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What makes an acute emergency? Temporal manifestation patterns and global health emergencies

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ABSTRACT

In this article, we consider the role that onset patterns play in shaping how acute global events are taken to be, drawing on illustrative cases from the field of global health emergencies. We identify four temporal manifestation patterns that we argue display distinct political dynamics. First, an emergent onset pattern (e.g. the H1N1 health emergency), with political dynamics dominated by novelty-induced uncertainty and lack of information as well as familiar analogies. Second, an anticipatory onset pattern (e.g. the risk of a global avian flu health emergency), with a political dynamic characterised by dread of an as-of-yet unrealised high-consequence risk. Third, a cyclical onset pattern (e.g. Ebola), with a political dynamic characterised by a sense of familiarity and expectedness, unless eventual 'unexpected' or 'unprecedented' aspects manifest themselves. Lastly, a perpetual onset pattern (e.g. antimicrobial resistance), with political dynamics characterised by incrementalism and low political salience. We argue that acuteness is often associated with a departure from expected manifestation patterns, such as an escalation or other traits that make events appear unfamiliar. Whilst drawing on global health emergences in this paper, the four categories theorised here may also be used on a range of other adversities at the global or local level.

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Introduction

Events that are widely perceived as threats to human health and global prosperity often feature highly on political agendas and are thought to produce a distinct form of urgency politics, often followed by a neglect of deeper structural problems, such as inequality, poverty and a lack of public health infrastructures (Staupe-Delgado and Rubin 2022; McInnes 2016; Nunes 2016). This situation is particularly true when issues reach some degree of emergency status at the international level, for example, through emergency declarations by international actors (Rubin and Bækkeskov 2020; Hanreider and Kreuder-Sonnen 2014). Global emergencies vary widely regarding both how they are framed as pressing issues by international actors and how much funding they attract (McInnes 2016), and emergent issues often displace existing priorities from the global agenda, at least temporarily.

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Observers have noted that decision-making regarding global development spending, including in acute emergencies, does not conform to what we may label 'rationalistic' modes of economisation, and that issue prioritisation is neither fair nor proportionate to the global burden of an issue (Maher and Sridhar 2012; Shiffman 2008). Measles, HIV/AIDS and polio are examples of infectious diseases that have attracted vast amounts of attention and funding and have shaped global development agendas for decades, whereas diarrhoeal diseases, pneumonia, sepsis and malaria have received (proportionally) less attention despite high disease burdens (Maher and Sridhar 2012). More perpetual global emergencies, such as antimicrobial resistance (AMR), have also struggled to attract attention relative to their current and especially potential future toll. The global burden of AMR is now believed to have overshadowed that of HIV/AIDS (Laxminarayan 2022) but remains absent from explicit mention in the Sustainable Development Goals (SDGs) and other major global development initiatives, including global health agendas, in which more targetable diseases like HIV/AIDS are typically explicitly listed as a key priority.

Global emergencies have been analysed in terms of 'kinds' (cf. Hsu 2019; Yamori and Goltz 2021; Staupe-Delgado and Rubin 2022), but the inherent temporal dynamics of different types of emergencies have rarely been considered. An assumption herein is that the acute and 'unexpected' belong to the emergency (or security) realm, whereas more lingering adversities belong to the development realm, constituting 'social problems' or issues that fall outside the scope of emergency terminologies.

In this article, we argue that one overlooked determinant of politicised event acuteness is the role of the inherent manifestation dynamic. However, we go beyond binary notions of the temporal categorisation of problems (more or less rapid- or slow-onset issues). We introduce greater variation into the acuteness effects of emergencies by analytically addressing the inherent temporal dynamics of emergencies (their onset manifestation pattern) with their resulting political dynamics (the way they emerge as societal issues and are cast as more-or-less acute). This essay asks how the temporal features of the emergencies (endogenous factors) interact with the surrounding socio-political environment (exogenous factors) to produce distinct emergency response dynamics.

We identified four temporal features of emergencies that form our analytical foci of interest. We argue that, temporally, the political dynamics of global health emergencies vary according to whether an issue is deemed emergent (i.e. novel, such as H1N1, COVID-19), anticipatory (an as-of-yet unrealised but dreaded risk, e.g. avian flu), cyclical (global health agenda items that recur periodically, e.g. Ebola) or perpetual (issues with indefinite durations that can be slowed but not realistically ended, e.g. AMR). These four emergency issue characteristics are ideal types of a primarily analytical value. We recognise these four types of emergencies do not constitute a full typological framework in the sense of suggesting mutually exclusive or exhaustive categories. Still, considering the manifestation dynamics of emergencies in terms of 'kinds' reveals interesting aspects of their 'political life', with important implications for how we approach emergency declarations in a global political-economy context of 'spectacles' and 'neglect' (Nunes 2016).

This article is structured as follows. In the next section, we position our work in the wider literature regarding global health emergencies and attention. We then elaborate on the role of an issue's inherent temporal dynamics in the resulting political dynamics by drawing on four temporality-based analytical categories (emergent, anticipatory, cyclical and perpetual). In the concluding section, we summarise and reflect on the salient points raised in the essay.

Greater or lesser emergencies in the global arena

In this section, we first examine exogenous considerations of how issues come to be regarded as acute emergencies, before considering their less well-understood internal endogenous aspects. Our focus is on global health emergencies and teasing out aspects relevant to adverse situations in general. As with our four temporal categories of emergencies, the distinction between exogenous and endogenous factors is primarily analytical, fully recognising that the socio-political context often influences how emergency temporalities are perceived and experienced. Nevertheless, one would be hard pressed not to acknowledge that different emergencies, for example, Ebola and AMR, possess innate temporal characteristics, and that there is analytical value in exploring how factors endogenous to the emergency might influence political response dynamics.

Exogenous considerations

Issues familiar to us often require significant stakeholder mobilisation to make it onto the policy agenda, often as part of a process aimed at achieving internationally agreed-upon goals, of which the now-expired Millennium Development Goals (MDGs), the current SDGs, other United Nations (UN) agreements, decades, or similar are well-known examples. Novel infectious diseases often follow a different pattern that is, to a great extent, shaped by emergency politics, at least during the initial stages of their emergence, after which they have a tendency to 'normalise' into a more persistent 'development issue'. The emergence of H1N1 ('swine flu'), COVID-19 and Middle East Respiratory Syndrome (MERS) led, in various forms, to emergency functions being activated regionally and globally, although MERS was not declared a public health emergency of international concern (PHEIC) by the World Health Organisation (WHO). To illustrate, the outbreak of the novel severe acute respiratory syndrome (SARS) in 2002 contributed towards a strengthening of WHO emergency capacities through the International Health Regulations (IHR) to equip the organisation better regarding emergency functions (McInnes 2016). These functions essentially allow for the rapid escalation of disease outbreaks in terms of political acuteness and financing by declaring a so-called PHEIC. These PHEICs have since been applied also to what we may label 'cyclical' diseases, such as Ebola virus disease (EVD), and more controversially to polio (Kamradt-Scott 2016; Wilder-Smith and Osman 2020), with very different political rationales and effects.

One conceptualisation of urgency is offered by Shiffman and Smith (2007, 1370), who regard global political priority as a combination of sustained concern, the enactment of policy responses and the allocation of resources at a level commensurate with disease burden. We can also view global political priority as shaped by the alignment of organisational agendas, symbolic politics, economic rationales and techno-scientific agendas (Reich 1995). Major theories of agenda-setting underline the important role of solutions in political attention (e.g. Kingdon 2014), as unsolvable and protracted issues are generally considered unattractive for decision-makers.

The WHO declarations of PHEICs are, notably, also connected to acuteness or political commitment (Wilder-Smith and Osman 2020), as global reactions to declaring polio a PHEIC differed from the declaration of Ebola as a PHEIC in 2014 (which differed from the response to the 2019 Ebola PHEIC declaration). There is also evidence that the legal instrument of PHEIC declarations under the IHR attracts less global attention than the less-legalistic

declaration of a global 'pandemic' (Doshi 2011; Green 2020). Emergency terminologies (McConnell 2020) generally have a limited temporal and spatial scope, meaning events vary in how compatible they are with crisis frames, and definitional power plays a significant role.

Problems may also quickly escalate from a state in which they are initially relatively neglected to then being cast as acute emergencies after some time, as with the global response to Ebola (Honigsbaum 2017; Nunes 2016), and, some would say, to COVID-19 in 2020 (Boin, Ekengren, and Rhinard 2020; Staupe-Delgado 2021). Political agendas are crowded with societal problems that all demand urgent attention, suggesting only a few issues may be treated as highly acute within the 'carrying capacity' of the global health agenda (Smith et al. 2021). Characteristics inherent to the issue also often play a significant role in how it is taken up and treated by decision-makers (Kingdon 2014, DeLeo 2016). Novel infectious diseases often display a distinctly powerful issue-grabbing dynamic because of the ensuing uncertainty about their potential consequences and particularly when better connected places become exposed, increasing the perceived risk of global spread. However, the inherent (e.g. temporal) nature of an issue is rarely considered in existing scholarship but is a critical component of the AMR puzzle.

Uncertainty is a common factor that obscures the processes by which international health problems are prioritised and categorised (Karlsen and Kruke 2018). One obstacle to early action may be the categorical nature of global frameworks, such as the IHR under the WHO (Abeysinghe 2013). In other words, the reasons for priority allocation are complex and often circumstantial.

Emergency politics are, thus, arguably shaped by the interaction between two main forces: the distinct issue characteristics of the emergency and the external contextual factors. Existing scholarship has generally compared and contrasted variations mainly in the latter, such as agendas, frames and responses. There are multiple such external factors that are not endogenous to the issue, but we briefly mention four main factors emphasised in the literature.

One major contextual factor is the power differences between key actors in their capacity to determine whether a public health issue should be considered a health emergency. High-income countries and supranational organisations (such as the WHO) contain the expertise and leverage to frame public health issues as emergencies. The recent surge in attention on AMR as a health emergency, for example, was spearheaded by a few Northern European countries (Bækkeskov et al. 2020). For many low-income-countries, however, the main health challenge is in many ways also a lack of access to functioning antibiotics rather than AMR, as mortality from treatable infections may be high. Almost six million deaths annually in low- and low-middle-income countries can be attributed to the lack of access to antibiotics (Rochford et al. 2018), pointing to major global inequalities in disease burden vs. the burden of responsibility, reminiscent of justice discussions in the climate change debate. The WHO's declarations of PHEIC are also frequently subject to internal pressure, as 80% of the organisation's budget relies on voluntary contributions, primarily from primary high-income countries and private benefactors (Hanrieder and Kreuder-Sonnen 2014; Eccleston-Turner and Wenham 2021). This role of high-income countries in global health politics should not be understated, although we will focus on temporalities in this paper.

Key actors' programmes and organisational backing are recognised as central determinants of how issues arrive on the agenda and stay there over time through issue institutionalisation (Shiffman and Smith 2007; Maher and Sridhar 2012). Actors have played a decisive

role as issue brokers capable of securing increased (or even relatively disproportionate) attention to certain issues, as well as decreased attention on issues when actor power shifts. For example, the observation that HIV/AIDS, after well over a decade of low political salience, rose and has stayed forcefully on the global health agenda for the past two decades is testament to the success of the MDGs, the Global Fund and UNAIDS, among other actors, in keeping the issue salient (Shiffman and Smith 2007). This prominence has led other commentators to highlight the disproportionate funding for HIV/AIDS in comparison with other high-burden diseases (Morfit 2011; Smith and Whiteside 2010; Shiffman 2008). Actors also have their limitations, stemming from the competitive realities of the 'global agenda' (in which issues claimed to be of international concern compete for agenda space). Actor power, referring to 'the strength of the individuals and organisations concerned with the issue' (Shiffman and Smith 2007, 1371), matters a great deal, both for the institution they work for and for responses.

Not only are constellations among actors and institutions important, but also how actors portray issues and emphasise certain frames over others (ibid.). There are many ways of framing an issue. The literature suggests that framings that are harmonious and have vested interests in the broader context of the issue (e.g. wider foreign policy interests) have an easier time achieving a relative consensus than frames that challenge prevailing paradigms (Nunes 2016).

The final important factor is the electoral politics that play a major role in changes in issue salience (Rubin 2016; Boin et al. 2017). Election run-ups in many ways represent an ideal arena for the reprioritisation and renegotiation of how acute certain societal maladies are taken to be. Since issues generally compete for attention and resources; the occurrence of one adversity typically impacts the attention awarded to other issues in the same sector (e.g. COVID-19 sparking interest in global public health at large). The sudden surge in attention to an issue we so often witness in the wake of emergencies leads to 'windows of opportunity' in which the event in question sparks wider debate and critiques. Having considered some of the more exogenous aspects of how emergencies become treated as acute, let us now consider the question of what are regarded as endogenous factors.

Endogenous considerations

A core argument is that the ease with which a particular event can convincingly be presented as acute depends not only on external factors, but also strongly on the features inherent to the issue in question, such as its temporal nature (e.g. manifestation pattern and duration). The human or material toll of a problem is only one of many factors that shape issue salience at the global level. How impact is spread geographically or over time, for example, plays a major role too, as the spatio-temporal characteristics of an issue determine how elusive or concrete an issue is perceived to be (Maher and Sridhar 2012; Boin, Ekengren, and Rhinard 2020). Decision-makers and the public have an easier time visualising a threat if there are clear and unambiguous causal patterns.

Regarding infectious diseases, the route of transmission and transmissibility are also examples of endogenous considerations that are key determinants of how severe a particular disease is. People generally experience more fear and direct personal risk when the range of potential protective behaviours is limited, such as for airborne contagion.

Acuteness and neglect have been regarded as depending on how the inherent nature of a problem fits with preconceived notions of an emergency (Nunes 2016; Abeysinghe 2013). Comparing the global AMR issue with the prevailing notions of disaster, Viens and Littmann (2015) found that approaching such slowly emerging disasters in disaster terms is conceptually problematic due to its lack of temporal boundaries, which disasters are typically considered to have.

Scale is also believed to play a key role, as people typically care more about harms that may affect people around them and themselves (Gierlach, Belsher, and Beutler 2010). Transboundary problems involve distinct challenges arising from the scale of the problem, in addition to the temporal dilemmas involved.

A generalisable insight from the above discussion is that issues experienced more directly are more conducive to emergency frames. Shiffman and Smith (2007) note the particular roles played by measurability, unambiguous severity and the extent to which the problem is solvable. Problems that are easily operationalised in terms of concrete measures that can be assessed reliably are, over time, generally prioritised over issues that are more difficult to approach in causal terms or to analyse in unambiguous ways. The inherent features of the issue in question (e.g. its manifestation dynamic) greatly shape the framing options, including how compatible they are with how we understand issues to be acute.

In studying the political dynamics of the H1N1 outbreak, the threat of avian influenza, the Ebola outbreaks of 2014–16 and 2019, as well as AMR, we analysed the distinct political dynamics displayed by health emergencies with different types of endogenous temporal features. These global health threats were selected due to their distinct temporal characteristics as respective examples of analytically interesting categories, which we have labelled 'emergent' (H1N1), 'anticipatory' (the fear of a future outbreak of a potent human-to-human transmissible avian influenza strain), 'cyclical' (Ebola outbreaks, which reoccur regularly with different degrees of severity) and 'perpetual' global health emergencies (AMR being a case in point, as it cannot be eliminated, only managed regarding consequences). These inherent issue-features, we argue, play an important role in determining how they are viewed (and potentially shift) in terms of how they are approached as global emergencies of greater or lesser degrees of acuteness.

How temporal characteristics impact emergency responses

In this section, we elaborate on the four analytical categories and theorise their political dynamics (see Table 1). Our conceptualisations draw on the temporal manifestation dynamics we deem inherent to the emergencies to analyse how this temporal aspect shapes the political dynamics of global health emergencies. As emphasised previously, we recognise that manifestation dynamics are not the only determinant of how issues come to be considered acute. However, the illustrative examples clearly suggest that temporalities matter for the dynamics of the emergency response. Nevertheless, the impacts of these intrinsic temporal features have rarely been analysed in the humanitarian and emergency management literature. The four analytical categories represent analytical categories based on temporal dynamics, with a particular emphasis on what we refer to as manifestation patterns. As such, some emergencies might constitute borderline cases between different categories, or they might jump between categories over their time-life. However, at any specific point in time, it is often possible to identify the most dominant temporal dynamic among this

Table 1. Kinds of health emergency manifestation patterns and their political dynamics.

	Emergent	**Anticipatory**	**Cyclical**	**Perpetual**
Illustrative case	*H1N1*	*Avian flu*	*Ebola*	*AMR*
Manifestation pattern (onset)	'Emergent' issues are perceived as novel or demonstrate novel aspects. Specifically, for infectious diseases, this category implies demonstrating new strains of concern or new contagions.	'Anticipatory' issues are characterised by their anticipatory–conjectural status as issues that have not yet manifested according to feared scenarios, but in which the mere possibility of their occurrence is perceived as an emergency.	'Cyclical' issues reoccur periodically and are characterised by traits that render them persistent issues or issues difficult to eradicate. The majority of adversities can be described as cyclical, including seasonal flu, hydro-met hazards and many other risks.	'Perpetual' issues have no clear endpoint or beginning. They are multi-generational or timeless adversities. Their impacts may also continue to worsen indefinitely with no clear endpoint in sight. Antimicrobial resistance is one case in point.
Political dynamic	The political dynamic is dominated by novelty-induced uncertainty and a lack of information and familiar template-based responses. This dynamic often changes as the issue matures.	The political dynamic is dominated by dread of an as-yet-unrealised high-consequence risk. It is relatively rare for such issues to attract sustained political attention prior to their manifestation, but the prospect of an avian flu pandemic is one example.	The political dynamic is dominated by a sense of familiarity and expectedness. Ebola outbreaks are a case in point. Only when manifesting as unusually severe (a novelty aspect) did the political dynamic shift towards a global emergency modus operandi.	The political dynamic is dominated by incrementalism and low political salience. Linear onset is often assumed, suggesting predictability. Attention is mainly secured when the onset departs from expectations.

tetrad of categories even though the categories are not mutually excluding in the strictest sense. The anticipatory category refers to emergencies that are conjectural and have not manifested in the real world, whereas emergent emergencies are politicised mainly owing to novelty aspects. The cyclical category contains emergencies crises that are recurrent in a consistent and enduring pattern, whereas the perpetual category covers emergencies with seemingly infinite end-life that stretch decades into the future. In the following, we devote one sub-section to each 'kind' of political dynamic, with examples from historical experience with international health emergencies.

Emergent or novel emergencies

The swine flu pandemic illustrates a much longer tendency observed in policy research to pay disproportionate political and scientific attention to 'novel' emergencies, often at the expense of long-lasting, protracted issues with comparable human tolls (e.g. Burton-Jeangros, Bourrier, and Brender 2019; Tang et al. 2018). The emergence of a novel disease (or novel 'concerning' strain of a known contagion) has been observed, in many cases, to lead to a distinctly uncertainty-based response that is neither fully precautionary nor fully reactive. The emergence of H1N1, Zika and, some would argue, COVID-19 and its variants, were all followed by an initial inaction phase best described as a short window for the politicisation of issue characteristics (how severe, route of transmission, how contagious),

before certain severity- and uncertainty-based narratives led to the activation of emergency measures, such as the declaration of PHEICs, travel bans, release of extensive research funding, screening, scale-up testing and similar practices, followed by the subsequent adjustments of these (Hoffman and Silverberg 2018; Staupe-Delgado 2021). Novelty attributes appear to facilitate the crafting of emergency narratives that refer to uncertainty and precaution to an extent not observed in more familiar albeit severe infectious diseases.

The 2009 outbreak of H1N1—popularly referred to as 'swine flu'—was detected in the US in April of that year (CDC 2019a). In terms of actors, the Centres for Disease Control and Prevention (CDC) played a central role in the first months before the WHO took on an increasingly decisive role thereafter. On 11 June 2009, the WHO declared the then-emerging H1N1 outbreak a pandemic due to its global spread (Nature 2009). This was the first time in over 40 years that a 'full-blown' influenza pandemic had been declared (WHO 2011), although the risk of a major influenza pandemic had been well known and feared for decades by leading epidemiologists and risk commentators (Garrett 2005; Osterholm 2007; Kamradt-Scott and McInnes 2012). Later commentaries suggest the declaration was problematic and, in many respects, illegitimate, exposing problems with key aspects of the newly established IHR and the WHO pandemic-phase model, which paid insufficient attention to severity by disproportionally weighting the role of community transmission and global spread (Abeysinghe 2013). Problem narratives arguably became increasingly contested as the suitability of the WHO's phase-based regulations were questioned as the spread indicated a Phase-6 pandemic, but the consequences on the ground were far from the much-dreaded scenarios of disease burden, as described elsewhere (Abraham 2011; Kamradt-Scott and McInnes 2012; Abeysinghe 2013). How does this situation relate to the question of saliency?

One explanation (and the attribute we emphasise in this paper) is the novelty attributes of the virus and the resulting crisis (i.e. the role of the manifestation pattern). Although H1N1 viruses had caused outbreaks in the past, most famously the Spanish flu (as well as the 1977 Russian flu), the 2009 case (pdm09) was presented as another strain with novel characteristics (resulting from its mutations). Arguably, this novelty triggered a distinct type of emergency politics associated with the discovery of novel virus strains deemed to be 'of concern' (Bækkeskov and Rubin 2014). Although this paper does not explicitly deal with the COVID-19 pandemic, there were similar responses to COVID-19 in early 2020 and to new strains of the SARS-CoV-2 virus (such as 'Delta' or 'Omicron'), but this does not preclude other reasons for high salience.

The H1N1 virus might have been perceived as highly acute because influenza pandemics had been anticipated and dreaded for decades, suggesting issue characteristics and crisis dynamics associated with anticipatory policy-making (DeLeo 2010), or because the newly reformed WHO, empowered by the new IHR, was in a better position to declare a pandemic, and that H1N1 conformed to a particular global health emergency narrative and techno-scientific governance tools (Abraham 2011; Abeysinghe 2013).

The 2002–04 SARS outbreak is another example of novelty aspects leading to emergency measures being introduced in a limited scope and uncertainty-induced emergency politics behaving differently from later outbreaks, such as H1N1, Zika and COVID-19. Actors and political contexts may account for some of this difference, as the WHO reforms were implemented in the wake of SARS, leading to the reformed IHR powers it obtained in 2005, which meant the WHO was in no position to declare a PHEIC at the time of SARS. In the case of SARS, uncertainty was not emphasised to the same extent, as witnessed by the much more

targeted use of responses. This situation may have been due to the more predictable virological traits, which rendered the use of targeted responses more feasible and effective.

Outbreaks of novel viruses, as an overall category of health emergencies, appear to display distinct political dynamics owing mainly to the novelty aspect itself and the resulting state of uncertainty surrounding key virological traits. In cases in which initial analogies to previous outbreaks prove inappropriate, this uncertainty typically increases, leading to a deeper sense of crisis.

Anticipatory emergencies

Issues rarely attract attention before they have occurred in the real world, despite existing in emergency scenario plans (DeLeo 2016). In cases in which not-yet-acute issues have climbed onto political agendas, the literature suggests these issues are characterised as being backed by considerable publics for a long period, such as with climate change and certain environmental problems (Tosun and Howlett 2021), or by distinct issue characteristics associated with high levels of dread, such as high-tech accident risks. Only in rare cases have issues originating in the sphere of as-of-yet unrealised possibility been elevated to emergency-like status before the issue manifested. One example is an avian flu threat with an issue characteristic that DeLeo conceptualises as two-sided (DeLeo 2016). This threat notion is based, on the one hand, on an immunological aspect in which an H5N1 flu would be foreign to the human immune system, making the risk of such a pandemic particularly dreadful (as a prospect) due to the very high lethality decision-makers would expect. On the other hand, if the contagion mutated into an air-transmissible strain, rapid community transition would lead to a much more uncontrollable outbreak that would 'likely spark an H5N1 pandemic' (DeLeo 2016, 84). Typical of anticipation-based policy issues, the prospect of avian influenza and other unrealised risks that still attract considerable attention include a temporal dread-centred dynamic focussed on what Caduff (2015) calls a contiguous reference to a worrying 'perhaps'.

DeLeo (2016) elaborates that anticipatory policy is a distinct kind of political dynamic revolving around a highly selective politicisation of dreaded risk scenarios. Such 'anticipatory–conjectural' problems (ibid.) hinge on being projected, simulated or otherwise based upon worrying future indicators but without manifest symptoms in the present. These indicators are then framed in such a way to render them a 'crisis', a critical moment in which only a change of course can avoid or mitigate a more-or-less certain impact. However, the literature also indicates that, in the case of dread risks, the mere possibility of the scenario may be viewed as warranting precautionary action in the present (Anderson 2010; Versluis, van Asselt, and Kim 2019), although often in ways that compete with existing norms that people value. Common to anticipatory problems is that, although their exact moment of occurrence, severity and location cannot be readily predicted, an acceptance of their plausibility or even possibility is enough to galvanise political action. Of course, committed action is not guaranteed—according to DeLeo (2016; see also Kingdon 2014), it is rare—and it depends upon the coming together of policy streams surrounding the anticipatory issue.

Avian influenza—popularly referred to as 'bird flu'—has rarely crossed over into humans, and human-to-human transmission is observed only in rare cases in the most typical strains known to date, the H5N1 and H7N9 subtypes (CDC 2019b). In the previous decade, hundreds of humans were infected. However, there has been no sustained community spread of either

the H5N1 or H7N9 strains, as they are not easily transmissible, which is a precondition for declaring a PHEIC or emerging pandemic. Nevertheless, the risk of a global avian influenza pandemic has long been recognised and feared as a potentiality owing to the particularly high mortality associated with some of the avian influenza scenarios (Garrett 2005; Caduff 2015). As noted by DeLeo (2010, 148):

> As of this publication, the H5N1 influenza, commonly known as avian flu or bird flu, had not claimed a single American life. Nor has the virus sickened a single citizen of the United States. […] Yet, despite the fact that it has not had any tangible impact on American lives, avian flu has come to represent one of this country's most pressing public health issues of the 21st century, garnering the attention of the public, policymakers, and the media alike.

Avian influenza is an example of an anticipated risk with a potentially devastating impact that has yet to materialise. What sets avian influenza apart from many of the other health emergencies and global health threats examined in this paper is that it is one of the few examples of a dreaded event that features highly on the political agenda despite a relatively minor global toll (in the present). Arguably, the conjectural aspects of this dreaded health emergency represent a distinct political dynamic due to its anticipatory issue characteristic. However, and as emphasised by Caduff (2018) in his critique of the media's fascination with 'the next pandemic' and 'serial novelty', living in a continuous state of anticipation inevitably invites an excessive focus on potentialities that at best distracts from pressing established issues. This situation potentially diverts resources from current adversities to prepare excessively for risks that remain unrealised.

Cyclical emergencies

Ruptures in ordinary politics only occur on rare occasions due to novel threats that have either manifested or are anticipated or dreaded as potential future scenarios. Most adversities, including those we label emergencies, are, in some way, of a cyclical nature, although novel events produce a greater sense of crisis. Although their manifestation is often responded to with shock, confusion and disbelief, the issue characteristics are not new, and if they surprise experts it is usually due to their magnitude being greater than expected, that a hazard of that type has not presented locally in some time, or that a hazard of that type has only occurred in neighbouring regions. Almost by definition, few issues are of a completely novel nature. Even common hazards can become 'focusing events', in which attention to a specific hazard, such as earthquake risk and earthquake mitigation, rises for some time, only to drop to pre-disaster levels after a period (Birkland 1998). As such, emergencies associated with non-novel hazards are typically (and unfortunately) recurring phenomena within societies.

Regarding natural hazard risk, reference is typically made to the frequency of reoccurrence or when the last hazard of a similar magnitude was observed at a relevant scale. For example, discussions of flood risk typically consider whether a flood is a '100-year flood' or '1000-year flood' to indicate its severity and indirectly suggest a pattern of recurrence and predictability. Such observations relate to 'the hazardousness of a place' (Hewitt and Burton 1971, 3). In this way, natural hazard risks are often considered intrinsic to regional ecologies, which has also led to the realisation that disasters are never natural. Although not directly comparable, infectious diseases display a similar political dynamic, which can be illustrated by the two cyclical Ebola outbreaks.

Ebola virus disease (EVD)—often referred to only as Ebola—has caused periodic outbreaks in human communities, with the first case being confirmed in the mid-1970s. There was an extensive outbreak with significant community spread in 2014–16, and another major outbreak in 2019, both (eventually) triggering a PHEIC declaration and activation of the IHR by the WHO (WHO 2019). The 2014 response, including the eventual establishment of the UN Mission for Ebola Emergency Response (UNMEER), the 'first-ever' UN mission created to respond to a health threat, has often been criticised for being slow and reactive (Honigsbaum 2017; Nunes 2016).

Crisis declarations are more about perception than objective fact. Conflicting frames and contextual politics may have delayed the response to Ebola, leading to a potential overreaction after Médecins Sans Frontières (MSF), which had warned of the looming health emergency for some time, eventually streamlined the narrative across other actors, such as the UN and the WHO (McInnes 2016). Uncertainty is likely to have played a significant role regarding both the headquarters' situational overview and how to interpret the role of the IHR and the newly reformed WHO powers to declare PHEICs (Karlsen and Kruke 2018). Whether a PHEIC declaration was appropriate for the 2019 Ebola outbreak was also a matter of controversy (The Lancet 2019). In addition to the PHEIC declaration regarding the Zika virus in 2016, the PHEIC declarations regarding Ebola led to increased attention on the social impacts of declaring PHEIC, as a series of travel bans and negative economic consequences were faced by West African countries in the case of Ebola, and by Brazil (and to some extent its neighbouring countries) in the case of Zika.

Ebola is the only health threat for which two PHEICs have been declared. However, many more outbreaks of EVD have been recorded. In an outbreak in 1976 in Zaire (present-day Democratic Republic of the Congo (DRC)), for example, the death toll is estimated at just under 300, with over 150 fatalities in Sudan that same year (WHO International Study Team 1978). An outbreak in Uganda at the turn of the new millennium resulted in over 220 fatalities (Lamunu et al. 2004). Dozens of outbreaks and individual cases have been recorded since the discovery of the virus in 1976, with the 2014–16 outbreak being the most severe by far. The dynamics of EVD outbreaks across this timespan suggest these cases reoccur regularly (Legrand et al. 2007; Chowell and Nishiura 2014), indicating it makes sense to approach the problem as a cyclical or recurrent one. As scholarship on the 2014–16 Ebola PHEIC also emphasises, the slow (and later, arguably, disproportionately intense) response to this outbreak could, in part, have resulted from EVD presenting as a known, recurring disease (lack of 'novelty' [as opposed to e.g. H1N1]).

The politicisation of the two biggest Ebola outbreaks occurred relatively slowly (although not as slow as with perpetual emergencies). The EVD outbreaks at the end of 2013 and in late 2018 in Western, Central and Eastern Africa did not initially lead to perceptions of emergency, possibly due to a sense of familiarity with such outbreaks in those countries. It was only when the outbreaks displayed emergency-like characteristics, such as being of an unprecedented scale, that the efforts to sound the alarm on the ground were treated like a global emergency (and, according to commentators, that the 2014–16 outbreak might also spread outside the African continent).

Novelty is a central variable explaining the varying levels of attention paid to global health emergencies. The emergence of Zika, for example, led to stronger reactions and responses, including a relatively quick PHEIC declaration (Hoffman and Silverberg 2018). Ebola, in contrast, was framed in emergency terms by some actors, notably MSF, in early 2014, half a year

before a PHEIC was declared. The HIV/AIDS pandemic, which claims up to one million lives annually (it claimed twice as many at its peak mortality year in 2004), is generally not considered compatible with similar emergency functions, suggesting a completely different kind of political dynamic (Wilder-Smith and Osman 2020; Staupe-Delgado and Rubin 2022). It appears as though familiar or recurring problems are typically framed in 'public health-problem' terms, whereas issues displaying greater degrees of novelty (either a novel contagion genome or unprecedented severity) facilitate the acceptance of emergency frames, precautionary action and uncertainty-driven political dynamics. This situation can be viewed in contrast to a more linear-thinking logic regarding non-novel issues, in which only elements of surprise can shift the issue from a mode of 'within-normal-ranges' (relatively predictable) to a mode that has become exceptional.

Perpetually and gradually worsening emergencies

In principle, emergencies with a creeping and incremental onset should be more straightforward to manage than sudden and explosive ones. Some emergencies, such as those connected to outbreaks with significant community spread, escalate quickly. Other emergencies affect societies more gradually, appearing mainly in health statistics or clinical settings, but not necessarily with a direct emergency-like impact, at least as far as the affected populations can observe as part of everyday experience (Staupe-Delgado and Rubin 2022). We now draw on the case of AMR to illustrate traits inherent to this category of slowly but perpetually worsening emergencies. Antimicrobial resistance has been called one of the greatest global health emergencies of our time, in addition to climate change and biodiversity loss (Bækkeskov et al. 2020; Hoffman et al. 2023). In 2019, 1.3 million people worldwide are estimated to have died from resistant microbes (Murray et al. 2022). This number is roughly equivalent to the global toll of HIV/AIDS and malaria combined (Laxminarayan 2022). By 2050, some worst-case projections predict annual superbug fatalities of 10 million people. Therefore, although AMR also displays some anticipatory dynamics (in the form of the gloomy future projections described above), perpetual dynamics dominate: the threat posed by AMR has been known for more than a century; more than a million deaths annually make the emergency highly manifest, and it is likely to pose a public health challenge for decades to come.

Despite having constituted a major public health threat for decades, European Union (EU)-level initiatives to combat AMR were only agreed in 2011 with the establishment of an action plan (European Commission 2022). A global-level action plan under the auspices of the WHO/FAO/OIE was not approved until 2015 (WHO 2015), relatively late given the estimated severity of the issue. One problem, we argue, is that AMR hardly fits existing notions of an emergency. Rather than constituting an 'outbreak' in its own right, AMR is an umbrella term for a biological process happening in most, if not all, contagions. Bacteria can mutate in ways that enable them to escape the effects of antibiotics in part if not fully. Similarly, viruses and fungi can evolve to develop resistance to antivirals and antifungals, respectively. The actor landscape and incentive structure are also unclear, and the WHO has limited power to enforce their Global Action Plan on Antimicrobial Resistance (Munkholm and Rubin 2020). It remains a matter of contestation regarding how the responsibility for action on AMR should be shared between the WHO, national governments, the pharmaceutical industries, the health and veterinary sector and individuals (Van Katwyk et al. 2020). Ultimately, limiting

the adverse consequences of AMR relies on 'glocalised' forms of antimicrobial stewardship, drawing on mixes of intersectoral solutions across levels of governance (Rubin 2019).

Regarding issue nature, how AMR constitutes a crisis is disputed. The non-conformity of AMR to typical notions of emergency has led to a range of similar labels, including 'slowly emerging disaster' (Viens and Littmann 2015), 'overlooked pandemic' (Laxminarayan 2022), 'silent pandemic' (UN News 2020; Mahoney et al. 2021) and 'creeping crisis' (Boin, Ekengren, and Rhinard 2020). Other labels include transboundary crisis, global health crisis and a crisis of modernity (Bækkeskov et al. 2020). These issue descriptions also implicitly contain some of the main arenas of contestation, including time horizon, spatial horizon and a dependency aspect (antimicrobials are simultaneously the problem and the solution). As a fact of biology and a result of the ever-present evolutionary process, AMR is an endless issue. This issue is a perpetual societal problem, erupting as a series of global health crises as individual diseases, such as increasingly resistant tuberculosis strains. Other diseases that remain in the fully treatable realm (for now) may later present as increasingly difficult to treat or even become untreatable.

Furthermore, AMR is a truly 'transboundary' problem, knowing no borders; it is a problem characterised by the global spread of microbes and exchanges of genetic material with varying attributes. The dynamics of perpetually and gradually worsening global health emergencies imply significant forewarning, which suggests greater potential for their proactive management. In reality, however, response is rarely proactive due to their elusive spatio-temporal nature and contradictory causal traits.

Concluding remarks

We elucidated possible interactions between the temporal manifestation dynamics of different global adversities (limited to health emergencies) and political dynamics. Drawing on insights from the issue characteristics of health emergencies as temporally diverse as the outbreak of a novel H1N1 strain in 2009, the anticipated risk of a global avian flu pandemic, recurring Ebola global health emergencies, and a perpetually worsening AMR problem, we described the potential differences and similarities between global issues that we labelled 'emergent', 'anticipatory', 'cyclical' and 'perpetual'.

As outlined in Table 1, we theorised that 'emergent' problems, such as H1N1 (or SARS, COVID-19), display a political dynamic characterised by novelty-induced uncertainty, improvised public health responses and research, as well as a period in which the issue dominates other agenda issues. So-called 'anticipatory' issues, on the other hand, arrive on the agenda because of a successful framing of their possible occurrence constituting a grave threat rather than their actual emergent development (e.g. avian flu). Recurring or 'cyclical' problems perceived as somewhat familiar rarely receive much attention until they are framed as unprecedented in some way, such as happened in the 2014–16 and 2019 Ebola emergencies. 'Perpetual' problems, such as the creeping emergency of AMR, stand out because they have no identifiable starting point or end, and their political dynamic is incremental, bureaucratic and characterised by low or periodic salience. Perpetual problems mainly attract attention if or when their onset pattern departs from expectations.

Although this discussion focussed on global health emergencies, we wish to underline that the four identified categories can also be used for a range of other problems at the

global or local levels. Many societal adversities are cast as emergent, from climate-induced disasters to framings of 'unprecedentedness' applied to social transformations. There are many more examples of issues other than avian flu that are dreaded despite them not having manifested on a large scale (an obvious example is war or nuclear accidents), for which the mere possibility or conceivability of the risk are deemed unacceptable, with various political effects. Most adversities are cyclical in some way, including floods, landslides, earthquakes or economic declines. A common aspect of these adversities is that they struggle for political priority before an actual disaster has occurred, and even then, attention is often temporary until other, seemingly more 'pressing' issues arise. Perpetual crises, however, may not be perceived as crises at all due to their seeming lack of urgency and acuteness. Climate change, AMR, loss of biodiversity, worsening structural social problems or increasing inequality within or between countries are examples of mega-trends. Although these issues are perhaps rarely *experienced* as emergencies, they function as amplifying or moderating effects that change the onset dynamics of other, more-concrete symptoms of deeper, more-elusive adversities.

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