous publics. It aims at populations culturally inscribed in highly divergent regimes of historicity – a fact which was made very clear by the recent Ebola response (Bastide, 2018) -, which always encompass vernacular ways of shaping the future (Bastide 2015, Bastide, this volume). If these processes of subjectivation might be thinkable within a single country, where institutions are coincident with national borders and "governed" population, reaching a global scale appears much more problematic.

Conclusion:

As a coherent conceptual corpus and set of practices, preparedness is currently reconfiguring international public health emergency planning. If we consider preparedness as inseparable from a specific regime of historicity and as a type of rationality, this scaling process – the diffusion of preparedness from its U.S. cradle to the international stage – still appears incomplete. Indeed, if we accept that WHO's preparedness models are representative of this internationalization process, it is important to stress that the institution still clings to a stochastic view of anticipation. Considering the difficulties faced while dealing with the H1N1 and Ebola episodes, we could thus be tempted to attribute these weak performances to this incomplete adoption of preparedness techniques. Moreover, this argument could be easily reinforced by comparing WHO's intervention processes to those in place at the U.S. CDCs, where the organization was much quicker to reconfigure and enter into crisis mode. This is fact. However, this would also be a gross underestimation of the specificity of WHO's position, and of its particular context of intervention. Being the organization in charge of leading the international response to public health crises, it evolves in a highly politicized arena, under unparalleled scrutiny, making its context of actions much more unpredictable and problematic. In these circumstances, there is absolutely no certainty that incorporating the whole preparedness "package" would make WHO more efficient in the context of future health disasters.

This said, we might be currently witnessing clues that the process of institutionalization of preparedness within the organization is leaning towards a more complete internalization/implementation of its conceptual "economy". In particular, this could be transpiring in the recent emergence, in early 2018, of a discourse on "disease X", which entered the list of pathogens susceptible of triggering a public health emergency^{ix}. As stated: "Disease X represents the knowledge that a serious international epidemic could be caused by a pathogen currently unknown to cause human disease, and so the R&D Blueprint explicitly seeks to enable cross-cutting R&D preparedness that is also relevant for an unknown "Disease X" as far as possible."

This introduction of uncertainty – disease X – in a list of pathogens whose potential to induce a health crisis is assessed along classical risk assessment lines, was somehow to be expected. Considering that WHO is currently implementing a whole community approach to preparedness, considering also that this approach supposes to turn social actors into active responders in a context of emergency, there is a need to *enrol* people in the preparedness culture – its regime of historicity –, to produce *subjects of preparedness*. This process of subjectivation is best facilitated by promoting high-impact uncertainties over known risks. Similar considerations were made by early proponents of scenario planning who argued that creating high-impact narratives - besides its usefulness in terms of capabilities assessment - would also be a way of increasing the awareness and concern for a specific issue, among the public and public authorities alike (see for instance: Ericksen 1975). Whether this move will sustain the emergence of more efficient public health crisis management capabilities remains to be seen.

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ⁱⁱⁱ On the idea of the future as being a cultural fact, see: (Appadurai 2013)

^{iv} Influenza pandemic preparedness plan. The role of WHO and guidelines for national or regional planning. Geneva, Switzerland, April 1999

^v This might be related, among other things, to the fact that WHO deploys a logic of action consistent with its commitment to Evidence-Based Medicine (EBM), which promotes more classical risk/benefits analysis.

^{vi} Taleb defines tunnelling as “[a] focus on a few well-defined sources of Black Swans (at the expense of the others that do not easily come to mind)” (Taleb 2007, 83)

^{vii} The fund was set at 100 million U.S. dollars. As of April 2018, it barely reached 60 million U.S. dollars.

<http://www.who.int/emergencies/funding/contingency-fund/en/>. Accessed May 19 2018.

^{viii} The promotion of the Revised International Health Regulations is also backed by the Global Health Security Agenda (GHSA), launched at G7 the G7 summit in 2014.

^{ix} <http://www.who.int/blueprint/priority-diseases/en/>. Accessed May 15 2018.