

2. From emergence to emergencies – a focus on pandemic influenza

Nathalie Brender, Claude Gilbert

THE EMERGENCE ISSUE HAS FOR SEVERAL YEARS been the cause of major concern within scientific communities and amongst public and private stakeholders aware of the onset of new types of risk that stand out from those already identified and addressed.³ This concern is not new since, for instance, many discussions and analyses in the 1980s were focused on ‘major technological risks’ (Lagadec, 1981). This line of thinking highlighted the shortcomings of domestication efforts since the late nineteenth century to turn threats into risks to make them easier to manage (Ewald, 1986). Debates on the risk society (Beck, 2001) and the precautionary principle (Hermitte and Dormont, 2000), while taking public health into greater account, were clear signs of the disruption prompted by the return of threats that are hard to identify, foresee and manage once substantiated.

The term ‘emergence’ has, however, primarily been adopted by infectious disease specialists, fully in step with public concerns, especially with regard to the AIDS situation. Emergence is often explained in quite general terms. For example, the Oxford Dictionary defines it as “The process of coming into existence or prominence”. This is nevertheless appropriate in referring to changes or disruptions occurring in nature, in the broadest sense of the term, which then trigger reactions from public safety authorities due to the threats they pose. The emergence of a threat seems to be above all determined by the reality of the phenomenon, regardless of the knowledge and tools that highlight its significance. Relevant scientific communities are thus expected to determine the seriousness and scale of emerging issues. Public measures or policies should therefore be defined and initiated on the basis of scientific expertise, which has an essential role. While it is widely acknowledged – including amongst stakeholders involved in producing basic knowledge and consulting – that the processes are far from being linear and that scientists and experts can have an influence on the choice of priorities (because of the interests of the different sciences and disciplines or, more trivially, due to their proximity with regard to the political and especially economic community). These aspects are,

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however, at most considered to be artefactual effects of the functioning of the scientific community, ultimately without any real impacts on the reality of an emergence attributed to a particular virus or bacteria.

Humanities and social science specialists have a different approach to this issue. They do not question the fact that scientists study actual situations by focusing on detecting new disorders since that is their function, and they may even sound the alert if the need arises (Chateauraynaud and Torny, 1999). But they incorporate specifically scientific rationales and interests in their analyses without considering that the effects may not be artefact-free. Conversely, they consider that the latter is just one factor to be taken into account alongside the findings of scientific assessments of the actual situation. Scientists, from their standpoint, are social stakeholders like any other category of actors. A brief look at the background of famous scientists like Alexandre Yersin, who discovered the plague bacillus (Deville, 2012), highlights the extent to which social life is crucial in scientific careers and concomitantly in discovery processes.

Humanities and social science specialists also do not question the fact that public authorities, backed by experts, strive to deal with new risks and threats (Godard *et al.*, 2002) via public policy implementation – so it is essential to identify and shield against any potential enemies (Gilbert, 1992). But here again they do not overlook the fact that the political and administrative actors also operate according to their own specific rationales and interests and that putting an issue on the agenda involves various considerations that are not limited to resolving the problem as it has been scientifically defined and isolated. Any emerging issue makes sense against the backdrop of already established situations, relative to what is “already there” (Lascoumes, 1994), along with the corresponding authority, power and legitimacy implications. From this standpoint, the onset of a threat is certainly a constraint for the different stakeholders focused on the issue, especially given the potential of health crises like those that have arisen in recent decades. But it can also provide opportunities for stakeholders who seize this occasion to assert themselves, boost their power, etc.

Emergence mechanisms are therefore quite hard to analyse when, for instance, it is necessary to focus on a burst of growth of mushrooms, how they are sought and found, but also the different uses mushroom pickers have for them once they leave the woods. To understand these mechanisms, it could be useful to consider political science and public sociology studies that have dealt with the emergence issue via analyses on modes of defining and recognizing public issues and placing them on the agenda. The aim is to assess why some issues – significant or made to be significant – acquire a public issue status while others do not, by focusing on the issue building process (Gilbert and Henry, 2012). With the building concept, the focus is less on imperative necessities – accounting for serious and urgent cases often goes hand in hand with the emergence concept – than on how stakeholders appropriate or not debate-provoking issues and on the way they succeed or not to impose them in the public sphere. Public recognition of issues seems to depend on their nature, but also possibly even more so on their mode(s) of appropriation.

Emergence can thus be viewed as a breach of reality due to unexpected phenomena or as an effect of a social mechanism set in motion when there is a sign of a breach. This mechanism unfolds according to its own logic and can lead to many surprises. An emerging issue can successively or simultaneously be defined in different ways, hence complicating its identification. Like the above mushroom example, it would seem better to refer to a plant generated by many crosses, where it is not possible to predict what kind of flowers or fruit it will produce. Pandemic influenza has thus again been the focus of public concern but not only for health reasons. Pandemic influenza is theoretically presented as an issue of a virus that is a serious threat to public health, but has turned out to be an open issue that is becoming increasingly open as its appropriations multiply. To gain insight into the re-emergence of the pandemic influenza issue, in reference to Spanish flu, it is essential to identify the different related interests, implications and definitions that have been put forward on both national and international scales.

WHO re-appropriation of the issue

CURRENT WHO MANAGEMENT OF THE PANDEMIC INFLUENZA THREAT now seems to be taken for granted. This threat – which has long been overlooked in international health risk regulations (Rasmussen, 2015) – has always been on the WHO agenda, although sometimes muted (Vagneron, 2013; 2015). It has also had a key role in the structuring and functioning of this organization. WHO has strengthened a surveillance network that was founded in 1947, set up a network of laboratories and encouraged countries create referral centres following the 1957 pandemic, with the H₂N₂ virus outbreak. Similarly, the development of a network-based system including WHO collaborating centres that centralize information on a global scale has largely been determined by the Hong Kong flu of 1968 outbreak. Expertise in this area has further increased since WHO has been getting support from technical laboratories to validate tests and develop vaccine strains. This system – although not essential to the activities of this organization – is the most long-standing and successful of the organization's control systems. Its alert function was first implemented during the emergence of SARS, which was initially identified as a potential new flu strain (Heymann, 2005).

WHO's recent interest in pandemic threats appears to be in line with its ongoing activities. It is essential to consider the criticism focused on WHO in the 1990s to be able to understand this situation. WHO re-appropriation of the pandemic influenza issue – which is crucial with regard to its re-emergence – was one solution to the difficulties faced by this international organization.

■ Pandemic influenza – a remedy for an organization in crisis

The legitimacy of WHO, like all organizations, depends on its ability to identify and deal with issues that in principle fall within its remit. This is the case regarding the eradication

of diseases such as smallpox. Through top-down initiatives focused on specific agents, WHO has long been considered one of the best UN organizations, if not the best (Peabody, 1995, p. 732). It has also experienced failures, such as in its management of the AIDS crisis, of which it lost control in the 1990s to the Joint United Nations Programme on HIV/AIDS (UNAIDS) (Peabody, 1995; Beigbeder, 1999). It has also been challenged for its clientelism during the 1993–1995 period and for the corruption prevailing in its regional offices (Beigbeder, 1999). Moreover, during the 1990s, WHO seemed to be a fragile structure burdened by serious financial problems, as well as being an inward-looking bureaucratic organization with many internal conflicts. It has also been criticized for being less operationally efficient than other agencies (e.g., UNICEF) and stakeholders such as nongovernmental organizations (NGOs). This situation prompted WHO to reform in the late 1990s by defining its remit and adjusting its strategic position in relation to other actors.

The resulting discussions indicated that WHO should remain within its area of excellence by asserting itself as a reference centre for biomedical expertise; by pooling, assessing and disseminating knowledge in scientific, medical and public health fields (especially by collecting and publishing epidemiological and statistical data); by establishing itself as a supervisory body to monitor the application of international health regulations; and finally by drawing up international recommendations (Beigbeder, 1999). WHO's key role was thus to provide advice on, formulate and support more suitable health policies, while promoting better research. This placed a very high value on intellectual functions, with the idea being that WHO should be both a moral and technical authority. WHO thus expanded its role beyond that of an information provider for international organizations, especially via the Global Public Health Intelligence Network (GPHIN), a warning and notification system launched in 1999, and the Global Outbreak Alert and Response Network (GOARN), which was founded in 2000 and brings together over 150 partners while providing outbreak response experts. WHO has been developing this system since 1996 to enhance detection and management of infectious disease outbreaks and was first implemented in response to the emergence of SARS (Brender, 2010).

Moreover, WHO was called upon to position itself as an overriding body whose remit was to frame international health policies, with two associated consequences: reaffirmation of non-intervention against actors implementing health policies in the field (governments or regional authorities) and – to enhance its influence – strengthening relationships and its coordination role with different categories of actors (scientific community, manufacturers, particularly in the pharmaceutical sector, and NGOs). Since 1998, WHO has been striving to establish itself as a reference body and go-between to bring together multiple stakeholders. Various contradictions have, however, complicated the task: between the management of health issues amongst countries (with the preservation of economic interests as imperative) and management within countries (with public health and individual rights as imperatives, especially in developed countries) (Fidler, 2004; Guilbaud, 2007); and between top-down programmes that have ensured its success (eradication of smallpox, poliomyelitis and guinea worm disease) and horizontal 'health for all by the year 2000' based programmes aimed at strengthening local healthcare systems (Beigbeder, 1999).

Furthermore, as already mentioned, WHO found itself facing powerful and sometimes new actors reluctant to acknowledge the organization's attributed role, including Gavi, the Vaccine Alliance, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the Bill & Melinda Gates Foundation. The proliferation of these actors has also led to what is often referred to as the institutional labyrinth of international health.

WHO's repositioning has been further complicated by the fact that the actors are coping with so-called public health issues with other concerns. This is not a new situation as health threats have long been handled on the basis of the dangers they pose with regard to country safety and sustainability (Guilbaud, 2007). However, the connection between human health and (bio)terrorism (Scoones and Forster, 2008; Zylberman, 2013), particularly due to the new status of smallpox as a biological weapon, the ever-closer link between human and animal health (with increased involvement of the World Organisation for Animal Health [OIE]) and, more broadly, the fact that health risks are being dealt with in terms of economic trade disruptions they could incur (with increased involvement of the World Trade Organization [WTO]), have undermined the definition of issues on which WHO focuses.

In the late twentieth century, WHO – despite its international legitimacy and repositioning in 1998 – did not have a strong stance in an immense and hazy system of actors. The agency was also unable to clearly distinguish the topics that in principle came within its scope. Given this situation, there were many good reasons for WHO to re-appropriate the pandemic influenza issue. It was an available and almost 'orphan' public health issue that no major stakeholder had actually taken on (the influenza issue was largely confined to seasonal flu cases). Although fresh in the minds of all public health stakeholders since the Spanish flu epidemic, the pandemic influenza threat was partly overshadowed by other public health problems in both developed and developing countries, as reflected in the WHO Influenza Pandemic Plan report which focused on other diseases such as malaria (WHO, 1999). WHO was already partially prepared for this health issue and thus able to come up with solutions. This situation could almost be explained by the 'garbage can theory' (Cohen *et al.*, 1972) whereby solutions that have already been formulated and are available sometimes determine the nature of the topics to be managed. Moreover, this public health issue was the focus of national and international lobbying by influenza specialist scientists and experts. For instance, an Organisation for Economic Co-operation and Development (OECD) working group placed infectious diseases – particularly pandemic influenza – back on the list of systemic risks, on the same level as terrorism and chemical and nuclear accidents (OECD, 2003, p. 102). Through its widespread global presence, pandemic influenza has emerged as a disease that could only be effectively managed on an international scale by an organization capable of implementing policies globally, handling coordination activities, etc. Finally, in addition to being a major health risk, pandemic influenza turned out to be linked to other issues (due to the many possible global impacts of pandemics), or even as a means to simulate other serious issues. It has thus been claimed that preparedness for an influenza pandemic could serve as 'the basis of planning for a possible bioterrorist attack' (OECD, 2003, p. 149), an argument that was subsequently put forward by WHO and its Member States to justify investments

earmarked for pandemic influenza preparedness. Some scientists even believed that the influenza virus could serve as a terrorism bioweapon and demanded that protection measures be implemented at national and international levels, while also asking WHO to take up this issue (Madjid *et al.*, 2003). These reconciliations sometimes complicated the definition of pandemics and helped open the issue to many other stakeholders, while they still highlighted that the issue was critical.

The many ‘qualities’ of the pandemic influenza issue, its consistency with WHO objectives and resources were largely conducive to its re-appropriation in the crisis context impacting the organization at the time. So it was a real opportunity for WHO which, by participating in managing the re-emergence of pandemic influenza, found a way to bounce back and reposition itself in the circle of major globally involved public and private stakeholders. This re-appropriation – prompted by strategic considerations – was promoted by different alerts, particularly by the SARS outbreak in 2003 (Brender, 2010), and by the almost simultaneous resurgence of the H5N1 avian flu virus. During these events WHO positioned itself as ‘owner’ of this issue, with the capacity to define, provide solutions and assign responsibilities regarding its management (Gusfield, 1984).

SARS, H5N1 and H1N1 – emergence catalysts

WHO TOOK ON THE RESPONSIBILITY FOR RISK ANALYSIS in emergency and uncertain situations at the onset of the SARS outbreak. The agency relied on innovative expertise mobilization systems and it set up, for the first time, virtual networks connecting virologists, clinicians and epidemiologists. Moreover, and also for the first time, it issued a global alert and coordinated the international response especially by activating the Global Outbreak Alert and Response Network (GOARN) to send 300 experts into the field. Via this action, it gained legitimacy that was widely recognized by many countries, despite objections from Canada and Thailand, for instance, that the International Health Regulations (IHR) – the only international instrument for infectious disease management – did not apply to SARS. WHO had no coercive capacity to deal with countries but still managed to take advantage of an incentive system to bring countries together in a global effort, particularly with regard to China, even though its support was late in coming. WHO established itself as a pivotal actor in health risk governance at the end of this epidemic and despite some criticism about the cost of the measures taken, rivalry between researchers, and the information overload relative to the processing capacity (Brender, 2014). SARS has symbolic significance for WHO because it represents the first test of its new experimental international risk governance processes and tools, even as the corresponding legal framework had yet to be stabilized. The agency explained its action by the multiple benefits of the SARS management systems set up (an argument that was subsequently put forward with regard to the H5N1 avian influenza and H1N1 situation) with regard to managing future influenza pandemics, new infectious diseases or bioterrorist attacks (WHO-GAR, 2003). This argument was meant to justify the use of resources earmarked for SARS measures and to convince donors to

invest in preparedness activities for the management of a future influenza pandemic. It was subsequently put forward in different WHO publications, especially in the World Health Report 2007 (WHO, 2007a, p. 35). WHO took full advantage of its experience by collecting feedback regarding SARS management, establishing good practices and improving its processes, procedures and tools to eventually be implemented in the management of H5N1 avian influenza and H1N1 pandemic influenza outbreaks. In short, WHO was back on the international stage in quite a bold manner and based on its expertise.

WHO strengthened its stance with the emergence of H5N1 avian influenza, alongside the emergence of SARS and the onset of the H1N1 influenza pandemic in 2009. The organization benefitted from the positive momentum created by the control of SARS to accelerate the IHR revision started in 1996. The revised IHR were approved in 2005 (coming into effect in 2007) in a version that broadened WHO's scope of action concerning infectious disease management, while being less constraining for countries than the project that served as a basis for the SARS response (Brender, 2014). In Appendix 2, this instrument provides for a risk analysis mechanism for countries to issue alerts on public health emergencies of international concern (PHEIC), which was applied by Mexico during an emergency influenza pandemic (H1N1) in 2009. Meanwhile WHO analysed the situation and its Director General mobilized an emergency committee to decide whether this situation warranted a PHEIC and to put forward recommendations for controlling the outbreak.⁴ The strong involvement of WHO in SARS management and different pandemic influenza threats enabled the agency to clearly entrench its role in international arrangements, which was a primary benefit of this emergency.

WHO was mobilized by the highly lethal H5N1 avian influenza virus upsurge in February 2003, right at the time of the SARS crisis. The agency readily established itself as the key actor in the preparedness for future pandemics threatening to become a human health issue. The organization's rhetoric was based on the certainty of an imminent pandemic, and hence on the need and usefulness to prepare for it by improving monitoring systems and hospital infrastructure, while anticipating the vaccine and antiviral needs (Check, 2005). Based on its SARS experience and the adoption of the revised IHR, WHO intended to coordinate the preparedness activities and the international response in case of pandemics. This, however, overlooked the competition with other international organizations such as the Food and Agriculture Organization of the United Nations (FAO) and especially the World Organisation for Animal Health (OIE), which ultimately received more funds than WHO for their interventions (Figuíé, 2014). WHO then adopted a more cooperative strategy and positioned itself as a federating and coordinating agency. This, for instance, involved organizing an international conference in November 2005 to draw up a global H5N1 control strategy and determine the financial needs. A funding plan of about \$2 billion was then formulated (World Bank, 2006) to deal with future pandemics, but finally \$4.3 billion was

4. This was also the case for the poliomyelitis and Ebola outbreaks in 2014. However, in the same year, neither MERS-CoV nor the H7N9 avian influenza outbreaks led to a PHEIC declaration.

pledged for this purpose according to a World Bank estimate (Kamradt-Scott, 2012). WHO then worked on a containment protocol generated by a multi-stakeholder working group including recognized experts from various institutions and geographical regions, WHO experts, representatives from other governmental and nongovernmental organizations, and even a representative of the Roche pharmaceutical group (Brender, 2010). This protocol and the WHO Global Influenza Preparedness Plan (and national plans) were the key response elements, complemented by the flagship revised IHR after they came into force in 2007.

The overall outcome of WHO's action in dealing with the H5N1 avian influenza outbreak nevertheless seemed mixed. The position of this organization was certainly consolidated following the implementation of the revised IHR, the strengthening of its coordination activities and the publication of its Global Influenza Preparedness Plan in 2005. However, it came under fire because of controversy among experts on the impact of future pandemics on human lives and the reliability of reporting from countries affected by avian influenza. The agency also had to deal with the refusal of Indonesia to supply virus strains for the purpose of developing a vaccine that would not benefit developing countries. Furthermore, it had to address major actors that were striving to position themselves on the international stage. As the influenza pandemic had yet to occur, concern about it also began to wane, resulting in stakeholder demobilization in the preparedness for this risk. All of this highlights that the H1N1 influenza pandemic in 2009 could thus be considered as an emergence in crisis.

In April 2009, concomitantly with the publication of its new Pandemic Influenza Preparedness and Response Plan, WHO acted on behalf of Mexico and the United States and placed the H1N1 pandemic influenza issue on the international stage. The organization applied the IHR for the first time – the Director General formed an Emergency Committee and declared H1N1 influenza to be a PHEIC, and then a pandemic on 11 June 2009 (although emergency committees also likely previously operated unofficially for SARS and H5N1 avian influenza). WHO took a leading position in managing the pandemic based on risk analysis mechanisms, mobilization of expertise, its pandemic preparedness plan and the procedures in place for managing SARS and H5N1 avian influenza outbreaks. The organization mobilized virtual networks including epidemiology modelling experts, epidemiologists, clinicians and virologists, while promoting vaccination and antiviral administration because the containment measures were no longer practicable. WHO was, however, strongly criticized, especially concerning the inefficacy of its governance, the quality of its risk communications and the unsuitability of its recommended measures, especially the mass vaccination programme, relative to the mild disease severity. It was also accused of collusion with the private sector (Cohen and Carter, 2010), particularly regarding members of the Emergency Committee, and squandering of resources (Council of Europe, 2010). This led to a loss of confidence and undermining of WHO's legitimacy, especially in Europe, whereas Asia and the United States were relatively satisfied with the management of the pandemic, and Africa had been spared.

The benefits that WHO reaped from its management of the SARS outbreak, and to a lesser extent the H5N1 outbreak, were partly undermined by its management of the

H1N1 pandemic, despite the fact that it was the first global public health emergency that occurred after the revised IHR entered into force in 2007. Moreover, the IHR, which aim to protect global public health from diseases while minimizing interference with international transport and trade, actually played a key role in the global response to the pandemic, with the result that the assessments of the IHR and of the measures taken to manage the pandemic influenza situation were closely linked (WHO, 2010). WHO, in response to the criticism and to not lose the benefits gained from its previous initiatives, and with the assistance of experts of various origins, decided to justify itself by reviewing the actions taken to deal with the pandemic influenza threat. This gave rise to a report that was published in 2011 (WHO, 2011).

Although this report partially cleared WHO, it highlighted the need for greater transparency with regard to the expertise (especially in the nomination of experts and the management of potential conflicts of interest) and for designing an organizational structure that would integrate any WHO criticism. Recommendations were also put forward concerning IHR implementation and cooperation intensification, which resulted in the signing of an agreement on the sharing of virus strains and facilitated access to vaccines in 2011 (PIP Framework⁵). Meanwhile, WHO shifted towards a new strategic framework, i.e., the Emergency Response Framework (EFR), which was more generic than just being focused on health. It was considered more effective for the coordination of activities during emergency situations while providing a way for WHO to promote its action on a larger scale. WHO was thus seeking to reassert its role while more clearly defining its scope, thereby striving to limit its exposure to criticism and questioning of the legitimacy of its action.

■ Pandemic influenza – a scalable emergence

Despite some difficulty, and while coping with a long-standing internal crisis, WHO took advantage of the opportunity that arose when the pandemic influenza issue and various other health alerts were back on the agenda to return to the circle of major international organizations. However, the way WHO managed this return had an impact on the definition of this pandemic as an emerging issue, i.e., not only was the emergence of the pandemic influenza issue largely determined by WHO's interest in promoting it, but its classification shifted according to the organization's successively changing positions. These variations and shifts are reflected in a number of WHO guidelines, syntheses and recommendations. A first major WHO Influenza Pandemic Plan was drawn up in 1999 (WHO, 1999). This pandemic was described as an event whose occurrence should be taken seriously, especially because of the increase in global trade and the fact that it is impossible to predict despite scientific progress, that it cannot be halted after onset, and that it could seriously strain economic systems and cause social unrest, in addition to saturating

5. Pandemic Influenza Preparedness Framework for the sharing of influenza viruses and access to vaccines and other benefits.

healthcare systems. Despite this pessimistic and even alarmist outlook, it was felt that pandemic impacts could be mitigated via effective preparedness and strategic effort, especially by setting up National Pandemic Planning Committees (NPPC) coordinated by national authorities, and mass vaccination programmes (despite delays in implementation and potential impacts, as in the United States in 1976). WHO was acting as a sentinel by announcing a pending hard-to-control health catastrophe, while nevertheless positioning itself as a manager with political authority by setting the degree of threat, thus “deciding on the exceptional situation” and posing as a “sovereign” agent (Schmitt, 1988, p. 15).

A first change in this initial framework occurred in 2005 following the SARS crisis and the H5N1 avian influenza outbreak with the development of the WHO Global Influenza Preparedness Plan (WHO, 2005). The threatening pandemic looked like it could take place at any time due to the widespread presence of a pre-pandemic virus (H5N1) at that time. The goal was no longer just to deal with the threat, but more specifically to respond to occurrences of pandemic influenza (WHO, 2005, p. 1). While keeping in mind that, “the responsibility for management of the national risk of pandemic influenza rests primarily with the relevant national authorities,” WHO was taking a much more active role, with a firm intention, to “link phase changes [of increasing public health risks associated with the emergence of a new influenza virus subtype] more directly with changes in public health response, and focus on early events during a ‘pandemic alert’ period when rapid, coordinated global and national actions might help to possibly contain or delay the spread of a new human influenza strain” (WHO, 2005, p. 1). The containment concept gave rise to a specific protocol (WHO, 2007b) to contain the emergence of a disease or at least delay its spread. Even if the approach recommended by WHO were “not successful in containing spread [of a pandemic virus, it] should gain time to develop vaccines against the new strain, and to implement other pandemic preparedness measures that had been planned in advance” (WHO, 2005, p. 1). Finally, while focusing on public health aspects, WHO now stresses the need for “intersectoral planning involving partners outside the health sector” (WHO, 2005, p. 2). This is an acknowledgement of the multidimensional nature of pandemic influenza, although public health stakeholders are responsible for its management.

The Preparedness Plan became WHO’s mainstay with the aim, in 2007, of developing and implementing tested plans in every country to ensure that the international response would be fully operational. Developing these plans was the recommendation most widely followed by countries, even the most reluctant, including the United States and some Asian countries. In August 2006, about 176 countries had drawn up a pandemic preparedness plan, but the quality varied in terms of content and especially with regard to plan effectiveness tests. In 2009, on the eve of the H1N1 pandemic, WHO estimated that 68% of the 119 revised national plans were based on the WHO plan, but only 8% had been tested (WHO, 2011, p. 66). During the process of drawing up these plans, WHO also had its say on the implementation of additional capacities for patient quarantine, timely treatment and laboratories.

The WHO guidance document published in 2009 (WHO, 2009) represented a new pandemic preparedness plan resulting from the 2007–2009 revision process. It was published almost

simultaneously with the emergence of the H1N1 influenza virus and confirmed the direction taken in 2005, considering that since that time progress had been achieved in many preparedness and response planning areas, with regard to antiviral drug stockpiling, a containment protocol to stop or delay the spread of pandemic influenza upon its emergence and, more generally, a better understanding of the pandemic phenomenon. “There is increased understanding of past pandemics, strengthened outbreak communications, greater insight into disease spread and approaches to control, and development of increasingly sophisticated statistical modelling techniques” (WHO, 2009, p. 8). So WHO had further distanced itself from the 1999 guidelines by tending to present public health actors – primarily itself – as being capable of responding despite the magnitude of the situation and uncertainties. However, it did this quite cautiously, while pointing out that, “pandemic preparedness requires the involvement of not only the health sector, but also the whole of society” (WHO, 2009, p. 12), given the potential impact of a pandemic crisis. Moreover, the link between animal and human health was stressed, with the H5N1 virus being the most likely candidate for an influenza pandemic. The 2009 pandemic plan took the IHR into account and, although still consisting of six phases, they were grouped and mainly concerned virus propagation for determining the phases and ultimately the declaration of pandemics. Phases 1 to 4 focused on the virus transmission capacity and its containment, while phases 5 and 6 concerned sustained human-to-human transmission with grading of the geographical spread of the virus.

WHO’s action was hinged on this instrument, but it was still criticized. The pandemic criteria had already been fulfilled for several weeks when Margaret Chan, Director General of WHO, finally declared the pandemic on 11 June 2009. This announcement triggered pandemic plans in most countries, but some had been set in motion earlier. The rapid spread of the virus and the uncertainty regarding its severity, as well as the time squeeze also, depending on the plan arrangements, led to the issuing of vaccine and antiviral requests to deal with the pandemic threat. It was found that a response mechanism based on automatic implementation of the WHO plan and national plans was not always adapted to the situation. This resulted in strong criticism given the fact that the pandemic turned out to be mild.

WHO again acknowledged these difficulties. In 1999, 2005 and 2009, the agency published a plan each time, but it had still not revised and drawn up a new plan following the H1N1 influenza pandemic. Only an interim document was disseminated to guide countries in risk assessment (WHO, 2013), especially in determining the threat severity. Some countries published new plans following the 2009 H1N1 influenza pandemic, including Switzerland in 2013. This development clearly reflected the intention of some countries, particularly in Europe, to distance themselves from WHO, while continuing to recognize its pandemic response expertise and coordination role. Most countries seemed to want to re-appropriate the responsibility for risk assessments (including national pandemic declarations) and for decision making on the implementation of measures. WHO was then asked to position itself in a federalist-inspired international model, with its assessment serving as a guide for countries retaining national flexibility. This was likely an implicit trade-off between the different stakeholders.

Beyond the difficulties it faced, WHO managed to establish itself as ‘owner’ of an exceptional issue which – by being associated with the common seasonal influenza issue – took the form of a recurrent threat (with concomitant possibilities of routinization and regular funding). WHO also designated a specific area of expertise: uncertainty management on behalf of countries (regarding the nature of the threat, expected mortality rate, etc.). Because of its pivotal role in information collection and dissemination and its close connections with the scientific community, WHO had a greater capacity than other agencies to deal with uncertainties or even, via different categories of experts, to trigger a scientific controversy (Gilbert, 2009). It had the role of shifting the cursor between certainties and uncertainties. WHO was thus again able to become one of the main actors in charge of dealing with global issues, while promoting a new type of global governance of these issues (particularly in the framework of the One World, One Health programme).

WHO acquired this status by positioning itself as a key actor in managing infectious disease emergence and governance thanks to its involvement in controlling SARS outbreaks, the development of a pandemic preparedness plan during the H5N1 avian influenza outbreak, and its management of the H1N1 influenza pandemic, along with all of the above-mentioned criticism which that entailed. WHO – as a learning organization, strengthened by its SARS experience and in competition with other organizations for handling H1N1 outbreaks – developed more efficient strategies, procedures and tools, which it tested in MERS-CoV and H7N9 avian influenza outbreak situations.

Following the H1N1 pandemic, WHO reaffirmed its leadership in managing infectious disease emergence, while stressing the role of countries and their responsibilities, especially strengthening of national public health capacities. Through this balancing act, it was able to sustain its status as a key actor despite the new positioning of countries and the economic crisis, which sharply reduced financial and human resources previously earmarked for the pandemic issue (thus delaying the development of a new pandemic plan to replace the temporary guidelines issued in 2013). The fact remains that WHO’s capacity for action was markedly affected and the agency was once again forced to question its strategic positioning.

An issue seeking owners – the French case

AT FIRST GLANCE, the fresh interest in pandemic influenza in France, as in other countries, seems to have primarily and almost mechanically resulted from the global emergence of influenza episodes that could develop into crises equivalent to or even greater than that resulting from the Spanish flu epidemic. The SARS, H5N1 and H1N1 outbreaks seemed to embody such threats, forcing authorities to reconsider situations that seemed to match past trends. So the potentially high impact of the event seems to have been enough to place this public health issue back on the agenda, but the conditions of its re-emergence actually seemed a bit more complex.

Pandemic influenza was seriously taken into account in France in the early 2000s with the development of a plan devoted specifically to this issue. France appeared to be amongst the countries at the forefront (Mounier-Jack and Coker, 2006), yet it had in fact lagged in placing the issue on its agenda because in the 1990s stakeholders from the scientific community were already highly mobilized to boost awareness on the extent of the pandemic influenza risk and the need and even urgency to deal with it. Some French researchers were actually the most fervent advocates of this cause on the national, European and international scene. Moreover, although the pandemic influenza issue was initially dealt with by health specialists, it was quickly linked with other issues that partially masked its initial features. The emergence of pandemic influenza in France is an issue that metamorphosed over its appropriation history, thus explaining its current hybrid nature.

■ Multiple appropriation

The pandemic influenza issue re-emerged in France prior to the health alerts in this century, while very few countries had shown an interest in this issue (only the United States and Canada had a rough draft plan on the issue). The attention that was refocused on the pandemic influenza threat was actually the result of a very deliberate action by stakeholders concerned about seasonal flu in the early 1990s. This involved scientists specialized in the issue, particularly those involved in a surveillance network (*Groupes régionaux d'observation de la grippe*, GROG), along with major scientific laboratories with which these scientists directly collaborated in a specialized group, i.e., the *Groupe d'étude et d'information sur la grippe* (GEIG). The aim of this group (founded in 1979) was to streamline the activities of flu vaccine producers in France (few at the time). It was also – with the assistance of researchers participating in its scientific council – to educate the media and therefore the public on the importance of vaccination. The different stakeholders, closely interacting with each other and forming an ‘influenza sphere’ (Becker, 1988), thus aimed to increase immunization coverage. The public health arguments were fruitful as they led to a partnership between private industries and the French national health insurance fund to launch national immunization campaigns.

In the 1990s, stakeholders of the influenza sphere felt it necessary to go beyond seasonal flu issue, increasingly implement routine treatment, and take into account more exceptional risks associated with influenza, such as pandemic influenza (that had actually been somewhat forgotten). The virologist Claude Hannoun of the Pasteur Institute (Hannoun, 2009) stood out amongst these stakeholders as he seemed to be the main ‘policy entrepreneur’. The pandemic influenza issue was promoted through a lobbying campaign to convince the national and international scientific community and health authorities. This strategy first involved the organization, by GEIG in 1992, of an international closed-session conference on Options for the Control of Influenza, which brought together the main researchers and other stakeholders concerned about the global influenza issue. This subsequently led to organizational expansion, the creation of a similar European-scale

structure at GEIG by Claude Hannoun (European Scientific Working Group on Influenza, ESWI), and direct interventions with stakeholders who could have a decisive role in the recognition of this re-emerging issue. Following meetings in Berlin in 1993, senior public health officials from various Western countries and international organizations were invited to make a statement to this effect. The statement was followed by an appeal by renowned scientists stressing the need to rapidly prepare for an influenza pandemic (Aymard *et al.*, 1994). Efforts to place this issue on multiple agendas were successful for reasons as much to do with the forcefulness in issuing the alert (by stakeholders with substantial resources and arguments) as with the interest that institutions and organizations could have in taking it into account.

This process was unique in that it was triggered and completed in the absence of a proven pandemic influenza threat. The re-emergence of this issue was therefore the result of the influenza sphere dynamics as it was reasonable to expect that this disease would inevitably resurface. However, despite successes on the European and international scene, French health authorities did not immediately listen to the call of the influenza sphere stakeholders and thus failed to place pandemic influenza on their agenda. It was only a few months after the Berlin meetings that a group of experts was formed with representatives from different French ministries (Health, Defence, National Education and Agriculture) by the Ministry of Health to sketch out a plan to deal with this potential threat. Although initially viewed from an interministerial standpoint, the pandemic influenza issue was essentially dealt with from a health and medical angle. Upon its emergence, seasonal flu specialists were thus able to assert their approach on the basis of a preliminary outline plan that had been developed in 1995 (RNSP, 1995). Different stakeholders nevertheless felt it was a plan by scientific and medical experts without much operational applicability and which – due to the lack of suitable procedures – did not really come within the scope of risk management policies. Pandemic influenza had not solely been defined in terms of public health, nor did it only concern actors in this domain.

As of 2001, pandemic influenza became increasingly associated with terrorism because of fears of malicious use of pathogens, as in the case of anthrax, smallpox, haemorrhagic fever agents, etc., which had already given rise to specific arrangements within the government. With the smallpox plan, health professionals, especially those in the hospital sector (emergency, ambulance and infectious disease services, etc.) had already adopted a rationale of a plan related to terrorist threats. This approach was reinforced with the bioterrorism thinking that developed in the early 2000s (e.g. with the Dark Winter exercise in the United States in 2001 where the spread of smallpox by terrorists was simulated) (Zylberman, 2013), along with various exercises in France and Europe in the framework of the PIRATOM (nuclear risk), PIRATOX (chemical risk) and BIOTOX (biological risk) plans. The 2003 SARS outbreak, particularly in Hong Kong and Canada, markedly heightened the concern. Hence, the rationale and operational strategies regarding bioterrorism also tended to be applied to pandemics. Moreover, as in the case of a potential bioterrorism attack involving the spread of smallpox, the emergence of pandemic influenza led to

the development of a programme for large-scale immunization of the population over a very short period (even though the latter case concerned the second or third wave of pandemics). The linkage with bioterrorism had varied and sometimes contradictory impacts. This confirmed the relevance of health sector stakeholders in their role as experts since the targeted enemy was clearly the pandemic virus, but once this role was acknowledged, influenza specialists from all disciplines were then asked to leave the way open to stakeholders competent in dealing with a range of new threats facing society. So it was not entirely a coincidence that the French General Secretariat for National Defence (SGDN⁶) – an interdepartmental structure that reported to the Prime Minister – was highly involved in the reflection on these issues and in preparing a plan as of 2002–2003.

Actors from the civil security and the defence sector in general were backed by a group of specific actors organized around the French interministerial delegate for avian influenza control (DILGA) appointed in August 2005. This entity consisted of a small number of senior officials from various ministries who were at the delegate's disposal. The group operated in an interministerial setting, despite the fact that it had initially been decided to assign this function to the Director General of Health. So public health was just one dimension amongst others covered during the many meetings DILGA organized, with pandemic influenza being approached in a much more global manner and as a potentially long-term issue. Representatives from many ministries and public organizations were consulted, as well as those from large local authorities and companies having a key economic role, while the focus was increasingly on the issue of the continuity of activities. DILGA's assessment of this especially dynamic aspect also helped change the approach to pandemic influenza.

■ An issue with a range of definitions

Pandemic influenza has been defined in several ways because of the many appropriations to which it has been subject. We assess this through the successive tones of the different versions of the plans developed to effectively manage this threat.

The first French governmental pandemic influenza plan in 2003–2004 (SGDN, 2004) was developed from a scientific and medical perspective, but it should be noted that the initial version was classified as a confidential defence document. The existence of this version, which was soon replaced by a public version, nevertheless clearly highlights the links with national security issues at the time. Links between the medical and military sectors were facilitated by the fact that 'pre-pandemic' viruses were equated with potential enemies. Given the nature of the threat, the approach was very warlike as human and animal health specialists had a confirmed role as experts and, in a related way, the health system seemed to be primarily concerned. The aim was to cope with the threat with active vigilance so as to be able to promptly identify the 'enemy', with preparedness for mobilization of

6. Now the Secrétariat général de la Défense et de la Sécurité nationale (SGDSN).

different medical, material and human resources to ‘combat’ the pandemic threat (with ‘vaccination’ as the ultimate weapon) (Gilbert, 2007). The confrontation with pandemics was here approached mainly from a civil security crisis angle, thus with a shift towards administrations with governmental obligations in the conventional state of emergency framework. The approach to the pandemic influenza issue – although always marked by public health concerns – was thus ambiguous and paved the way to various appropriations. The second version of the plan (2006), drawn up under the auspices of SGDN, did not markedly change the previous framework. A new direction was, however, taken with the third version (2007) influenced by DILGA, which in turn was increasingly involved in designing the plan. By focusing on the issue of the continuity of activities, the small group of senior officials involved in this structure, as well as in SGDN, was no longer solely committed to mobilizing state actors in emergency situations. They were at once led to consider a broader interministerial collaboration (thus not limited to the health, security and civil defence sectors), an association with actors other than those from the central government (local authorities, especially the largest ones) and much more active involvement of civil society stakeholders, including businesses. This changed the essence of the pandemic influenza dimension, with society overall now being concerned by this threat. The focus shifted, with less concern about determining how to handle the pandemic crisis issue, which was delegated to the central government, and more interest in checking the resistance or resilience capacities of the different constituents of society. Note that resilience was a term that was ‘emerging’ in the collective risk and crisis domain, and more broadly in public policy, especially following the publication of the French white paper on national security and defence (*Défense et sécurité nationale*) in 2008, which stressed this dimension (Mallet *et al.*, 2008).

Subsequent versions of the plan (2009, 2011), especially that of 2011, confirmed this change of perspective since, based on feedback, they highlighted the government response strategy, emphasizing flexibility and adaptation to the characteristics of the pandemic. This was a real strategy shift away from foreseeing and planning everything via a set of highly precise specifications, which was the approach adopted in the first versions, to preparing authorities for highly uncertain situations. It seemed that the authors of the previous version had taken into account some criticism of the prior approaches, which were considered to have been too planning oriented, to the detriment of the analysis of situations in all of their complexity (Gilbert, 2007), or they had focused on theoretical studies challenging strategies based solely on proactive initiatives (Jullien, 2002). Moreover, it had become clear that, beyond the governments, the pandemic influenza plan concerned, “all public authorities, health professionals and socioeconomic stakeholders participating in the response to the pandemic situation” (SGDSN, 2011).

In very broad terms, the pandemic influenza issue could be considered to have re-emerged via three overall stances. The first, i.e., the most obvious and spontaneous, was the adopted public health approach, whereby pandemics simply represented an extension of influenza control, with specific features due to the change of scale. The second, which was less obvious but also very relevant, was the consideration of pandemic influenza as

a collective security issue. From this standpoint, pandemic influenza had a public health dimension, along with a civil security (public order and national defence) dimension. Confirmed links with terrorist threats reinforced this approach. The third and last stance involved viewing pandemic influenza as a global issue burdening contemporary societies, especially the most modern ones. The idea was no longer to deal with temporary threats under a state of emergency, but instead to ensure the continuity of activities in uncertain and degraded situations while relying on commonplace social resources and forces.

These three general definitions of pandemic influenza steered this issue in quite different directions. They swayed the issue towards various potential types of ‘owners’, but were not mutually exclusive and links existed between each definition. The public health oriented definition accommodated the collective security oriented definition, even in its most extreme aspects (social unrest, terrorism). Similarly, the collective security oriented definition, with specific reference to government interventions, accommodated a much broader definition via the introduction of the resilience concept and overtures to civil society stakeholders. Although the issue was transformed in a very precise way, with vulnerabilities and structural resistance capacities being taken well into account, the different definitions were overlapped and intertwined. This is a fairly common situation regarding public issues where various definitions coexist, with some often taking precedence over others, some pertaining to public areas and others restricted to ‘discrete areas’ where there may be trade-offs between concerned stakeholders (Gilbert and Henry, 2012). Concerning pandemic influenza, however, this coexistence seems to mainly correspond to a certain degree of indecisiveness regarding the attribution of the ‘ownership’ of the issue. Clearly, the health sector stakeholders did not have the capacity to retain this issue within their field of expertise even though they were the main promoters of pandemic influenza as a public issue to be placed on the agenda. It eluded their grasp when security stakeholders took up the cause and implemented their own instruments. But these latter stakeholders in turn lost their grip on the issue when other stakeholders (some from the security domain) presented pandemics as a perfect example of new global issues. So no stakeholder category really emerged as the ‘owner’ and even today any aspect of the pandemic influenza issue can be placed under the spotlight depending on the circumstances and setting.

This situation obviously had direct impacts on the re-emergence of pandemic influenza, which may occur in different ways depending on the extent of investment in it, which in turn depends on quite different factors. The obligation of any category of stakeholders to manage a given issue given the formal powers or missions they have been assigned is certainly one key factor. Regarding pandemic influenza, it goes without saying that stakeholders of different domains (public health, civil security and defence, global security) are all focused on this issue because of these different possible definitions. However, the interest in the issue cannot be dismissed as being simply linked with institutional obligations. It is also related to the way the stakeholders seize opportunities that arise, which was likely the main factor in the re-emergence of pandemic influenza as a public issue in France.

■ Drivers of an emergence

One of the drivers of this emergence was the possibility for different actors involved in seasonal flu management to expand and promote their action. This was the case with regard to political/administrative actors who felt this warranted the adoption of a health policy based on vaccination, to economic actors who could see an opportunity for market expansion in the drug sector, but perhaps even more to scientists specialized in flu issues. Despite ongoing costs for society (concerning both mortality and economic impacts), influenza did not (or no longer did) call for special scientific attention. It had gradually acquired the status of an ordinary issue to be managed in an ordinary way via proven methods. By promoting the re-emergence of the pandemic influenza issue, seasonal flu specialists managed to bring this issue back under the scientific spotlight. While these specialists had adopted a relatively marginal position, they managed to obtain research funds and jobs as well as gain access to leading scientific journals, which until then had been difficult. So finally it became possible to have a career working on influenza. These specialists were able to demonstrate the expertise acquired with regard to influenza monitoring and alerts, which in the influenza sphere was the subject of heated debate between virologists (who considered themselves natural owners of this issue) and epidemiologists (in an outsider position). The issues especially concerned the way these two disciplines approached the influenza phenomenon and the impacts this had on their respective capacities to organize surveillance and conduct foresight studies (e.g., characterizing new threatening viruses or developing epidemic dynamics models). Influenza specialists therefore jointly promoted the re-emergence of the pandemic influenza issue, but the dispute over its ownership was an additional driver (despite the subdued aspect of this dispute). Disciplinary tensions thus increased with the growing demand for surveillance and the expansion of the disease intervention field (e.g., potential modes of virus spreading, estimates of attack and fatality rates, individual and collective benefits that could be expected from different control strategies, etc.). As the pandemic threat was being taken into account, influenza became a real challenge for the scientific community well beyond the scope of virology and epidemiology (i.e. with specialists in infectious diseases, immunology and public hygiene also being concerned). The re-emergence process was thus triggered by the many incentives, including institutional ones, as in the case of the French Institute for Public Health Surveillance, which was determined to play a key role in monitoring and forecasting health threats (Buton, 2006).

This situation closely mirrored that in the animal health field since actors in this sector – in scientific research, consulting and public administration – continued to stress that most human infectious diseases stemmed from animal diseases. This claim, which was driven by the avian influenza (H5N1) threat, was underpinned by the powerful administration in place with experience on health crises (especially since the mad cow crisis), by the strong support available (from veterinarians; Alam, 2009), and the almost immediate backing from an international organization (OIE) with a strong French presence.

Another driver of this emergence concerned the way a group of actors incorporated (in its field) a theme that normally was beyond its realm of expertise. Collective security actors (to simplify) actually managed to take over the pandemic influenza issue by assimilating it to threats attributable to real enemies and turning it into an issue that could be managed as part of a plan focused on security objectives and which, like all public policy instruments, had its own programme (Lascoumes and Le Galès, 2005; Buton and Pierru, 2012). Various explanations for this takeover could be put forward. It could have been the result of the prevailing circumstances, such as the fact that a tool was available to address an issue requiring a solution (again in reference to the garbage can theory; Cohen *et al.*, 1972). The fact is that actors in the health domain claimed that *a priori* pandemic influenza did not have an instrument to incorporate this issue in a specific public policy, and moreover that they were already prepared for the security aspect of public health issues. But collective security actors were also provided an opportunity to expand and reconfigure their area of intervention by grasping an easily incorporated public health issue. This standpoint is in line with recommendations put forward in French national defence white papers that placed the pandemic threat at the same level as other global threats (without any clear distinction between risks with or without human enemies). Irrespective of the hypothesis, however, the possibility of including the pandemic influenza issue in a non-public health domain was a challenge for different actors and thus a driver of emergence (but not focused on a public health issue).

A third type of emergence factor revealed by the pandemic influenza situation was the possibility of attaching a general rationale onto a given issue. The approach taken by DILGA markedly exceeded the objective it had been assigned. The setup of this structure provided an opportunity for a small group of officials to very deliberately get involved in a major work programme combining a large number of stakeholders and geared towards determining – in terms of a global threat – the strengths and weaknesses of the French state and French society overall. From this viewpoint, pandemic influenza proved especially suitable for such an exercise and, in the name of public health, a broad review of the capacities of government bodies, local authorities, businesses, associations, etc., was conducted (especially in the framework of weekly meetings, or so-called ‘influenza Tuesdays’). The review was backed by very broad discussions on the government role, which was beginning to shift more from that of a leader to a facilitator, thus to accept a new form of modesty in a complex society confronted with globalization, while not abandoning any prerogatives (Bourcart, 2015). So pandemic influenza provided an opportunity for stakeholders to take on a reformer role in an interministerial structure that actually had very little power but did have a sufficiently large audience to interest various categories of actors. This, for instance, was the case for very large companies which – driven by risk and crisis managers – formed a club to deal with the pandemic influenza issue and consider new forms of cooperation with governments, while considering how the responsibilities could be allocated (Steyer and Gilbert, 2013).

There had thus been many different emergence drivers which, once triggered, fuelled other events. Various sectors of the scientific community (research in basic and more

applied areas) took advantage of pandemic influenza programmes to develop studies corresponding to their own research programmes. Governments and local authorities also used pandemic influenza as a vector to boost the awareness of their services and communities on public health issues. Moreover, via the pandemic influenza issue, some French government-run services (e.g., the *Institut national des hautes études de la sécurité intérieure*) or closely linked agencies (e.g., the *Haut comité français pour la défense civile*) positioned themselves to rethink collective risks and crises and incorporate the resilience aspect. Some structures, like the Ethics Research Department at the *Université Paris-Sud 11*, focused on pandemics with regard to ethical issues, etc. Pandemic influenza was hence used in many different ways. Although some of the uses were relatively opportunistic and some projects could not be carried out (such as the journal *Pandémiques : Pandémies, éthique et société*, which halted after three issues, i.e., nos. 2 and 3, November 2007), they helped maintain the pandemic influenza re-emergence phenomenon by confirming its status as an issue to be taken into account alongside other issues seeking recognition as a public concern.

Assessment of the appropriation of the pandemic influenza issue in France and the effects on its re-emergence raises many questions. It is hard to identify a category of actors that has taken on a real leading role to become owner of the issue. Different actors have shared this role but not always in a complementary way despite reconciliations between health, security and civil defence stakeholders via the pandemic influenza plan. Moreover, the definition of this issue has fluctuated from public health, public security (public order, terrorism) and activity continuity (resilience) orientations. The hybrid or even baroque sense given to pandemic influenza thus varies according to the appropriations, and even more to the intensity of the appropriations of this issue. Finally, the aspects that make pandemic influenza an interesting issue differ markedly, which means that the existence of this issue from a social standpoint, thus beyond its natural dimension, is based on mixed and relatively unrelated dynamics. The re-emergence of the pandemic influenza issue has also been the result of lobbying by scientists, of its inclusion in a security rationale, and of its qualities as a subject of debate on general or fundamental issues.

The approach to the pandemic influenza issue is thus the result of a relatively complex process that nevertheless has not prevented this disease from getting a foothold due to a series of explicit and implicit trade-offs between stakeholders (or at least interested parties). It is recognized that a pandemic is primarily an issue of a virus whose spread and development must be monitored – a point upon which both virologists and epidemiologists agree. The disease can mainly be overcome via vaccination – an option promoted by virologists and not challenged by other disciplines, despite some reserves (mainly because of the time required for mass vaccine production once the pandemic virus strain has been identified). This framing has been toughened by the use of increasingly sophisticated instruments in the areas of surveillance and proactive response (proactive epidemiology), and by the enhanced capacity to produce vaccines, which in turn could substantially progress (via increased use of molecular biology techniques), but it tends to limit the scope of health expertise regarding pandemic influenza. It is further acknowledged

that pandemic influenza is also a security (especially public order) issue warranting the intervention of sovereign bodies (especially since terrorism is associated with the pandemic threat). Moreover, pandemics are considered to be a societal problem via the activity continuity concern. This raises the question as to how to bring together governments and civil society to cope with new threats, develop intervention plans and adopt tailored ethical principles. These three general aspects are in some ways the package through which pandemic influenza is approached in France.

There is broad consensus on this framing of the pandemic influenza issue, with benefits for all stakeholders but, like any framing, it works by both inclusion and exclusion. Hence, influenza is not as much the issue as the agent that could induce it, so the focus is mainly on monitoring this agent and on implementing a vaccination programme to sidestep a potential attack. Accordingly, the disease always tends to emerge by default (failure to implement suitable surveillance, failure to quickly set up and apply a mass vaccination programme). Moreover, upon onset, the disease can only be treated by means that are often ineffective (e.g., public hygiene), questionable (e.g., use of controversial antiviral agents) or considered as a last resort (e.g., massive use of antibiotics in the treatment of pulmonary complications, which may also be controversial). Some disciplines (e.g., infectious diseases, immunology, public hygiene) may thus be marginalized in the pandemic management process, while warranting the intervention of sovereign bodies in the pandemic control process (as attempted during the H1N1 avian influenza outbreak with the implementation of a mass vaccination programme). In short, various types of investment tend to distance pandemic influenza from its primary definition regarding public health, but it is clear that the conventional approach is ultimately needed. Although new stakeholders have tried to appropriate the pandemic influenza issue via competing definitions, it has seemingly had no impact on the approach to this issue in the public health sector. This is especially true since the relative loss of interest in this issue in the public arena has given rights back to the ‘natural’ owners, i.e., core actors in the influenza sphere.⁷

■ Emergences at issue

Whether on the international level through the WHO case or on the national level, it is quite clear how the emergence of a public health issue is specifically associated with disorder in the natural environment, as reported by scientific experts, but even more so with the various interests that different categories of actors may have to take on the issue and even give it different definitions. Therefore a naturally occurring issue will have no social existence unless the actors present and making use of this issue can appropriate

7. A study carried out with Christophe Milazzo (*Université Pierre Mendès-France*) in the framework of the ANR Index project showed that within this ‘little world’ stakeholders multiply their allegiances to structures and engagements in networks, and that the most enduring challenges persist when the pandemic is taken off the agendas of other categories of actors interested in this issue.

it. The emergence phenomenon may then be highly complex, depending on many factors, particularly the nature of the relationships, adjustments and trade-offs between actors who have stated they are interested in any specific issue. The question of sharing the potential benefits of an emerging issue impacts both the force acquired by this emergence and its form. From this standpoint, situations that may be observed on international and national levels are unlike.

WHO, by contributing to the re-emergence of the pandemic influenza issue, promoted its own emergence as an international organization able to manage policies and emergency actions tailored to global issues such as pandemic influenza under the new One World, One Health concept adopted by a group of organizations in 2004. The emergence of a renewed WHO did not take place without some difficulty. The agency had to carve out its niche amongst the plethora of other actors (by making necessary trade-offs), strengthen its institutional foundations (especially via IHR) and make some changes to ensure that it would be both more efficient and better accepted. However, from an organizational perspective, this emergence process – with all of the associated constraints – had an impact on WHO's definition of the pandemic influenza issue. Its approach changed concomitantly with the adjustments and trade-offs that the organization was obliged to make when taking into account the international pandemic issue definition fights that were developing. This was especially the case with the avian influenza threat which was at the crossroads of three major types of definition or narrative: “it's a bird disease that affects people's livelihoods”; “human-human spread is the real risk, and could be catastrophic”; and “a major economic and humanitarian disaster is around the corner and we must be prepared” (Scoones and Forster, 2008, p. 12). WHO, by favouring the second narrative while still keeping other options open, neutralized the action of potential competitors (knowing that its main role could always be questioned depending on whether the emerging pandemic was of animal or human origin). Pandemics are still mainly a health risk, but they now have other dimensions that WHO cannot overlook and which it has thus partially integrated.

The situation differs with regard to the French case because, contrary to the international trend, there is no clearly identifiable group of stakeholders with both the willingness and capacity to take over and manage the pandemic influenza issue as leader and owner. Although interest in this issue by various categories of actors has actually led to its re-emergence, in parallel with the current international dynamics, the potential benefits of this re-emergence have been shared in a dispersed or even disordered manner, with each major category of actors pulling the issue in its direction without really appropriating it. Therefore, in the French setting, the question that arises concerns the actual purpose of the pandemic influenza issue considering how it has been used so far, but also how it could be further used. In other words, would a new alert be sufficient to trigger renewed interest in the pandemic threat or, considering current concerns in France about public health, collective security and the respective roles of the government and civil society, should it be considered that investment and profit making that have taken place via the pandemic issue is generally finished and that other emerging issues are likely to be a new

focus? This questioning rationale has led to a major change in perspective because the analysis no longer begins with the issues (emerging or not) but rather with configurations of pre-existing interests in the society that could host and manage them (Gilbert and Henry, 2012). Thinking from this angle might help gain insight into why – now that pandemic influenza is established as a multidimensional composite hybrid issue – it has partially lost its interest in the eyes of some stakeholders who had previously invested in it, except of course in the eyes of those who, as already mentioned, seem to be its natural owners. Contrary to the international trends, it is not certain that stakeholders in the influenza sphere would be powerful enough to boost the pandemic influenza issue to the height that they would like it to be positioned. This very clearly means that the emergence of an issue and its maintenance on the government's agenda are generally dependent on how they could become part of present interests. In other words, that which is 'emerging', regardless of its nature, must still contend with that which is already 'installed', even if this means upsetting its scheduling.