Loughborough University

This item was submitted to Loughborough's Research Repository by the author.
Items in Figshare are protected by copyright, with all rights reserved, unless otherwise indicated.

Emergent emergency response: Speed, event suppression and the chronopolitics of resilience

PLEASE CITE THE PUBLISHED VERSION

https://doi.org/10.1177/0967010618817422

PUBLISHER

SAGE Publications © The Author

VERSION

AM (Accepted Manuscript)

PUBLISHER STATEMENT

This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) licence. Full details of this licence are available at: https://creativecommons.org/licenses/by-nc-nd/4.0/

LICENCE

CC BY-NC-ND 4.0

REPOSITORY RECORD

Zebrowski, Chris. 2019. “Emergent Emergency Response: Speed, Event Suppression and the Chronopolitics of Resilience”. Loughborough University. https://hdl.handle.net/2134/35441.

Title: Emergent Emergency Response: Speed, Event Suppression and the Chronopolitics of Resilience

Abstract:

Emergency responses are premised on the hope that even when events cannot be wholly predicted and prevented, that timely action in the present can be exercised to strip an emergent event of its disruptive potential. Yet, while the speed of emergency responses plays a critical role in underpinning UK resilience, it has been a relatively neglected subject in studies of resilience advanced through the paradigm of preparedness. This article aims to contribute to and extend work in the field of emergency governance by arguing that concerns surrounding the speed of response contribute to a distinct form of security enacted in contemporary emergency response strategies which I term 'event suppression'. Drawing on policy analysis, Preparedness Exercise observations and practitioner interviews, this article investigates how speed operates as a core problematic orienting the design of UK emergency responses organized through the Integrated Emergency Management (IEM) framework. IEM promises to accelerate emergency response operations by utilizing advances in communications technologies to drive the bottom-up emergent self-organization of emergency responses. Event suppression ensures security not by preventing an event from happening, but by quickly closing down the 'disruptive' time of the emergency event and restoring the linear historical time of standard political processes.

Introduction

In the time-sensitive field of emergency response, speed is critical. The sudden onset, non-linear amplification, and rapid spread of emergent 'complex emergencies' demands the capacity for a speedy and flexible response. In the UK, emergency response and recovery activities are organized through the framework of Integrated Emergency Management (IEM). IEM is described as the "generic national framework for managing emergency response and recovery that is applicable irrespective of the size, nature or cause of an emergency, but remains flexible enough to be adapted to the needs of particular circumstances" (Cabinet Office, 2013: 52). Communications are prioritized as a means of inciting emergent, bottom-up processes of self-organization amongst emergency responders to improve the overall speed and efficiency

of operations. By promising to "restor[e] normality as soon as possible" (Cabinet Office, 2010c: 49) in the wake of an event, emergency responses underpin wider efforts to enhance UK resilience by ensuring that 'disruptive challenges' have a minimal impact on 'daily life' (Cabinet Office, 2005b: 9).

Since 2001, UK Civil Contingencies—an assemblage of bodies, policies, ideas, techniques and technologies tasked with emergency planning and response in Britain—has been organized around the objective of enhancing UK resilience to a wide range of events from the potentially catastrophic (e.g. viral epidemics, financial collapses, and terrorism) to the relatively mundane (e.g. floods, industrial disputes, and individual stress). Resilience is defined in this context as the "[a]bility of the community, services, area or infrastructure to detect, prevent, and, if necessary to withstand, handle and recover from disruptive challenges" (Cabinet Office, 2013: 229). The form of security (Lobo-Guerrero, 2011) that resilience promises is therefore decidedly temporal. Rather than being prophylactically performed as a space free from danger, security is understood 'immunologically' (Grove, 2014) as the capacity to quickly and efficiently 'bounce-back' from disruptive events. Recent research has begun to consider the multiple, complex temporalities through which resilience is performed. Studies of preparedness exercises (Adey and Anderson, 2011b), bombsite memorials (Heath-Kelly, 2015); and military psychological resilience training programmes (Howell, 2015) demonstrate the similar way in which distinct governmental techniques operate simultaneously upon both anticipation and memory in order to fold a state of preparedness in the present. By analysing how *potential* future emergencies are prepared for in the present, these studies have begun to explore the ways in which resilience "connects the past, the future, and the present, while instantiating a constant struggle of redefining and recreating security" (Dunn Cavelty et al., 2015: 11). However, preparedness represents only one (albeit important) temporal register through which resilience strategies operate.

In contrast to the sizeable literature analysing how preparedness relates to resilience, emergency response has been a relatively neglected area of study for resilience scholars (notable exceptions include Anderson, 2012, 2016; Grove, 2013). Response has been described as a 'logic' (Anderson, 2016) or 'diagram' (Grove, 2013) of emergency governance. A logic may be thought of as a historically contingent strategy of power organizing assemblages. Related to, yet distinct from, anticipatory logics such as preparedness, precaution and pre-emption, which operate prior to the onset of an event, the logic of response is enacted within the 'interval of emergency' (Anderson, 2016) to "protect life, contain and mitigate the impacts of the emergency and create the conditions for a return to normality" (Cabinet Office,

2013: 10). Responses are premised on the hope that even when events cannot be wholly predicted and prevented, that timely action in the present can be exercised to strip an emergent event of its disruptive potential.

While the 'speed of recovery' has been identified as a principle consideration defining certain strands of resilience research (Holling, 1996; Pimm, 1991; Rose, 2007), little critical research has been conducted to examine its implications for the rationalities and practices of security. Drawing on policy analysis, Preparedness Exercise observations and practitioner interviews this article investigates how speed operates as a core problematic orienting the design of UK emergency responses organized through the Integrated Emergency Management (IEM) framework. IEM provides a rich empirical referent for analysing the complex temporal relations through which security is being 'defined and recreated' by technologies of resilience. IEM promises to enhance the speed and efficiency of multi-agency emergency responses by adopting new models of informationally-driven emergent self-organization for UK emergency responses. This article aims to contribute to and extend work in the field of emergency governance by arguing that concerns surrounding the speed of response contribute to a distinct form of security enacted in contemporary emergency response strategies which I term 'event suppression'. By form of security, I am referring to the function of a security logic: the mode, and indeed meaning, of security enacted by a stabilized set of security practices. Event suppression ensures security not by preventing an event from happening, but by quickly closing down the 'disruptive' time of the emergency event and restoring the linear historical time of standard political processes. Distinct from, yet intimately related to, the form of security enacted by logics of preparedness, wherein security is linked to futurity (Anderson, 2010), event-suppression operationalizes the speed of response to strip the event of its problematizing potential, ensuring that disruptive events have a minimal impact on 'daily life'. Representing both an enabler and exemplar for individual, community, and business resilience, a detailed study of IEM may provide important insight into how distinct 'resiliences' are being operationalized across different domains of life (Anderson, 2015).

I begin this article by elucidating the chronopolitical problematization of security organizing contemporary emergency response. Here, I argue that the particular danger attributed to contemporary threats arises from their capacity to rapidly self-amplify through unpredictable processes of complex emergence. The second section of this article turns to empirically investigate how emergency responses, guided by the framework of IEM, are being strategized in response to this challenge. IEM operates to supress an event by inciting flexible and adaptive multi-agency emergency responses capable of rapidly self-organizing and

evolving quicker than threat itself. The third section will look to explicate event suppression as a distinct form of security and explore its implications for the politics of security. This article concludes with a short reflection on the implications of this analysis for critical resilience scholarship.

The Speed of Emergent Emergencies

Critical scholarship on emergency governance since the advent of the war on terror has largely been driven by Giorgio Agamben's claim that a permanent state of emergency (aka. exception, siege, necessity) "has become one of the essential practices of contemporary states, including so-called democratic ones" (2005: 2). Analyses of Guantanamo Bay (Neal, 2006), the Mexican-American border (Doty, 2007) and refugee camps (Martin, 2015) have all sought to demonstrate the proliferation of such zones of exceptionality—extra-legal areas not subject to the normal legal order—within the contemporary security environment. The suggestion is that the abundance of such sites demonstrate the advent of a permanent state of emergency wherein the exception has become the norm.

Agamben's own work has sought to trace the development of 'an apparatus of state of emergency' from its inception in the French Revolution to 'the dominant paradigm of government in contemporary politics' (2005: 2). Like Schmitt (2005), who he draws on extensively, Agamben is concerned with the sovereign ability to suspend the legal order through the declaration of a state of emergency. For Schmitt, the sovereign decision to declare a state of emergency reveals the primacy of sovereign power over and above the constitution from which sovereign powers are said to derive (Schmitt, 2005). By contrast, Agamben asserts that the state of exception is not a "state of law" but "law's other": "a space devoid of law, a zone of anomie in which all legal determinations…are deactivated" (2005, p. 50). Here, Western traditions of sovereignty are traced to a fundamental biopolitical distinction between the politically qualified life (*bios*) and 'bare life' (*zoé*). Operating through a topology of 'inclusive-exclusion' sovereign power is rooted in the production of 'bare life': individuals stripped of all legal recognition, placing them in a legally sanctioned state of legal abandonment and exclusion (Agamben, 1998). The Nazi death camp is singled out by Agamben as the "the fundamental biopolitical paradigm of the West" (1998: 102) wherein bare life could be killed without it constituting murder. By transforming Schmitt's temporal distinction between normal and exceptional politics into a spatial topology of inclusive-exclusion, Agamben is able to

identify the persistence of exceptional sites of emergency governance signifying the advent of a permanent 'state of emergency'.

A second distinct but related line of research is now emerging which seeks to empirically investigate the rationalities and practices governing 'the emergency of emergence' (Dillon, 2007). In contrast to the legal-theoretical considerations of Agamben and Schmitt, this research approaches the relation between life and emergency from a different perspective: starting from the understanding of life as *emergent*. The emergency of emergence is "an emergency not derived from a base distinction underlying law but from the infinite empiricities of finite life understood as a continuous process of complex adaptive emergence" (Dillon and Lobo-Guerrero, 2009: 10). Protevi (2006) argues that synchronic accounts of emergence—the whole displaying properties that cannot be accounted for by the sum of its parts—have dominated discussions of emergence thus far. Life, according to this understanding "is not to be located in its parts, but in the collective emergent properties of the whole they create" (Kauffman, 1995: 24). Order, is neither imposed nor anarchic, but self-organized from the bottom up. The attention given to synchronic accounts of emergence tend however to underemphasize the temporality of this process. Diachronic emergence refers to the sudden, sometimes catastrophic, and unpredictable mutations in organizational form which characterize the temporality of biological evolution (Dubos, 1959). Like Deleuze's notion of the event (1990), synchronic emergence describes the differenciating bursts which re-pattern the virtual, creating new thresholds of structure and behaviour within self-organizing systems (Protevi, 2006: 23). It is for this reason that emergent life "is understood to operate in that permanent state of immanent emergency that defines the infinite flux of its contingent emergence" (Dillon, 2007: 19).

The emergency of emergence is manifest in the turbulence (Cooper, 2010) or radical contingency (Dillon, 2007) said to characterise the contemporary security environment. This is most acutely observed in the high-impact, low probability threats including terrorist strikes, epidemics, financial crises, and natural disasters which evade actuarial capture (Daase and Kessler, 2007; Kessler and Daase, 2008; Massumi, 2009), strain risk-based technologies of security (Bougen, 2004), and haunt contemporary liberal security imaginaries that are routinely attributed to an increasingly complex and interdependent world (Cabinet Office, 2008a, 2010a). Events here are said to arise unexpectedly (Aradau, 2014) and amplify across the many circulations and interdependencies comprising life (Anderson and Adey, 2011; Braun, 2007; Dillon and Lobo-Guerrero, 2009). Note here that the ontology of the event is not the sudden materialization of a quasi-miraculous Schmittian exception (Schmitt, 2005), but something that

unfolds over time: rapidly snowballing from conditions too numerous and distributed to be fully accounted for in advance. The emergency emerges: an idea already contained within the etymology of emergency itself which connotes "the rising of a submerged body out of the water' and 'the process of coming forth, issuing from concealment, obscurity, or confinement" (Neocleous, 2008: 72). Yet, in studying the emergency of emergence have we not underemphasized the significance of the temporal emergence of the emergency? Whether it be the rapid spread of Ebola; the radicalization of terrorists; or the toxification of assets within a financial crisis—danger is cast as something which emerges rapidly and unexpectedly through complex and often unpredictable processes. Can we not conclude that what is so radically threatening about the contemporary emergency event is its capacity to rapidly become dangerous through processes of complex emergence?

The problematic of threat's rapid emergence is covered explicitly in the 2008 Pitt Review. The report was commissioned to undertake a comprehensive review of the 2007 UK summer floods which resulted in the "largest loss of essential services since World War II, with almost half a million people without mains water or electricity" (Cabinet Office, 2008b: ix). The rapid onset of the flooding came 'before anyone could really react' (Cabinet Office, 2008b: ix), overwhelming the drainage infrastructures across England and Wales. Failures quickly cascaded across interdependent 'systems of systems' - assemblages which include infrastructure and supply chains that are "intimately linked with the economic and social wellbeing and security of the communities they serve" (Cabinet Office, 2008b: 251). This produced a 'domino effect', interrupting essential services including power supplies, transport links, telecommunications, and mains water supply (Cabinet Office, 2008b: 3). These distributed failures fed back upon once another, in places like Longlevens, Gloucestershire where flooding disrupted the power supply of pumping stations depended on for flood response (Cabinet Office, 2008b: 250). Throughout the report, the particular danger of large-scale flooding is associated with its 'rapid onset' (Cabinet Office, 2008b: ix, 45, 334) and ability to quickly spread through 'cascading effects' (Cabinet Office, 2008b: 238, 250-251). Moreover, it is with respect to its rapid emergence that large-scale flooding may be likened to more sinister dangers threatening British communities:

> Because of the scale and speed of the risk they pose, those phenomena have similar potential to other security challenges to threaten our normal way of life across significant areas of the country with little warning (Cabinet Office, 2008a: 15).

Similarly, the challenge posed by the rapid and unpredictable emergence of contemporary threats is not confined to emergency response alone. The rising prominence of 'rapid response' units within military (Der Derian, 2001), policing (Fassin, 2013) and disaster response (King, 2002) operations reflect a growing concern with our capacity to react quickly and decisively in the face of emergent threats.

Resilience has been advanced as a solution to the problem of the rapid and unpredictable emergence of contemporary emergencies (Chandler, 2014; Walker and Cooper, 2011). Resilience refers to the capacity of a broad array of complex adaptive systems to absorb, withstand and 'bounce-back' quickly and efficiently from a perturbation by exercising their own inherent capacities of emergent self-organization (Zebrowski, 2016). In other words, resilience promises to secure life lived under a "perpetual state of potential emergence(y)" (Massumi, 2007: no pagination) by activating "a system's emergent response to emergencies" (Kaufmann, 2013: 55). Resilience governance involves enhancing the adaptive capacity of those systems underpinning or constitutive of valued forms of life to rapidly respond to emergent threats (and opportunities).

One prominent technique of resilience governance is the Preparedness Exercise. Preparedness Exercises aim to enhance resilience by simulating a fictional emergency event in relation to which emergency response plans, protocols and responsibilities can be exercised across the multiple agencies converging to resolve an emergency event (Adey and Anderson, 2012; Anderson and Adey, 2011; Aradau and van Munster, 2012). Researchers have considered how preparedness exercises inculcate resilience through a temporal modality of the 'future anterior' (Aradau, 2010: 4) which permits an unknowable future event to become "actionable and thus governable" (Adey and Anderson, 2012:100). As with its historical antecedents, including vulnerability mapping and table-top scenario planning, preparedness exercises operate on an affective level to generate fears that "we are not prepared' in order to produce a "continuous state of readiness" (Lakoff, 2007). The governance of affect is even more explicit within preparedness exercises which, by design, aim to simulate the affective atmospheres of an actual emergency to habituate and enhance decision-making under conditions of uncertainty, stress and confusion (Adey and Anderson, 2011a, 2012; Kaufmann, 2015). While many studies have focused on how techniques of preparedness operationalize fear in order to "make individuals governable through preparedness techniques that promise to allay this insecurity" (2013: 575), we might conversely consider that the form of security enacted within preparedness exercises is related to an altogether different affect: a sense of

confidence in the ability of oneself and one's colleagues to effectively respond to a future emergency.

While this research has been vitally important in understanding the complex temporalities through which resilience is inculcated, the focus on preparedness exercises in understanding resilience governance risks conflating resilience with preparedness. Moreover, the focus within this research on anticipation and futurity perhaps understates a core priority of preparedness planning in improving readiness, reducing 'delays' (Anderson, 2016) and increasing the speed and efficiency of response operations. Emergency response provides an alternative way to understand the relations between time and security enacted within discourses of resilience. With emergency response, resilience is associated with the rapid restoration of 'normality' in the wake of an emergency. If preparedness activities are driven by the concern that "we are not prepared", then responses are compelled by concerns surrounding 'our' capacity to keep up with the rapid emergence of contemporary threats. Such concerns are a manifestation of what I term the chronopolitical problematisation of security governing emergency response. The term 'chronopolitics' was coined by French theorist Paul Virilio to distinguish a new problematization of power, distinct from the spatial problematization defining geopolitics (see also Virilio, 1977, 2005a, 2005b). According to Virilio, this problematic has come to the fore as technological advances have enabled the accelerated movement of people, goods, information and capital flows with profound effect on the spatial and temporal structures organizing contemporary security politics. In his characteristically hyperbolic account, Virilio argued that such accelerations were contributing to the ascendancy of temporal concerns over and above those of spatiality which have traditional held precedent in global politics. While we should remain suspicious of any teleological account of danger's acceleration,[1] his account of chronopolitics usefully alerts us to the political stakes arising from problematizations of security rooted in concerns over speed and temporality.

In the following section, we examine how the chronopolitical problematization of security identified here is manifest within the resilience discourses of UK Civil Contingencies. A detailed empirical analysis of the emergency management framework of IEM will examine how the chronopolitical problematization of security has given rise to new strategies of emergency management rooted in the ideal of bottom-up, emergent self-organization. By pitting the speed of emergent emergency responses against the rapid emergence of the

emergency, IEM is demonstrated to coalesce around a chronopolitical problematization of security defined in terms of differential speeds of emergence.

The Speed of Emergent Response

In the event of an emergency, UK Central government promises "to react with speed and decisiveness" (Cabinet Office, 2005a: 5). Integrated Emergency Management (IEM) is crucial to this ambition. IEM represents the principle strategic framework through which emergencies are managed in the UK. Described as "the concept on which civil protection in the UK is based" (Cabinet Office, 2013: 8), IEM sets out the conditions guiding multi-agency preparedness, response and recovery activities. IEM contributes to UK resilience by promising a speedy return to 'normality' in the wake of a disruptive challenge (Cabinet Office, 2008b: 397-402). Circumscribed within a chronopolitical problematisation of security, IEM promises to accelerate emergency response operations by utilizing advances in communications technologies to drive the bottom-up emergent self-organization of emergency responses. IEM thus provides a rich empirical referent for understanding how resilience discourses extend, inflect, adapt and transfigure extant logics and practices of emergency response.

We could begin by noting that while the speed of a response has long been a consideration for emergency planners, it too has a history. Collier and Lakoff (2015) trace a genealogy of contemporary preparedness planning to the emergence of 'vital systems thinking' in America in the 1930s. This began as a static evaluation which applied the insights of systems theory to assess the vulnerability of vital systems upon which modern life was understood to increasingly dependent. Speed only arose as a prominent concern in the context of the Cold War as American preparedness planning was subsumed under a policy of deterrence. Deterrence depended on the promise of a retaliatory nuclear strike. Recognizing that the "US would not have the luxury of a long period during which to mobilize its industrial-military power as in the prior two wars" (Collier and Lakoff, 2015: 28) an 'ideology of preparedness' (Sherry, 1977) arose to "maintain a state of ongoing readiness to withstand and respond to a sudden nuclear attack" (Collier and Lakoff, 2015: 29). Similar concerns played out in the UK, where estimated timescales pertaining to nuclear escalation had to be continually revised downwards within the 'Government War Book' over the course of the Cold War.[2] Hennessey (2010: 200-205)

[2] The Government War Book detailed how a 'continuity of government' apparatus was to be progressively unfolded through three sequential stages (pre-Precautionary Stage matters, the Precautionary Stage, and War) in

recounts how the rapid escalation of the 1962 Cuban Missile Crisis caused great distress amongst emergency planners whose plans depended on a period of nuclear escalation extending over a number of months (Hennessy, 2010: 200-205)! While we should be careful to account for the different histories of American and British emergency planning, we can clearly discern how concerns with speed originally manifest in terms of readiness: guaranteeing the second-strike response capacity underwriting a policy of deterrence (Aradau and Munster, 2011: 27) (which was itself playing out as a nuclear arms *race*). Taken together, the mutual imbrication of these logics of preparedness and response performed an early from of resilience in which the capacity to withstand and bounce-back from an attack provided insurance against the failure of deterrence policies to pre-empt nuclear catastrophe.

Rather than representing a radical rupture in the logics and practices of emergency governance, IEM may be better understood as extending and transfiguring extant logics of emergency response. The concept of IEM first appeared in Home Office Circulars (ES3/1993) entitled *Integrated Emergency Management: Application to Local Authority Emergency Preparedness*. By this time, the end of the Cold War was already shifting the focus of planning from wartime to peacetime emergencies, however this had not yet been reflected in emergency legislation, which continued to prioritise civil defence concerns. The concept of Integrated Emergency Management first emerged as a means of enhancing all-hazards capabilities and arrangements in a time of rapidly diminishing civil defence funding. As opposed to the definition of integration used today, which emphasizes the coordination of informationally-enabled multi-agency responses (Cabinet Office, 2013: 15), integration here merely referred to "[t]he integration of arrangements for a range of emergencies, whether in peace or as the result of a hostile act" (as quoted in Rockett, 1994: 50). In his critique of civil contingencies arrangements at that time, Rockett noted that 'informational and structural integration is entirely absent from British counter-disaster planning' with responder agencies working "in the British tradition, quite independently of one another" (1994: 53). The impetus for a comprehensive review of UK Civil Contingencies/Civil Defence architecture was only afforded at the turn of the twenty-first century in the wake of a series of high profile domestic crises including fuel protests, flooding incidents and an outbreak of foot and mouth disease (Coaffee et al., 2009; Smith, 2003). In 2001, the Blair government ordered an *Emergency Planning Review* to reorganize an outdated Cold War machinery away from the catastrophic

line with rising international tensions in the lead-up to nuclear exchange. See in particular CAB/175/2 on Exercise Felstead.

threats which had preoccupied planners throughout the second half of the twentieth century, towards the 'complex emergencies' and 'new security challenges' which were anticipated to define the twenty-first. In particular, the review sought to update emergency legislation and improve integration amongst the multiple agencies converging on a complex emergency (Rockett, 1994: 53; Smith, 2003: 414).

Reflecting the close correspondence between civil defence and civil contingencies historically, it is widely acknowledged that the reorganization of UK Civil Contingencies borrowed heavily from the concepts, strategies, and organizational models of the Revolution in Military Affairs (RMA) (Coaffee et al., 2009; Dillon and Reid, 2009; Walker and Broderick, 2006). In this respect, it was no coincidence that the *Emergency Planning Review* of UK Civil Contingencies architecture coincided with the *Strategic Defence Review* (Ministry of Defence, 2002: 14-18) which signalled the intention of the British Armed Forces to further develop 'network-enabled capabilities'[3] in a move to improve integration with U.S. and NATO forces. In contrast to the top-down, hierarchical forms of command and control traditionally associated with the military, network-centric operations are premised on the exploitation of communications technologies to drive the emergent bottom-up self-organization of military units (Cebrowski and Gartska, 1998; Dillon and Reid, 2009). By applying the insights of the complexity sciences to the flexible and adaptive networked organizational models adopted by international businesses since the 1970s,[4] the RMA sought to develop the concepts of informationally-driven self-synchronization and emergent self-organization to enhance decision-making and overcome uncertainty within highly complex and dynamic battle environments. The competitive advantage afforded to network-centric operations is enhanced 'rapidity of effect' (Ministry of Defence, 2002: 18). Informational superiority in an evolving battle ecosystem is said to translate into decisional superiority in rapidly evolving environments, permitting networked troops to respond to emerging risks and capitalize on emerging opportunities more quickly than the enemy (Cebrowski and Gartska, 1998).

As in military literatures of the RMA, the central problematic organizing contemporary emergency response operations is the radical uncertainty associated with responding to an emergent emergency (Comfort, 1993; Comfort et al., 2001). In the dynamic and rapidly evolving environment of an emergency the "information available will often be incomplete,

[3] Within the 2002 Strategic Defence Review these are referred to as 'network-centric capabilities'. 'Network-enabled capabilities' has become the predominant phrase now used by the Ministry of Defence

[4] For an example of more contemporary engagements with complexity and emergence amongst management scholars see the journal 'Emergence: Complexity & Organization'.

inaccurate or ambiguous, and perceptions of the situation may differ within and between organisations"(Cabinet Office, 2013: 18) hampering decision-making on the ground (Adey and Anderson, 2011b). This problematization of emergency response has generated a sizeable industry in information systems and technologies, composed largely of military spin-offs[5] and supported by academic research on emergency response information systems (e.g. Comfort, 1993; Yang et al., 2013). In the UK, Resilience Direct has been developed as a secure digital collaboration platform facilitating communication and knowledge sharing amongst emergency responders during the preparation, response and recovery phases of an emergency. It is underpinned by a series of communications infrastructures including HITS (the High Integrity Telecommunications System), Airwave and MTPAS (Mobile Telecoms Privileged Access Scheme) which have been act as layered fall-back solutions ensuring the resilience of communications—recognized as a "fundamental enabler underpinning the effective response to any emergency" (Cabinet Office, 2013: 110)—in the event of network overload or physical disruption. Information technologies are championed as a means of 'overcoming some limitations in human information processing that have long stymied organizational action in complex environments (Comfort, 1993: 18). Enriching the information available to emergency responders is seen to enhance both individual and collective decision-making and permit the devolution of decision-making (Comfort, 1993). Problem-solving, rather than being confined to the individual, can be distributed through a network of agencies comprising diverse specialisms, skills and expertise. This, in turn, accelerates emergency responses: permitted emergent challenges to be responded to quickly and decisively while allowing different response activities to be pursued concurrently, rather than sequentially, across a response network (Emergency Planning College, 2008). Taken together, the concern with timeliness of decision-making, the avoidance of delays and the concurrence of disparate response and recovery activities collectively speak to the need to accelerate emergency responses in the face of the potentially rapid emergence of an emergency.

With IEM, information circulation is elevated to the central organizing principle driving the emergent, bottom-up self-organization of emergency responses. The stated aim of IEM "is to develop flexible and adaptable arrangements that will enable an effective joint response to, and recovery from, any emergency" (Cabinet Office, 2013: 8). Guided by the eight principles of anticipation, preparedness, subsidiarity, direction, information, integration, co-operation and continuity, IEM underpins UK resilience by 'restoring normality as soon as possible' following

[5] Field notes: Civil Contingencies show; Coventry UK (24 September 2014).

an emergency (Cabinet Office, 2003: 6, 17, 2008b: 350-398, 2010c: 49). Horizon-scanning and regular risk assessments are conducted to identify potential events in their germinal stage where they can be pre-empted before their capacity to inflict significant damage has been realized. Anticipation and preparedness may, however, in certain instances prove insufficient. The declaration of an emergency by the emergency services will shift operations from preparation phase to response phase in accordance with procedures set out in emergency plans required by the Civil Contingencies Act (HM Government, 2009: 61).

Effective emergency responses are dependent upon the timely identification of the challenges posed by an emerging event. In addition to their immediate life-saving duties, first responders are required to continually assess both the nature and potential development of an incident. Observations are collected and communicated through Situational Reports (SitReps) which are uploaded to Resilience Direct and processed at the coordinating level to generate a Common Recognized Information Picture (CRIP) (Cabinet Office, 2013: 68). This information, which is further enriched through integrated mapping technologies allows responders to access common information in real-time: promoting shared situational awareness across the diverse responder agencies converging on a response, boosting integration and accelerating the completion of complex tasks by enabling agencies to self-synchronize their activities (Cabinet Office, 2013: 9).

In the majority of cases, a response will be managed from the 'bronze' (operational) level alone. A response at this level will be led by the police and concerned exclusively with addressing the immediate needs of a response. In situations where the potential reach or devastation of an event require greater planning (HM Government, 2009: 64-65) additional levels of organization may be introduced to assist in the coordination of activities on the ground. 'Silver' (Tactical Co-ordinating Group (TCG)) or 'gold' (Strategic Co-ordinating Group (SCG)) levels of command may be activated to assist multi-agency activities in the planning, co-ordination, and distribution of resources in a localized event. Events escalating in severity and/or geographic scope may have this local command and control structure supplemented with additional tiers of management at the regional (devolved administrations outside England) or national level (Cabinet Office, 2013). Guided by the principle of subsidiarity, decisions are devolved to the lowest appropriate level with higher echelons of organization introduced only to facilitate operations on the ground by providing strategic direction and assisting with coordination (HM Government, 2009: 64-65). Subsidiarity, preserves continuity by recognizing that "emergency response and recovery should be grounded in the existing functions of organisations and familiar ways of working, albeit on a

larger scale, to a faster tempo and in more testing circumstances" (Cabinet Office, 2013: 15). Architectures of emergency response are thereby constructed in an emergent, bottom-up fashion and enabled to quickly swell and deflate in light of the specific demands posed by a unique emergency event.

In contrast to the unilinear escalation of an emergency event presumed in the War Book response strategies organized through the IEM framework aim to incite flexible and adaptive responses capable of rapid, non-linear and thus highly contingent evolutionary trajectories. Coordinating groups at the strategic and tactical levels also may use the CRIP to establish the logistical requirements of a particular event. To do so, the emergency is fragmented into its component challenges (Anderson and Adey, 2011: 7-8). These isolated problems may then be addressed by adopting, adapting, and actioning pre-drafted emergency plans. The assemblage of distinct combinations of emergency plans over the course of a continually evolving event will activate different networks of response. Bespoke governmental networks, comprising particular category 2 responders,[6] coordinating body subgroups, and advisory bodies may be introduced into a response network in order to address the specific challenges generated by an emergent emergency event. The product is a flexible and adaptive assemblage of response (Grove, 2014) capable of rapidly responding to the emergent challenges issued from an unfolding emergency. As in the doctrines of the RMA from which these logics derive, the adoption of network-centric organizational models aims to yield returns on the speed of operations. Optimizing the conditions of emergence of a flexible and adaptive assemblage of response (Grove, 2014) enhances the speed of deployment and reaction to emergent challenges issued by an emerging emergency. This, in turn, bolsters UK resilience by ensuring a sense of 'normality' is restored as soon as possible after the onset of an emergency event.

While security scholars have demonstrated the impact of 'resilience-thinking' in reconfiguring logics of preparedness away from the catastrophic threats of the Cold War to the complex emergencies of today, one could argue that the uptake of resilience discourses in the field of emergency response have had an even more profound effect. Here, the adoption of resilience discourses has coincided with a wholesale inversion from the top-down governance and linear escalation of UK Civil Defence, to the bottom-up, emergent and ultimately contingent unfolding of contemporary emergency responses organized through the framework of IEM. Responding to a chronopolitical (re)problematisation of security, defined in terms of

[7] This is an argument that resonate with a number of recent studies critiquing the ways in the threat of terror, and especially 'ticking-time bomb' scenarios, serve to legitimate emergency measures and increased executive powers in the context of the 'war on terror' (Glezos, 2011; Stahl, 2008).

differential speeds of emergence, IEM has been advanced as a framework for enhancing the speed and efficiency of emergent emergency response operations. In the following section, we turn to consider the (chrono)political implications of contemporary logics of emergency response for contemporary security governance.

Speed and Event Suppression

The central problematic organizing contemporary emergency response operations is an abiding concern with differential speeds of emergence. In the previous sections, we have outlined how this chronopolitical problematic has transformed the logics and practices of emergency response. In this section, we turn to analyse the form of security enacted within contemporary logics of response. Just as logic of responses were shown to extend, inflect, adapt and transfigure extant logics of emergency governance, so too should event suppression be understood to derive from the forms of security enacted by affiliated logics of emergency governance. Our analysis therefore focuses on relating and distinguishing event suppression from the forms of security enacted within affiliated logics of emergency governance. Explicating the form of security enacted within logics of response will enable to us to begin to explore the implications of event suppression for the politics of security.

Resilience strategies are circumscribed within a biopolitical imperative to 'make life live' (Foucault, 1998, 2003). By enhancing the regenerative capacities of systems underpinning and constitutive of community life, resilience strategies aim to optimize the conditions under which life might quickly and efficiently bounce-back from a systemic perturbation. However, resilience strategies operate in relation to a different problematization of 'the event' than traditional biopolitical imaginaries. Traditionally, 'standardizing' techniques of biopolitical governance were associated with a particular rendering of the event as risks (Dean, 2010: 206; Ewald, 1991). Risks are most commonly represented as punctuated occurrences of an event within time. These events may be categorized in accordance with their essential type and evaluated with regards to their probability. Biopolitical techniques, such as insurance, act on this actuarial data to spread the (primarily financial) costs borne by an event's actualization across a population (Ewald, 1991).

Resilience strategies respond to a new problematisation of emergency events beyond risk, focused on the capacity of an event to rapidly escalate through unpredictable processes of complex emergence. This new rendering of the event, as we alluded to previously, has a history. For Collier and Lakoff the advent of vital systems security in the 1930s represented

"a significant mutation in biopolitical modernity" (2015: 21) rooted in a shift in governmental attention to the high devestation/low probability 'reflexive risks' (Beck, 1992) operating at "the limits of a rationality of insurance' (Lakoff, 2007: 247). As a "mode of knowledge which challenges or replaces statistical calculability" (Aradau and Munster, 2011: 45), logics of preparedness aim to render a future event knowable, and thus governable, through 'enactment' (Collier, 2008) techniques such as Preparedness Exercises. Emergency response may likewise be understood as a post-risk logic of security, however the ways in which the event is 'made actionable' is very different. Rather than invoking a temporal modality of the 'future anterior' (Aradau, 2010: 4) to render an event knowable and thus governable, emergence responses begin by disaggregating the event its component challenges (Anderson and Adey, 2011: 7-8) which can be collectively addressed through the assemblage of distinct combinations of emergency plans.

The unique, unrepeatable nature of any emergency event's emergence within and across interdependent systems strains efforts to sufficiently typologize them according to their essential type as 'risks' (Foucault, 2003: 246). Instead of operating in respect of the *general* type of an event, as with insurance, emergency response operations aim to subdue the *generic* processes of emergence animating any event (Massumi, 2009). Operationalising a diagram of governance rooted in technologically-enabled models of bottom-up self-organization, IEM aims to deliver emergent emergency responses uniquely tailored to address the specific demands issued by a *singular* event. By accelerating the diverse activities performed within an emergency response to quickly and efficiently address the component challenges of an emerging event, IEM serves to supress an emergency event by suffocating the generic processes animating the emergence of an unfolding event. It is in this regard that we can appreciate how resilience strategies enact a related, albeit inverted, logic to that of preemption. Whereas pre-emptive power is exercised to dampen the conditions of emergence and terminate *potential* threats before they become dangerous (Cooper, 2006; de Goede, 2008, 2009; Massumi, 2007), resilience looks to optimize the conditions of emergence, or evolve-ability, of valued systems to rapidly adapt to, and evolve *through*, crises. In doing so, the response strategies of UK Civil Contingencies foreground a dimension of the event's temporality marginalized within the risk-based imaginaries underpinning traditional biopolitical strategies of security. Resilience strategies operate within, and upon, the duration of an emergent event. It is not how often events appear within time (with what probability) but the temporality of the event's emergence which provides resilience strategies with both their operational environment and strategic target.

Event suppression is clearly affiliated with the reparational form of security (Lobo-Guerrero, 2011) performed by risk-based technologies of security like insurance which aim to secure a particular way of life by promising financial compensation in response to a pre-specified event. Event suppression likewise ensures security not by preventing an event from happening, but by stripping the event of its disruptive potential. However, rather than operating through compensatory mechanisms, IEM aims to ensure security by accelerating response activities so as to minimize the temporal duration, spatial extension, and destructive potential of an unfolding event. Events happen (indeed it is widely acknowledged that they cannot be wholly prevented), but they are quickly responded to in order to ensure minimal impact on the processes comprising the life of the community. Of course, risk-based rationalities and technologies of security governance, continue to play a pivotal role in underwriting UK resilience. Risk-registers are ubiquitous as a means of directing preparedness activities and allocating budgets (Cabinet Office, 2015; Hagmann and Dunn Cavelty, 2012), while insurance is critical in facilitating the recovery of individuals, families and businesses to an emergency (Cabinet Office, 2008b: 143–164). Far from being eclipsed, risk-based forms of security, like logics of preparedness, are shifted, repurposed, and sometimes even subordinated within evolving assemblages of emergency governance.

With event suppression, security is realized, not by preventing events from happening but by quickly closing down the 'disruptive' time of the emergency event and restoring the linear historical time of standard political processes. Event suppression devenomizes an emergency, bleeding an event of its disruptive potential. Event suppression thereby serves to pre-empt the onset of what Edkins (2002, 2003) has called 'trauma time'. Trauma time is the disruptive time of a crisis. Its political significance lies in its power to interrupt, and problematizes, the linear chronological time underpinning sovereign power (Edkins, 2006: 102-111). Identifying that "[m]emory, and the form of temporality that it generally instantiates and supports, is central to the production and reproduction of the forms of political authority that constitute the modern world" (2006: 101), Edkins has investigated how the weaving of traumatic events back into linear narratives supportive of political power through activities including memorialization serves to continually re-constitute the authority of the state in the wake of potentially destabilizing crises (Edkins, 2002, 2003). For Edkins, sovereign power is preserved, constituted and contested in the wake of a traumatic event when "what we call the state moves quickly to close down any openings produced by putting in place as fast as possible a linear narrative of origins" (Edkins, 2006: 107).

Though they seek to achieve it in very different ways, both resilience strategies and memorialization practices act similarly to strip an event's potential to disturb daily life. This raises questions concerning the role which resilience plays in the maintenance, constitution, and perhaps even challenging, of political order. Like memorialization, resilience strategies act to mitigate an event's capacity to disrupt the 'normal' temporal order. But rather than retrospectively domesticating 'trauma time' by imposing upon it a meaning supportive of narratives underpinning (state) order, resilience strategies aim to quickly foreclose the duration, extension and intensity of an unfolding event. The speed of reaction is clearly integral to both these strategies, yet it is only in logics of event suppression that speed is strategically deployed to mitigate the duration and intensity of the time experienced as 'traumatic'. By accelerating the activities of tightly integrated agencies operating concurrently on varied aspects of a common response strategy, responses organized through the framework of IEM act to quickly close down the 'disruptive' time of the emergency event and accelerate the return to 'normality'. Security is realized not by eradicating threats, but by divesting an event of its problematizing potential, and ensuring the continuity of the 'linear, narrative time' (Edkins, 2006:108) of standard political and economic processes.

A fuller account of the (chono)political implications of resilience in the field of emergency governance can be discerned by attending to the distinct, but complimentary, forms of security enacted by logics of preparedness and response respectively. In respect of debates surrounding the politics of exception, techniques of preparedness may serve to mitigate or offset recent concerns surrounding the impact of the chronopolitical problematisation of security in eroding the functions of reflection and accountability underpinning decision-making in the field of emergency management. So where Virilio (1977, 2005b: 13) warned of the corrosive effects that concerns with acceleration have had on the processes of deliberation, negotiation and debate underpinning liberal democracy[7], the temporality underpinning techniques of preparedness may provide an opportunity for slower, more considered processes—such as the drafting of legislation or the inculcation of habits and routines—to structure decision-making with regards to emergencies (Scarry, 2011).

With regards to debates surrounding the governance of affect in the field of emergency management, these logics appear similarly off-set. Logics of preparedness, it could be said, operate by *creating* disruptive times and *amplifying* security affects. Simulations, risk-

[7] This is an argument that resonate with a number of recent studies critiquing the ways in the threat of terror, and especially 'ticking-time bomb' scenarios, serve to legitimate emergency measures and increased executive powers in the context of the 'war on terror' (Glezos, 2011; Stahl, 2008).

registers, and emergency plans, for example, all operate by envisioning a multiplicity of potential futures to incite and direct actions in the present. Affectively, the future is cast as a potential danger to incite activities which allay this insecurity and builds confidence in the ability to respond to future events. The most developed form of this is the preparedness exercise, which, through its design, creates an aesthetic: a heightened affective atmosphere in relation to which players can act out their responsibilities within simulated conditions. Logics of response, by contrast, might be said to operate to *eliminate* disruptive times and *quell* security affects. Event suppression operates to rapidly close down the chaotic time of the emergency in order to minimize its disruptive effects. Its effect is anaesthetic: extinguishing the rise and spread of affects such as fear and anxiety which could potentially disrupt and destabilize the relatively insipid temporality of 'everyday life'. In spite of their differences, the logics, when taken together, might be understood as complementary. Where techniques of preparedness are operationally dependent on the preservation of anxiety, logics of response operate to ensure these anxieties never bubble over into outright fear in the midst of an actual event.

Conclusion

> The real crisis would be a situation where crisis was not recognized…
>
> (Critchley, 1999: 12)

This article has sought to render explicit the form of security enacted within the emergency response strategies of UK Civil Contingencies. Through a study of the response framework of IEM, I have argued that the speed of emergence figures as a core problematic organizing the ways in which emergencies are understood and responded to within contemporary emergency response operations. The aim of IEM is to provide a flexible and adaptable structure within which the concurrent operations of heterogeneous agencies can be coordinated in order to quickly close-down crises and re-establish 'normality'. This, I contend, has important implications for the way in which security is understood and pursued. Specifically, the response strategies of UK Civil Contingencies are shown to enact a form of security which I term event suppression. Event suppression contributes to UK resilience by acting to diminish the emergency's temporal duration, geographic scope, and destructive potential so as to secure a speedy return to 'normality'. Event suppression strips the event of its problematizing potential,

ensuring that disruptive events have a minimal impact on 'daily life'. Security, rather than a space characterized by absence of threat, is defined with respect to the preservation, and rapid restoration, of the historical time of standard political and economic processes.

In explicating the chronopolitical problematization of security and form of event suppression from a singular case, this article intends to advance an initial formulation of transformations currently taking place in the field of emergency response associated with the concept of resilience. Given the limited empirical focus of this article, further analysis will be required to understand how these concepts are differentially enacted in alternative empirical sites. In doing so, we should be careful to attend to the multiplicity of meanings and practices embedded within the concept of resilience. What this study has demonstrated is that far from representing a singular 'thing', very different 'resiliences' (Anderson, 2015) can be identified by attending to the distinct logics and forms of security enacted under the concept of resilience.

Likewise, the chronopolitical implications of resilience are likely to shift, and be rearticulated, as we move to different empirical fields. Where concerns with speed and acceleration give rise to the resilience discourses operating in the field of emergency response, more research is required to examine the relation between time and security when resilience discourses are applied to crises marked by slower onsets, such as climate change (Nobert and Pelling, 2017), or longer durations, such as financial crises (Mckeown and Glenn, 2017). Similarly, there is a need to consider how resilience is being refigured in light of evolving understandings of time and temporality associated with the introduction of the Anthropocene (Grove and Chandler, 2017). In a more explicitly political vein, we might be compelled to inquire into the value of slowing-down as a means of achieving resilience or reframing it in a way that diverges from, or runs counter to, the neoliberal governmental agendas of which it has become deeply complicit (Chandler, 2012; Evans and Reid, 2013; Reid, 2012). Does the adoption of resilience-ideas by the transition towns (MacKinnon and Derickson, 2012) or slow movement (Carp, 2012) open new avenues for critically engaging with resilience beyond 'resistance' (Neocleous, 2013)? Following such a line of questioning may move us beyond existing critiques which posit an essential character of resilience (Anderson, 2015) and enable us to experiment with the critical potential harboured within resilience discourses to open new avenues of political engagement.

References

Adey P and Anderson B (2011a) Affect and security: exercising emergency in 'UK civil contingencies'. *Environment and Planning D: Society and Space* 29(6): 1092–1109.

Adey P and Anderson B (2011b) Event and anticipation: UK Civil Contingencies and the space – times of decision. *Environment and Planning A* 43(12): 2878–2899.

Adey P and Anderson B (2012) Anticipating emergencies: Technologies of preparedness and the matter of security. *Security Dialogue* 43(2): 99–117.

Agamben G (1998) *Homo sacer: Sovereign power and Bare Life*. Stanford, CA: Stanford University Press.

Agamben G (2005) *State of Exception*. Chicago: University of Chicago Press.

Anderson B (2010) Security and the future: Anticipating the event of terror. *Geoforum* 41(2): 227–235.

Anderson B (2012) Rapid Response. *Berfrois*. Available at: http://www.berfrois.com/2012/08/ben-anderson-emergency-quick/.

Anderson B (2015) What Kind of Thing is Resilience? *Politics* 35(1): 60–66.

Anderson B (2016) Governing emergencies: the politics of delay and the logic of response. *Transactions of the Institute of British Geographers* 41(1): 14–26.

Anderson B and Adey P (2011) Governing events and life: 'Emergency' in UK Civil Contingencies. *Political Geography* 31(1): 24–33.

Aradau C (2010) The Myth of Preparedness. *Radical Philosophy* 161(May/June): 1–7.

Aradau C (2014) The promise of security: resilience, surprise and epistemic politics. *Resilience: International Policies, Practices and Discourses* 2(2): 73–87.

Aradau C and Munster R Van (2011) *Politics of Catastrophe: Genealogies of the Unknown*. London & New York: Routledge.

Aradau C and van Munster R (2012) The Time/Space of Preparedness: Anticipating the 'Next Terrorist Attack'. *Space and Culture* 15(2): 98–109.

Beck U (1992) *Risk Society: Towards a New Modernity*. London: SAGE Publications.

Bougen PD (2004) Catastrophe Risk. *Economy and Society* 32(2): 253–274.

Braun B (2007) Biopolitics and the Molecularization of Life. *Cultural Geographies* 14: 6–28.

Cabinet Office (2003) *Dealing with Disaster, 3rd edition*. London: HM Government.

Cabinet Office (2005a) *Central Government Arrangements for Responding to an Emergency*. London: HM Government.

Cabinet Office (2005b) *Emergency Preparedness*. London: HM Government.

Cabinet Office (2008a) *The National Security Strategy of the United Kingdom: Security in an Interdependent World*. London: HM Government.

Cabinet Office (2008b) *The Pitt Review - Learning Lessons from the 2007 Floods*. London: HM Government.

Cabinet Office (2010a) *A Strong Britain in an Age of Uncertainty: The National Security Strategy*. London: HM Government.

Cabinet Office (2010c) *Responding to Emergencies: The UK Central Government Response, Concept of Operations*. London: HM Government.

Cabinet Office (2013) *Emergency Response and Recovery: Non statutory guidance accompanying the Civil Contingencies Act 2004, Version 5*. London.

Cabinet Office (2015) *National Risk Register of Civil Emergencies*. London.

Carp J (2012) The Study of Slow. In: Goldstein B (ed.) *Collaborative Resilience: Moving Through Crisis to Opportunity*. Cambridge & London: The MIT Press, pp. 99–126.

Cebrowski AK and Gartska JJ (1998) Network-Centric Warfare: Its Origin and Future. *US Naval Institute Proceedings* 123(1/1): 1–11.

Chandler D (2012) Resilience and human security: The post-interventionist paradigm. *Security Dialogue* 43(3): 213–229.

Chandler D (2014) *Resilience: The Governance of Complexity*. London: Routledge.

Coaffee J, Wood DM and Rogers P (2009) *The Everyday Resilience of the City: how cities respond to terrorism and disaster*. Basingstoke: Palgrave Macmillan.

Collier S (2008) Enacting catastrophe: preparedness, insurance, budgetary rationalization. *Economy and Society* 37(2): 224–250.

Collier S and Lakoff A (2015) Vital Systems Security: Reflexive Biopolitics and the Government of Emergency. *Theory, Culture & Society* 32(2): 19–51.

Comfort LK (1993) Integrating Information Technology Into International Crisis Management. *Journal of Contingencies and Crisis Management* 1(1): 15–26.

Comfort LK, Sungu Y, Johnson D, et al. (2001) Complex Systems in Crisis: Anticipation and Resilience in Dynamic Environments. *Journal of Contingencies and Crisis Management* 9(3): 144–158.

Cooper M (2006) Pre-empting Emergence: The Biological Turn in the War on Terror. *Theory, Culture & Society* 23(4): 113–135.

Cooper M (2010) Turbulent Worlds: Financial Markets and Environmental Crisis. *Theory, Culture & Society* 27(2–3): 167–190.

Critchley S (1999) Introduction: What Is Continental Philosophy? In: Critchley S and William R. Schroeder (eds) *A Companion to Continental Philosophy*. Oxford.

Daase C and Kessler O (2007) Knowns and Unknowns in the `War on Terror': Uncertainty

and the Political Construction of Danger. *Security Dialogue* 38(4): 411–434.

de Goede M (2008) The Politics of Preemption and the War on Terror in Europe. *European Journal of International Relations* 14(1): 161–185.

de Goede M (2009) Precaution, preemption: arts and technologies of the actionable future. *Environment and Planning D: Society and Space* 27(5): 859–878.

Dean M (2010) *Governmentality: Power and Rule in Modern Society*. London: Sage.

Deleuze G (1990) *The Logic of Sense*. London: The Athlone Press.

Der Derian J (2001) *Virtuous war: mapping the military-industrial-media-entertainment network*. Oxford: Westview Press.

Dillon M (2007) Governing Terror: The State of Emergency of Biopolitical Emergence. *International Political Sociology* 1(1): 7–28.

Dillon M and Lobo-Guerrero L (2009) The Biopolitical Imaginary of Species Being and The Freedom to Underwrite in the Molecular Age. *Theory, Culture & Society* 26(1): 1–23.

Dillon M and Reid J (2009) *The Liberal Way of War: Killing to Make Life Live*. Milton Park: Routledge.

Doty RL (2007) States of Exception on the Mexico–U.S. Border: Security, '"Decisions,"' and Civilian Border Patrols. *International Political Sociology* 1(2): 113–137.

Dubos R (1959) *Mirage of Health: Utopias, Progress, and Biological Change*. London: Rutgers University Press.

Dunn Cavelty M, Kaufmann M and Soby Kristensen K (2015) Resilience and (in)security: Practices, subjects, temporalities. *Security Dialogue* 46(1): 3–14.

Edkins J (2002) Forget Trauma? Responses to September 11. *International Relations* 16(2): 243–256.

Edkins J (2003) *Trauma and the Memory of Politics*. Cambridge: Cambridge University Press.

Edkins J (2006) Remembering Relationality: Trauma Time and Politics. In: Bell D (ed.) *Memory, Trauma and World Politics: Reflections on the Relationship Between Past and Present*. Houndmills, Basingstoke: Palgrave Macmillan, pp. 99–115.

Emergency Planning College (2008) *Situational Awareness and Information*. SERCO. Available at: http://www.epcollege.com/EPC/media/MediaLibrary/Knowledge Hub Documents/J Thinkpieces/SECM_SAInfoBehaviorsNote.pdf?ext=.pdf.

Evans B and Reid J (2013) Dangerously exposed: the life and death of the resilient subject. *Resilience: International Policies, Practices and Discourses* 1(2): 83–98.

Ewald F (1991) Insurance and risk. In: Burchell G, Gordon C, and Miller P (eds) *The*

Foucault Effect: Studies in Governmentality. London: Harvester Wheatsheaf, pp. 197–210.

Fassin D (2013) *Enforcing Order: An Ethnography of Urban Policing*. Cambridge: Polity.

Foucault M (1998) *The History of Sexuality, Volume One: The Will to Knowledge*. London: Penguin Books.

Foucault M (2003) *Society Must Be Defended : lectures at the Collége de France, 1975-76*. London: Penguin.

Glezos S (2011) The ticking bomb: Speed, liberalism and ressentiment against the future. *Contemporary Political Theory* 10: 147–165.

Grove K (2014) Agency, affect, and the immunological politics of disaster resilience. *Environment and Planning D: Society and Space* 32: 240–254.

Grove K and Chandler D (2017) Introduction: resilience and the Anthropocene: the stakes of 'renaturalising' politics. *Resilience: International Policies, Practices and Discourses* 5(2). Routledge: 79–91.

Grove KJ (2013) From Emergency Management to Managing Emergence: A Genealogy of Disaster Management in Jamaica. *Annals of the Association of American Geographers* 103(3): 570–588.

Hagmann J and Dunn Cavelty M (2012) National risk registers: Security scientism and the propagation of permanent insecurity. *Security Dialogue* 43(1): 79–96.

Heath-Kelly C (2015) Securing through the failure to secure? The ambiguity of resilience at the bombsite. *Security Dialogue* 46(1): 69–85.

Hennessy P (2010) *The Secret State: Preparing for the Worst 1945-2010*. London: Penguin Books.

Holling CS (1996) Engineering resilience versus ecological resilience. In: Schulze P (ed.) *Engineering within ecological constraints*. Washington, D.C.: National Academy Press, pp. 31–44.

Howell A (2015) The ethics of military human enhancement and the politics of data. *Security Dialogue* 46(1): 15–31.

Kauffman S (1995) *At Home in the Universe: The Search for the Laws of Complexity*. London: Viking.

Kaufmann M (2013) Emergent self-organisation in emergencies: resilience rationales in interconnected societies. *Resilience: International Policies, Practices and Discourses* 1(1): 37–41.

Kaufmann M (2015) Exercising emergencies: Resilience, affect and acting out security.

Security Dialogue: 8–9.

Kessler O and Daase C (2008) From Insecurity to Uncertainty: Risk and the Paradox of Security Politics. *Alternatives* 33: 211–232.

King NB (2002) Security, Disease, Commerce: Ideologies of Postcolonial Global Health. *Social Studies of Science* 32(5–6): 763–789.

Lakoff A (2007) Preparing for the Next Emergency. *Public Culture* 19(2): 247–271.

Lobo-Guerrero L (2011) *Insuring Security: Biopolitics, Security and Risk*. London & New York: Routledge.

MacKinnon D and Derickson KD (2012) From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography* 37(2): 253–270.

Martin D (2015) From spaces of exception to 'campscapes': Palestinian refugee camps and informal settlements in Beirut. *Political Geography* 44: 9–18.

Massumi B (2007) Potential Politics and the Primacy of Preemption. *Theory & Event* 10(2).

Massumi B (2009) National Enterprise Emergency: Steps Towards an Ecology of Powers. *Theory, Culture & Society* 26(6): 153–185.

Mckeown A and Glenn J (2017) The rise of resilience after the financial crises: a case of neoliberalism rebooted? *Review of International Studies* 44(2): 193–214.

Ministry of Defence (2002) *Strategic Defence Review: A New Chapter*. London: HMSO.

Neal AW (2006) Foucault in Guantanamo: Towards an Archaeology of the Exception. *Security Dialogue* 37(1): 31–46.

Neocleous M (2008) *Critique of Security*. Edinburgh: Edinburgh University Press.

Neocleous M (2013) Resisting Resilience. *Radical Philosophy* 178(March/April): 2–7.

Nobert S and Pelling M (2017) What can adaptation to climate-related hazards tell us about the politics of time making? Exploring durations and temporal disjunctures through the 2013 London heat wave. *Geoforum* 85: 122–130.

Pimm SL (1991) *The Balance of Nature? Ecological Issues in the Conservation of Species and Communities*. Chicago, IL: University of Chicago Press.

Protevi J (2006) Deleuze, Guattari and Emergence. *Paragraph* 29(2): 19–39.

Reid J (2012) The Disastrous and Politically Debased Subject of Resilience. *Development Dialogue* 58: 67–80.

Rockett JP (1994) Constructive critique of United Kingdom emergency planning. *United Kingdom Emergency Planning* 3(1): 47–60.

Rose A (2007) Economic Resilience to natural and man-made disasters: multi-disciplinary origins and contextual dimensions. *Environmental Hazards* 7(4): 383–398.

Scarry E (2011) *Thinking in an Emergency*. New York & London: W. W. Norton & Co.

Schmitt C (2005) *Political Theology: Four Chapters on the Concept of Sovereignty*. London: University of Chicago Press.

Sherry M (1977) *Preparing for the Next War: American Plans for Postwar Defense.* New Haven: Yale University Press.

Smith J (2003) Civil contingencies planning in government. *Parliamentary Affairs* 56: 410–422.

Stahl R (2008) A Clockwork War: Rhetorics of Time in a Time of Terror. *Quarterly Journal of Speech* 94(1).

Virilio P (1977) *Speed and Politics*. Los Angeles: Semiotext(e).

Virilio P (2005a) *Negative Horizon: An Essay in Dromoscopy*. London & New York: Continuum.

Virilio P (2005b) *The Information Bomb*. London: Verso.

Walker C and Broderick J (2006) *The Civil Contingencies Act 2004: Risk Resilience and the Law in the United Kingdom*. Oxford: Oxford University Press.

Walker J and Cooper M (2011) Genealogies of Resilience: From Systems Ecology to the Political Economy of Crisis Adaptation. *Security Dialogue* 14(2): 143–160.

Yang L, Yang SH and Plotnick L (2013) How the internet of things technology enhances emergency response operations. *Technological Forecasting and Social Change* 80(9): 1854–1867.

Zebrowski C (2016) *The Value of Resilience: Securing Life in the 21st Century*. London: Routledge.