Introduction[1]

Resilience thinking in politics has risen to prominence in recent years, roughly corresponding in timeframe to the crisis of neoliberalism in the aftermath of the financial crisis.[2] In this paper, we argue that certain resilience discourses have been popularised by neoliberal elites because they represent a vision of the world congenial to their interests. As others have pointed out, such dominant discourses 'serve to enshrine certain interpretations of social life as authoritative and to delegitimise or obscure others, generally to the advantage of other groups in society and to disadvantage subordinate ones' (Fraser and Gordon, 1997: 123 quoted in Garrett, 2016). We therefore need to critically examine these dominant discourses and provide alternative interpretations lest we fall into 'doxic slumber' (Garrett, 2016: 1911; Bourdieu, 2000: 173).

This paper precedes as follows. First, we argue that any theory of resilience must be able to explain 'the formation, persistence and causes of vulnerability' (Adger, 2006: 277). Whilst recognising the 'pluralistic character' of resilience and the different interpretations of it across a spectrum of academic subjects (Joseph, 2018; Humbert & Joseph, 2019: 215), we examine how two strands of resilience discourse in the field of politics – a mainstream version adopted in scholarly and policymaking practice and a post-liberal rendition of the concept outlined by David Chandler - first, address the issue of vulnerability, and, second, formulate responses to capacitate people to deal with it. Our argument in this section is that both strands

[1] The authors would like to thank the reviewers whose impeccable critiques, extremely helpful comments, and suggested further reading helped forge this final version

[2] Although, obviously, in other academic subjects resilience discourse emerged far earlier. See Jonathan Joseph's excellent historiography of its emergence in other fields, such as, psychology and ecology (Joseph, 2018: 12-16).

of resilience discourse mystify the causes of vulnerability, and that they do so by systematically downplaying the structural determinants of change in favour of an agentic, response-driven approach to crisis.

In section two, we utilise a critical realist philosophical framework and a Marxist scientific ontology to understand how social structures produce differential vulnerabilities. It is only through a theoretically grounded understanding of how vulnerabilities persist that three crucial elements of adaptation can be explained: who adapts, and why? What is being adapted to? And how does adaptation occur in practice (Pelling, 2011: 23-9)? We aim to answer these questions through a Marxist theoretical lens, underpinned by a critical realist philosophical ontology. In so doing, attention is turned towards the 'resources available to cope with exposure, the distribution of these resources (both social and natural) across the system, and the institutions that mediate resource use and coping strategies' (Adger, 2006: 277). As Dagdeviren et al. point out, 'resilience analysis must take account of rules and resources together with power relations that bind and are bound by the two' (Dagdeviren et al., 2020: 542). Access to resources, and to the institutions that mediate their use, is deeply political, and so too is the study of vulnerability. Discourses of vulnerability, draw attention to 'groups that are *already marginalised*' and who thus '*bear a disproportionate burden* of … impacts' (Adger, 2006: 273, emphasis added). By eschewing an aetiology of vulnerabilities, resilience thinking fails to provide answers to such questions, in stark contrast to the critical realist Marxist approach proposed in this paper.

This analysis paves the way for the final section where we conclude by joining a growing chorus of scholars for whom resilience represents a nihilistic moment in the development of neoliberalism (Evans and Reid, 2013; Joseph, 2013; Zebrowski, 2009, 2016; Neocleous, 2013). Rather than resilience thinking representing a post-liberal moment,

we agree with these writers that it remains enframed by neo-liberal thinking (Zebrowski 2016: 9). The rise of resilience thinking thus resonates with the general promotion of responsibilisation, self-organisation and adaptation, particularly with regard to self-reliance under neo-liberalism (Joseph, 2013: 42). As such, resilience thinking tends to support neo-liberal interpretations of crises and the solutions put forward in response to such cataclysmic events.

Recently, David Chandler has argued that the greatness weaknesses of the resilience thinking approach is that its focus on adaptation rather than agency means that it will always be limited to sustaining what already exists rather than transformation that can improve our world – we therefore need to move to a post-resilience landscape (Chandler, 2019). As we argue below, this was always going to be the case given that its 'active conception of the subject is founded on a passive conception of its relation to the wider social condition' (Joseph, 2018:18-19). Resilience thinking essentially encourages us to 'turn from a concern with controlling the outside world to a concern with our own subjectivity, our adaptability, our reflexive understanding, our knowledge acquisition, our decision-making, our life choices and our risk assessments' (Joseph, 2018: 19). To counter this shift, we argue for a turn towards a critical realist understanding of the social structures in which we are embedded so that we can better understand the causes and potential solutions to our vulnerabilities.

Vulnerabilities, resilience discourse and causality

As Brad Evans and Julian Reid point out, the 'underlying ontology of resilience … is actually vulnerability' (2013: 87). At a high level of abstraction, vulnerability can be defined as a state of susceptibility to harm(s) emergent from stresses associated with social and

environmental changes, and, importantly for resilience discourse, from the incapacity of systems, communities or individuals to adapt to those changes on positive terms (Adger, 2006: 268; Béné et al., 2012: 15). In short, the link between vulnerability and resilience is that both relate to 'disturbances' to current states of affairs (whether livelihoods, whole economies or ecosystems), and both concepts integrate some idea(s) about how to respond to those interruptions in order to (re-) capacitate people and nature.

The concept of vulnerability, suggests Neil Adger (Adger, 2006: 268), can be 'a powerful analytical tool for describing states of susceptibility to harm, powerlessness, and marginality [in] both physical and social systems, and for guiding [the] normative analysis of actions [designed] to enhance well-being through reduction of risk'. However, mainstream resilience thinking downgrades issues related to social stratification and unevenly distributed harms in favour of the development of *post hoc* strategies of adaptation to crises framed as both inevitable and unavoidable (Béné et al., 2012: 20). Rather than addressing the fundamental causes of vulnerabilities, their formation and persistence, it frames them as the product of 'non-linear or random[] … events' (Béné et al., 2012: 20), or what the US financial analyst Nassim Taleb terms 'black swan' events - events which could not have been foreseen prior to their actualisation (Taleb, 2011). The global financial crisis of 2007/08 (GFC), for example, was, in this understanding, a black swan event. Such events are said to present an epistemological problem 'of knowing the initial conditions' generative of vulnerability because it would require more resources than could feasibly be deployed to arrive at a complete understanding of the system. A good analogy is that of the Emperor who devotes all of a country's energies on creating a perfect cartographic map of the empire, leading to economic ruination because there were no resources left for anything else (Chandler, 2014: 25). Because of this epistemological difficulty, resilience thinking tends to shift attention away from 'attempt[s] to control change' and toward the more ameliorative aim of capacitating 'systems to cope with, adapt to, and

shape change[s]' which have already occurred (Béné et al., 2012: 20). This normative orientation has two key consequences: it brackets off the underlying sources of change and renders the search for causes less important than dealing with realised consequences.

Consequently, mainstream resilience thinking interprets and represents an image of the world in which there appear to be 'no agents and no targets for effective action' to reduce vulnerabilities (Fainstein, 2015: 169). Scholarly and policy attention is instead directed to the creation and provision of 'predetermined coping responses' that can be enacted in the aftermath of crises (Mitchell, 2013: 4). This is often necessary, for instance, when a 'hazard event', such as the global financial crisis (GFC) or the Covid pandemic, 'is so large it overwhelms local capacity' or when an 'event is less catastrophic, but existing coping responses are insufficient to handle the impact' (Cutter et al., 2008: 603). In the aftermath of a natural disaster, this will require the foresight to create evacuation plans, provide shelters, disseminate information, and construct emergency response plans (Cutter et al., 2008: 603). These are all legitimate and necessary measures. However, by focusing on *post hoc* responses attention is redirected away from the study of causality, which becomes especially problematic when applying resilience to social rather than natural systems because it undermines the analysis of 'the wider social and spatial relations that generate' the 'turbulence and inequality' that resilience is parasitic upon (see also, Davidson, 2010; Hornborg, 2009; Leach, 2008; MacKinnon & Derickson, 2012: 2).

A second strand of resilience discourse is labelled 'post-liberal' by David Chandler. This differs from liberal governance which is said to operate through 'intervention and regulation from above society … on behalf of, or over, the social whole'. In contrast, post-liberalism governance is said to involve '" empowering" the citizen or "capability-building", enabling political subjects to take societal responsibility upon themselves and their communities'. As such, the 'task of government today lies precisely in the management and regulation of, or inculcation of, the agency of the governed. The solution to problems of society,

whether in the form of welfare, crime or conflict, becomes then not that of liberal forms of state intervention but of the development of societal agency (Chandler and Richmond, 2015: 15-16).

As Chandler points out, post-liberals posit that ontological complexity imposes severe limits upon our knowledge. For example, according to post-liberals it is not possible to investigate the aetiology of vulnerabilities by analysing social structures such as those related to class, race and gender, because those structures 'are not fixed, but shift and change, often as a result of self-organisation. This can result in novel features, usually referred to in terms of emergent properties' (quoted in Chandler, 2014: 21; Cilliers, 1998: viii-ix). Causality itself is thus said to be a 'secondary product of contingent processes of interaction' (Chandler, 2014: 64), which implies that causality 'cannot be fully understood' by analysing discrete components of social systems (quoted in Chandler, 2014: 21; Cilliers, 1998: viii-ix). Any attempt to delineate structures generative of vulnerability is said to 'ignore' the problem of complexity that post-liberals refer to (Chandler, 2014: 38), representing an inadmissible form of theoretical closure.

Consequently, the precise aetiology of vulnerabilities is considered to be 'objectively unknowab[le]' to any agent (Chandler, 2014: 26), 'no matter how clever they are or what position of power they might occupy' (Chandler, 2014: 23). Unknowability, in other words, is ontological rather than epistemological. Not only do elites' efforts to reduce extant vulnerabilities fail because they ignore the purported reality of complexity, but so too do their naïve attempts to control and direct social outcomes more generally (Chandler, 2014: 11). Top-down attempts to reduce vulnerabilities through social planning are said to 'merely produce new and unforeseen consequences: new vulnerabilities' (Chandler, 2014: 11). Vulnerabilities in this account are thus framed as the unintended consequences of top-down decision-making structures. Post-liberal resilience theory posits that vulnerabilities *can* be reduced, but only if policymakers, first, recognise that causality exists at the level of everyday social practices

which are multitudinous and contingent, and, second, harness those practices in governmental policymaking (Chandler, 2014: 169). The 'resilient subject', on this account, is one who abandons the promise of security *per se* and instead learns from, and adapts to, a complex world through 'emergent adaptivity'.

Defining causality as emergent from interactive adaptivity has the consequence of 'clos[ing] off the future as something that can be grasped as either a calculative probability, a random chance or the hidden outcome of objective causal relations', because if there are no structures of social relations with autonomous causal capacities then, logically, '[t]here is agency everywhere but no fixed structures or necessary regularities' (Chandler, 2014: 189). Moreover, in addition to a view of structures as 'fictional' (Chandler, 2014: 57), agency in this approach is seen in terms of 'the actions, practices, or interventions that produce outcomes or bring about changes' (Howarth, 2013: 155), a position which makes the study of determinate agents acting with particular intentions 'much less important' than the study of unintended consequences. All of this, as Chandler observes, renders the theory itself as 'a parallel fetish' to Marx's commodity fetishism, in that it 'naturalises the market' by framing the world, its processes and events as distributed, unknowable, and therefore unpredictable (Chandler, 2014: 205).

In sum, both variants of resilience discourse outlined above promote the idea that vulnerabilities cannot be captured theoretically, either because of insurmountable epistemological challenges or because causality is emergent from interactions whose outcomes cannot be known in advance. Indeed, from within the purview of post-liberal resilience theorising it is only 'the event [which] reveals relations and interconnections in a concrete, determinate fashion, linking the immediate with the distant and conceptual thought with the immediacy of feeling' (Chandler, 2014: 155). Both mainstream and post-liberal resilience, despite their differences, share two key assumptions. The first is that vulnerabilities have no

theoretically determinate origin, and the second, logically implied by the first, is that the vulnerabilities upon which resilience discourse is parasitic cannot be predicted. We beg to disagree, and in the next section utilise critical realism and Marxism to make the case that resilience discourses of both kinds draw principally upon vulnerability-inducing events which, while contingent in their particulars, are nonetheless framed by relations of necessity, and, as such, are predictable in broad outline. To this we now turn.

Critical realism, Marxism, and the causes of differential vulnerabilities

Critical realists, like resilience advocates, begin the study of vulnerability at the level of 'the concrete complex reality of human and societal experience' (Chandler, 2014: 21, 154). Unlike resilience thinking, however, emergent causality is seen as the joint product of structures and agents, both of which possess autonomous causal powers and continually 'intertwine and redefine one another' over time (Archer, 1995: 76). Consequently, scholarly focus is directed first and foremost to a theoretically informed understanding of how vulnerabilities are produced, by whom, and with what consequences. This requires retroducing the conditions in which vulnerabilities emerge (Danermark, 2002: 96; Elder-Vass, 2010: 48), and in accordance with an understanding that agents are 'reflective, purposive, promotive and innovative' human subjects (Archer, 1995: 249) who work in and through social structures to bring about changes they deem consistent with their values, mediated by their beliefs about the structure of the world (Archer, 2000: 54). Moreover, for realists the world is seen as comprised of 'an irreducible plurality of structures' (quoting Collier, 1989: 194, emphasis added; Hartwig, 2007: 442), with the implication that no one theoretical framework could hope to capture a universal source of vulnerabilities (on the critical realist approach to theoretical and methodological pluralism, see Olsen, 2003).

What these structures consist of is beyond the remit of critical realism *per se*, which merely aims to demonstrate that structures 'are social entities with emergent causal powers', and that these powers 'are distinct from those of human individuals' (Elder-Vass, 2010: 6). To this end, three key claims about the causative powers of structures can be made. First, structures are irreducible to ideas – for instance, gender structures continue to condition interaction whether people realise it or not. Second, they condition which ideas have 'material force', in that they are able to causally effect and/or affect material outcomes (Porpora, 1998: 354; Sum & Jessop, 2013: 4). The power of resilience discourse to represent vulnerability as an ontological fact, for example, diverts attention away from more sociological explanations, but only because it is an ideational framework which has the support of key agents. And, third, structures often continue to exert an influence even despite concerted agential attempts to change them, as is the case with respect to demographic decline in Russia, for instance (Eberstadt, 2011).

Hence, structures are relatively enduring but not fixed and unchangeable (Archer, 1995: 175-6) and, therefore, the first task of scholarly work is to delineate particular causal structures and to demonstrate why those structures are generative of vulnerabilities. Substantive theoretical work is required to investigate and unmask these structures because our knowledge of vulnerabilities is theory-laden (on theory-ladenness, see Sayer, 2003), with the implication that 'any adequate treatment' of them 'must be conducted from a certain ethical perspective' (Chan, 2014: 555, fn. 1). A feminist, for example, will favour a theory which shines a light on 'the reality of difference and inequality within the household' (Smyth & Sweetman, 2015: 407), whereas Marxists will investigate them through a lens which exposes a contradiction between two classes in the context of production and exchange relations (Fainstein, 2015). There is no theoretical closure involved, however, because when guided by critical realism both sets of scholars recognise that their insights isolate and explain *some* mechanisms, but not others, as a

consequence of drawing on a particular set of 'antecedently existing cognitive resources' while excluding others (Bhaskar, 2011: 19).

This process of simplification and abstraction, far from being ignorant of post-liberal realities, is vital in order to be able to 'extract explanatory order out of what otherwise appears to be an intractable flux' of undifferentiated social practices (Archer, 1995: 167-8). It is only by combining insights that the many-sided object of vulnerability could be explained in its full concreticity (Sayer, 1992: 7), but this does not invalidate perspectival studies. The key test of a theory's 'practical adequacy' is what it tells us about the discourse compared to alternative conceptualisations (Sayer, 1992: 69). This approach facilitates an escape from the *cul-de-sac* of resilience-as-complexity and its depoliticising obsession with the ubiquity of unintended consequences. Addressing vulnerabilities then becomes a question of the extent to which causative practices can be transformed in more socially rather than privately beneficial directions. But this requires, first and foremost, a recognition that the vulnerabilities rendered visible by the Marxist lens are an emergent tendency of private property relations, and that they occur with enough frequency that they can be described as what Tony Lawson terms 'demi-regularities' (Lawson, 1998: 149).

Observed regularities provide the basis for tentatively forming expectations about the existence of *future* vulnerabilities (Patomöki, 2003: 208), which then directs scholarly and policy attention to taking actions to prevent their emergence. This is where the emergent properties of human beings – the 'capacity to learn, reflect, weigh consequences and to self-monitor' (Archer, 1995: 188) – come into play, since it is this process of learning which, as post-liberal theory recognises, generates the potential for beneficial change. But the capitalist structure is strategically selective, which is to say it 'selectively reinforce[s] … actions, tactics, or strategies' productive of harms, and discourages those geared toward their elimination (Jessop, 2005: 49). It does so because it contains an inherent bias which privileges the ideas of

those ‘human agents bent upon establishing the hegemony of a particular social form of organisation of production’ (Cammack, 2003: 48), namely, the capitalist class.

Interpreted through this lens, resilience discourse constitutes what Michel Foucault termed a ‘truth regime’ about vulnerabilities, as well as a prescriptive programme of calculated responses to deal with them (Foucault, 1997: 114). Yet whereas most Foucauldian theorists bracket off ‘the political a priori of the distribution of power and the location of rule’ when studying forms of governance (Dean, 2010: 40), from a CR and Marxist perspective knowledge of this distribution is crucial because it focuses attention on the ‘wider, deeper picture’ which informs and even motivates the emergence of particular governmental forms (Joseph, 2012: 30; Marsden, 1999: 135-161; Sum & Jessop, 2013: 205). It can ground our claim that resilience is in fact a truth regime emergent not from complexity *per se* but from what Philip Mirowski and Dieter Plehwe term a ‘neoliberal thought collective’ (NTC), a ‘network of organized neoliberal intellectuals’ (Mirowski & Plehwe, 2009: 4) whose interests are best served by promoting a form of governance which ‘download[s] … the responsibility for risk aversion and management onto individuals and communities’ (Dean, 2010: 258). In the socio-economic sphere, the post-war management of vulnerability went through two key phases prior to the emergence of resilience: the Keynesian ‘golden age’ (1944-1970s) and neoliberalism (1980 onwards).

With the advent of neoliberalism a new governing mentality emerged and crystallized over time, and political discourse was transformed into ‘the language of individual freedom, personal choice and self-fulfilment’ (Dean, 1995; Joseph, 2013; Miller & O'Leary, 1987; Miller & Rose, 1990: 24; Rose, 1993). Yet this discursive shift was connected to a project to rebalance class bargaining power in ways favourable to capital and state, which included efforts to individualise risk and therefore vulnerability. Labour markets were liberalised to reinstate market discipline on workers, leading to the enactment of policies which both reduced worker

protections and made it more difficult for people to survive outside market mechanisms (Greer, 2015: 4). Public utilities, social welfare provisions, and public institutions were all privatised to bring them under the orbit of market rationality (Harvey, 2005: 160), with the result that uncertainty and vulnerability became increasingly governed in accordance with 'the abstract universal flows of money in the world market' (Albo, 2004: 94). Indeed, many of the vulnerabilities manifest in the social sphere through the global financial crisis are traceable to earlier attempts to resolve the contradictions of Keynesianism through credit, because this created complex linkages amongst financial institutions, precipitating the subprime crisis in US housing markets.

The selectivities of resilience thinking

Neoliberalism is now in the midst of a global 'organic crisis' which is at once economic, social, cultural, and ecological (Gill, 2012), and resilience is particularly well-suited to this moment because it works as a governmental stop-gap in the absence of a consistent strategy to resolve social and environmental vulnerability and its institutionalised counterpart, political uncertainty (Davies, 2014; Grabel, 2011: 806). In the immediate aftermath of the GFC there appeared to be the possibility of returning to a more Keynesian approach to the management of vulnerability, but this was quickly usurped by the NTC, who abandoned Keynesian insights in favour of reconstituting the neoliberal orthodoxy (Fischer, 2012: 43; Mirowski, 2013). The resilience discourse plays a key role in this reconstitution because it 'privilege[s] particular forms of knowledge, problem perceptions, and narratives' of vulnerability and change over others (Brand, 2013: 207). At the same time, it predetermines coping responses by drawing on what Sian Sullivan terms a 'shifting grid of self-reinforcing conceptual reference points'

(Sullivan, 2006), focused, in the case of resilience, on key neoliberal tropes: responsibilisation, adaptation, self-organisation, and so on.

These selectivities constitute a crisis-recovery imaginary which selects, repeats and promotes particular actions (e.g. austerity, stimulus packages, debt relief for banks, etc.) over others (Sum & Jessop, 2013: 440), such as, for instance, calls for so-called People's Quantitative Easing (PQE) as a crisis-recovery option (Giles, 2015). As the latter contradicts the interests of the NTC it remains subjugated knowledge - it has no place in resilience discourse's narrative of vulnerability and post-crisis recovery. Resilience discourse as a whole thus forms what José J. Lopez and John Scott term an 'embodied structure' (Lopez & Scott, 2000: 4), that is, an ideational structure with autonomous causal powers emergent from the ideas, habits and skills inscribed in the minds and bodies of privileged neoliberal agents.

These powers are actualised when institutional and relational structures are (re-) produced and/or transformed in ways congenial to the projects of capital and state, and challenged when proto-resistant subjects become agents of (potential) change by accentuating systemic contradictions and by alerting people to the existence of ideational diversity regarding the origins of their diminished material conditions (Archer, 1995: 240). Resilience helps to conceal these contradictions by blocking alternative interpretations and representations of the origins of vulnerabilities (Archer, 1995: 307), principally by becoming 'a kind of taken-for-granted point of reference' for dealing with crisis (Dean, 2010: 37). However, this reference point selectively privileges the interests of capital and state over vulnerable populations, and therein lies its causal power to assist in the maintenance of system reproduction.

Resilience discourse enables and facilitates the emergence of another ideational selectivity, namely, resilience as a social technology geared to 'constituting objects, creating subject positions …[,] recruiting subjects, and, in particular, … creating relations of

power/knowledge' that can be governmentalised (Sum & Jessop, 2013, 216). This is not to say that resilience possesses a reductive logic, only, instead, that it 'evinces an orientation toward a particular matrix of ends and purposes' (Dean, 2010: 32), and that these ends and purposes are consistent with the maintenance of neoliberalised social formations. Its causative power to influence social and environmental outcomes cannot, however, 'be simply read off particular programmes, theories and policies of reform' (Dean, 2010: 32), such as government pronouncements on resilience (e.g. Osborne, 2014), the OECD's formal resilience agenda (OECD, 2014, 2016; OECD., 2012), or humanitarian 'resilience programming' methodologies (Mitchell, 2013). These are all important contributors to the discourse, but they do not exhaust it and are not the key mechanisms through which its powers to govern uncertainty and vulnerability are realised.

Resilience thinking is best understood as 'a key strategy in the creation of contemporary regimes of power which hallmark vast inequalities in all human classifications' (Reid and Evans, 2013:92). As a 'mode of thought' (Lemke, 2002: 2), resilience thinking constitutes a body of 'knowledge, belief and opinion' about how best to recover from crises (Dean, 2010, 24-5) which categorises people into three 'layer[s] of society' (Mitchell, 2013: i). First, there are those who can, or must, 'absorb' negative impacts emergent from 'long-term stresses, change and uncertainty' (Mitchell, 2013: i; Thompson, 2011: 73-4). In the natural world, for example, absorption is demonstrated when marshlands are able 'to absorb the repeated disturbances of flood, drought, and fire' (Walker & Salt, 2006: 38), whereas in the social world a good analogue might be the aforementioned capacity of working populations to limit losses in welfare. Here, crisis takes on a distinctly positive, agentic hue for resilience scholars. In a study of 'hidden resilience in poor households in Britain', for example, Krysia Canvin *et. al.* suggest that resilience counters '[n]egative stereotypes and attitudes that reinforce low expectations'. As such, they argue, discourses of vulnerability 'do not do justice to the tenacity,

coping and survival skills exhibited by' people (Canvin, Marttila, Burstrom, & Whitehead, 2009: 244; quoted in Harrison, 2013: 99). Resilience is thus not focused 'on tackling established problems but on supporting the developmental processes that lead to positive outcomes' (Davidson, 2009: 123; quoted in Harrison, 2013: 99). The structures which generate such 'established problems' are outside the purview of the discourse, or at least relegated in favour of a focus on capacitation.

Absorption and transformation – connote a view of the world as 'complex, adaptive, dynamic, emergent, interdependent and never in equilibrium', as opposed to the 'mechanistic, linear and deterministic' worldview of liberal thinking (Ziervogel, Cowen, & Ziniades, 2016: 3). Transformative capacity in this perspective is the ability to 'create a fundamentally new system when ecological, economic or social structures make the existing system untenable' (Mitchell, 2013: 4; citing Walker et al., 2004). This might be necessary as a response to 'the over-turning of established rights systems and the imposition of new regimes' (Pelling, 2011), for instance, such as occurs when climate change forces adaptation on vulnerable populations or when economic transformations generate the same necessities in the social sphere (Harrison, 2013). Transformation thus denotes 'much broader processes of change' than adaptation (Pelling, 2011), with the implication that the latter is a response to a milder form of ecological or social disturbance.

Vulnerable populations who adapt are those who can make 'incremental changes' to their livelihoods whereas those who must transform are dealing with situations which may force them to 'adopt[] a new direction in making a living'. The concept of transformation can also, however, refer to bigger units, such as 'when a region moves from an agrarian to a resource extraction economy' (Béné et al., 2012: 22). The discourse is thus flexible enough to include adaptants at different scales, but from the perspective adopted here all are changing in relation to a determinate process: changing structures of production. Both adaptation and

transformation are congenial to the NTC's understandings of capitalism's destructive mode of renewal. In resilience parlance, they generate for agents a 'discontinuous change that involves subjective and objective aspects of the whole multilevel organisational system', 'result[ing] in a radical multidimensional reconfiguration of culture, systems and structures' (Edwards, 2010: 30; quoted in Ziervogel et al., 2016: 3).

This conceptual scaffolding does two things. First, it constitutes a form of perceptual power which mystifies people's understanding of their own social conditions. This then renders them not so much 'voluntary adherents to consensual precepts' as 'victims' of a discursive formation which promotes adaptation to processes deemed by ontological fiat to be generated by relations of universal contingency (Archer, 1995: 262). The effect is to reduce the extent to which people are capable 'of articulating dissident views and of passing these over the intersection to stimulate structural disruption' (Archer, 1995: 262).

Second, as Jonathan Joseph argues, 'recent enthusiasm for the concept of resilience across a range of policy literature is the consequence of its fit with neoliberal discourse' (2013: 38). As such, it emphasises the 'adaptation of subjects rather than systems' (Joseph, 2018: 19). It reconfigures the neoliberal form of governmentality by continuing to valorise 'self-reliance and responsibility in an uncertain world' (O'Malley, 2013: 505), but in a manner which reflects the nihilism of post-crisis dynamics. Indeed, resilience thinking is constituted from the familiar forms of rationality that articulate the discursive and non-discursive practices of neo-liberal states. Resilience thinking is thus 'an interpretation of social behaviour determined by, and supportive of, neoliberalism' (Zebrowski, 2016: 88).

The reality is that resilience thinking's stratification model of crisis recovery is both Janus-faced and private sector led. On the one side it is a 'technique of governance' which works 'through an attempt to enhance its targets' (Howell, 2015: 69), but on the other it both

responsibilises vulnerable populations and normalises an increasingly authoritarian approach to the governance of those deemed 'perpetually incompetent' in their own self-management (Dean, 2010: 257). In the aftermath of the 2011 riots in London and elsewhere in the UK, for example, then-Prime Minister David Cameron spoke not in terms of the political-economic structures which drive people to such desperate actions, but instead 'of a broken society, mindless criminality and the actions of a sick and feral underclass born from "troubled families" in areas of low socio-economic status' (Rogers, 2013: 325). The trope of 'mutual responsibility' was used to divide 'responsible' communities who adapt or transform themselves when faced with conditions of vulnerability from those who must be subjected to more coercive mechanisms of governance.

Resilience is here manifest as a method for suppressing disorder. It facilitates the wilful ignorance of deep-seated, structurally-inscribed dissatisfaction and instead focuses on state-centric 'preparedness' to deal with the social consequences of malcontent as and when they arise (Rogers, 2013: 326). At the same time, though, it exhibits a form of pastoral power which encourages the irresponsible to examine their lives, their plans, and their validity therein, in the hope of mobilising them to adopt the responsibilisation agenda through the reshaping of their conduct (Lazzarato & Jordan, 2012: 129; Thompson, 2011: 73-4). What is revealed is the aim of encouraging potentially resistant subjects to either absorb the social costs of the crisis or to take on board the resilience discourse's injunction to adapt. Enhancement is thus predicated on acceptance.

Resilience discourse acts as a mnemotechnic inscribing moral concepts such as 'blame', 'guilt', 'bad conscience' and 'duty' into the minds of proto-resistant subjects (Lazzarato & Jordan, 2012: 41-2). It encourages people, in other words, to undertake 'ethico-political work on the self' so that the causes of vulnerability are individualised and internalised (Lazzarato & Jordan, 2012: 130), facilitating the redirection of their passions, desires and actions to the

advantage of the NTC (Lazzarato & Jordan, 2012: 68). The effect is to divide society into those who will change in response to capitalism's destructive processes and those who will not, expediting the transformation of the former and the political marginalisation of the latter.

The overarching discourse encourages people to take adversity as a given, and on this basis works by helping people to deal with social and psychological demands that they are unable to cope with, and which might otherwise predispose them to becoming resistant rather than resilient subjects. As William Davies puts it, these technologies of the self are intended to 'anaethetise political sentiments', 'reduce unhappiness, and, with it, resistance' (Davies, 2015). Just as importantly, they do so whilst 'leaving the power relations and structural contradictions' generative of psychic vulnerability untouched (Gill and Donaghue, 2016: 2). The resilient subject is, then, formed in response 'to the disappointing reality of endemic crises' (Evans & Reid, 2013: 91), and in accordance with the necessity (seen from the perspective of the NTC) of getting people 'to subjectivise themselves in certain ways' (Kelly, 2010: 100). It is only when subjectivities are (re-)formed that political and economic elites can pass off the social costs of crisis onto vulnerable populations, allowing the latter 'to get on with the business of adapting' to them (citing Evans, 2011: 34; MacKinnon & Derickson, 2012: 7).

Conclusion

In section one of this paper we set out reasons for rejecting both mainstream and post-liberal interpretations of resilience discourse in favour of an approach which explains it as a social technology consistent with the elite-led management of agential subjectivities in an era of political and economic crisis.We argued in section two for a different understanding of emergence than that presented by post-liberal resilience, which flattens both structure and agency and for this reason fails to provide the epistemic resources necessary to ascertain the

relative weight of causal factors generative of the social costs upon which resilience is parasitic (Jackson, 2011: 117). By adopting a critical realist Marxist approach, differential vulnerabilities can be understood as the outcome of capitalist relations and resilience is seen as a discourse on these vulnerabilities that is highly congenial to the interests of state and capital in a time of crisis.

Resilience is the latest in a series of technologies deployed by the NTC to forestall neoliberalism's moment of radicalised judgement. The discourse itself, as we have argued, works in part by mystifying causality. It focuses on events which appear contingent even while they are demonstrably wrapped up in relations of necessity. The fact that capitalist social relations predictably generate vulnerabilities is largely abandoned by resilience advocates in favour of an approach which is remarkably consistent with 'the entirely superficial standpoint of the market' (Pilling, 1980). Just as the subjective motives of individual entrepreneurs blinds them to the emergent effects of their activities, so too does the discourse of resilience divert scholarly and policymaking attention away from structural contradictions by framing causality in terms of universal contingency.

In the final section, we set about the task of explaining how resilience as a governmental technology works in practice. This, as Alison Howell suggests, 'is a matter of empirics: of sorting out what, empirically, resilience-oriented reforms are doing' (Howell, 2015: 67). However, empirical work without theoretical grounding is blind, just as theory without empirics is empty (Bhaskar, 1989: 44). Hence, we made the case in this section that resilience itself, as an ideational framework, works in accordance with an epistemic and discursive selectivity which favours the vested interests of the NTC over those of vulnerable populations. For this reason, as a mode of governing it is committed to utilising the discourse of resilience to encourage people to either absorb processes which render them vulnerable, adapt to them by becoming more flexible, or to transform their livelihoods in a more radical fashion through the

realignment of their attitudes and motivations so that they are compatible with political-economic forces deemed inevitable, irrepressible, and unidentifiable.

In the case of resilience, the injunction to adapt is aimed at creating new systemic and agential capacities to deal with ongoing crisis. It forms new identities by operationalising a scaffolding which predisposes agential actions through the injunction to absorb, adapt or transform, and draws on complexity ontologies to render people's perceptions of their own material realities compatible with the interests of capital and state. Emotional management in the face of adversity, as Eva Illouz suggests (2008: 209), has become 'a widespread and even dominant notion because it corresponds to the ideology of social groups that are key to the production process and because it corresponds quite well to the requirements made on the self by new forms of capitalism.' We specifically defined this 'social group' as the NTC. Indeed, as a cultural emergent – that is, as a body of ideas about vulnerability derived from historically determinate condensations of class relations – resilience helps, as noted above, to discursively reframe relations of contradiction into relations of 'mutual adaptation'. It is only by rejecting this defanged discourse of the political, however, that progress can be made in actually addressing the root causes of vulnerability.

References

Adger, W. N. (2006). Vulnerability. *Global environmental change, 16*(3): 268-281.

Albo, G. (2004). The old and new economics of imperialism. *Socialist Register, 40*, 88-113.

Archer, M. (1995). *Realist social theory : the morphogenetic approach*. Cambridge: Cambridge University Press.

Archer, M. S. (1996). *Culture and agency : the place of culture in social theory* (Rev. ed. ed.). Cambridge: Cambridge University Press.

Archer, M. S. (2000). Homo economicus, homo sociologicus and homo sentiens. In J. Q. Tritter & M. S. Archer (Eds.): *Rational choice theory : resisting colonisation* (pp. 36-56). London: Routledge.

Béné, C., Wood, R. G., Newsham, A., & Davies, M. (2012). Resilience: new utopia or new tyranny? Reflection about the potentials and limits of the concept of resilience in relation to vulnerability reduction programmes. *IDS Working Papers, 2012*(405): 1-61.

Berger, S. (2008). K. William Kapp's theory of social costs and environmental policy: Towards political ecological economics. *Ecological Economics, 67*(2): 244-252.

Bhaskar, R. (1989). *Reclaiming reality : a critical introduction to contemporary philosophy*. London: Verso.

Bhaskar, R. (2011). *Reclaiming reality : a critical introduction to contemporary philosophy* ([Reprint] / with a new introduction by Mervyn Hartwig. ed.). London: Routledge.

Binkley, S. (2014). *Happiness as enterprise: An essay on neoliberal life*: Suny Press.

Brand, U. V., Alice B. M. (2013). Epistemic selectivities and the valorisation of nature: the cases of the Nagoya Protocol and the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES). *Law, Environment, and Development Journal, 9*(2).

Cameron, D. (2015). Transforming the British economy: Coalition strategy for economic growth. Speech delivered on 28 May 2010.

Cameron, D. (2016). Prime Minister's speech on life chances.

Cammack: (2003). The governance of global capitalism: a new materialist perspective. *Historical Materialism, 11*(2): 35-59.

Canvin, K., Marttila, A., Burstrom, B., & Whitehead, M. (2009). Tales of the unexpected? Hidden resilience in poor households in Britain. *Social Science & Medicine, 69*(2): 238-245.

Carrington, M. J., Zwick, D., & Neville, B. (2015). The ideology of the ethical consumption gap. *Marketing Theory*. doi:10.1177/1470593115595674

Cederström, C. (2015). *The wellness syndrome*. Malden, MA: Polity Press.

Chan, J. K. L. (2014). Health care and human vulnerability: A Confucian perspective. *Religious Perspectives on Human Vulnerability in Bioethics* (pp. 153-164): Springer.

Chandler, D. (2014). *Resilience : the governance of complexity.*

Chandler, D. and Richmond, Oliver (2015). Contesting post liberalism: governmentality or emancipation? *Journal of International Relations and Development* 18(1): 1-24.

Chandler, D. (2019). Resilience and the end(s) of the politics of adaptation. *Relience* 7(3), pp. 304-313.

Cilliers: (1998). *Complexity and postmodernism : understanding complex systems*. London: Routledge.

Collier, A. (1989). *Scientific realism and socialist thought*. Hemel Hempstead: Harvester, Wheatsheaf.

Communities, R. (2012). After the riots: The final report of the Riots Communities and Victims Panel. *London: Riots Communities and Victims Panel*.

Connolly, W. E. (2011). *A world of becoming*. Durham, N.C.: Duke University Press.

Cristina, C. (2013). Metaphors Of The Crisis - A Reflection Of The Global Financial Situation. *Management Strategies Journal, 22*(4): 78-84.

Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global environmental change, 18*(4): 598-606.

Da g d e v i r e n, H., Ca p u c h a, L., Calado, A., Do n o g h u e, M. a n d E s t ê v ã o, P. (2020). Structural Foundations of Social Resilience. *Social Policy & Society* (2020) 19:4, 539–552

Danermark, B. (2002). *Explaining society : critical realism in the social sciences*. London ; New York: Routledge.

Davidson, D. J. (2010). The applicability of the concept of resilience to social systems: some sources of optimism and nagging doubts. *Society and Natural Resources, 23*(12): 1135-1149.

Davidson, R. (2009). More than' just coping': The antecedents and dynamics of resilience in a qualitative longitudinal study. *Social Policy and Society, 8*(1): 115.

Davies, W. (2015). *The happiness industry: How the government and big business sold us well-being*: Verso Books.

Davies, W. a. (2014). *The Limits of Neoliberalism : Authority, Sovereignty and the Logic of Competition*. London: Sage.

Dean, M. (1995). Governing the unemployed self in an active society. *International Journal of Human Resource Management, 24*(4): 559-583.

Dean, M. (2010). *Governmentality : power and rule in modern society* (2nd ed. ed.). Los Angles, Calif. ; London: SAGE.

Derrida, J. (2005). *Writing and difference*. London and New York: Routledge.

Eberstadt, N. (2011). The Dying Bear: Russia's Demographic Disaster. *Foreign Affairs, 90*(6): 95-108.

Edwards, M. (2010). *Organizational transformation for sustainability: An integral metatheory*: Routledge.

Ehrenreich, B. (2009). *Bright-sided: How the relentless promotion of positive thinking has undermined America*: Macmillan.

Elder-Vass, D. (2010). *The causal power of social structures : emergence, structure and agency*. Cambridge: Cambridge University Press.

Evans, B., & Reid, J. (2013). Dangerously exposed: the life and death of the resilient subject. *Resilience, 1*(2): 83-98.

Evans, J. P. (2011). Resilience, ecology and adaptation in the experimental city. *Transactions of the Institute of British Geographers, 36*(2): 223-237. doi:10.1111/j.1475-5661.2010.00420.x

Fainstein, S. (2015). Resilience and Justice. *International Journal of Urban and Regional Research, 39*(1): 157-167. doi:10.1111/1468-2427.12186

Fairclough, N. (2006). *Language and globalization*. London: Routledge.

Fischer, A. M. (2012). The Perils of Paradigm Maintenance in the Face of Crisis *The Global Crisis and Transformative Social Change* (pp. 43-62): Springer.

Foster, J. B. (2000). *Marx's ecology: Materialism and nature*: NYU Press.

Foster, J. B., Clark, B., & York, R. (2010). *The ecological rift : capitalism's war on the earth*. New York: Monthly Review Press.

Foucault, M. (1997). The essential works of Foucault, 1954-1984. In M. Foucault: Rabinow, & J. D. Faubion (Eds.): *Truth and power*. New York: New Press.

Fraser, N. and Gordon, L. (1997) 'A genealogy of dependency', in N. Fraser (ed.), *Justice Interruptus: Critical Reflections on the Post-Socialist Condition*. London, Routledge.

Garbarino, J. (2011). *The positive psychology of personal transformation: leveraging resilience for life change*: Springer Science & Business Media.

Garrett, P. (2016), Questioning Tales of 'Ordinary Magic': 'Resilience' and Neo-Liberal Reasoning. *British Journal of Social Work,* 46, 1909–1925.

Giles, C. (2015, 13th August, 2015). People's quantitative easing - no magic. *Financial Times*.

Gill, R., & Donaghue, N. (2016). Resilience, apps and reluctant individualism: Technologies of self in the neoliberal academy. *Women's Studies International Forum, 54*, 91-99.

Gill, S. (2012). *Global crises and the crisis of global leadership*. Cambridge: Cambridge University Press.

Grabel, I. (2011). Not your grandfather's IMF: global crisis, 'productive incoherence' and developmental policy space. *Cambridge Journal of Economics, 35*(5): 805-830.

Greer, I. (2015). Welfare reform, precarity and the re-commodification of labour. *Work, Employment & Society*.

Hansen, S. (2017). *Learn to love stress: turn stress into motivation, mental energy, emotional resilience, and happiness*: Ruskin Publishing Ltd.

Harrison, E. (2013). Bouncing back? Recession, resilience and everyday lives. *Critical Social Policy, 33*(1): 97-113.

Hartwig, M. (2007). *Dictionary of critical realism*. London: Routledge.

Harvey, D. (1985). *The urbanization of capital*. Oxford: Blackwell.

Harvey, D. (2005). *A brief history of neoliberalism*. Oxford: Oxford University Press.

Harvey, D. (2010). *The enigma of capital : and the crisis of capitalism*. London: Profile Books.

Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 4(1): 1–23

Howarth, D. R. (2013). *Poststructuralism and after : structure, subjectivity, and power*.

Howell, A. (2015). Resilience as Enhancement: Governmentality and Political Economy beyond 'Responsibilisation'. *Politics, 35*(1): 67-71.

Humbert, C. and Josephy, J. (2019). Introduction: the politics of resilience: problematising current approaches. *Resilience: International Policies, Practices and Discourses,* 7(3): 215-223.

Illouz, E. (2008). *Saving the modern soul: Therapy, emotions, and the culture of self-help*. California: University of California Press.

Jessop, B. (1990). *State theory : putting the capitalist state in its place*. Cambridge: Polity.

Jessop, B. (2005). Critical realisam and the strategic-relational approach. *New Formations, 56*, 40-53.

Johnson, S. (2015). *Who moved my cheese*: Random House.

Joseph, J. (2012). *The social in the global : social theory, governmentality and global politics*. Cambridge: Cambridge University Press.

Joseph, J. (2013). Resilience as embedded neoliberalism: a governmentality approach. *Resilience, 1*(1): 38-52.

Joseph, J. (2018). Varieties of Resilience: Studies in Governmentality. Cambridge: Cambridge University Press.

Kapp, K. W. (1975). *The social costs of private enterprise [by] K. William Kapp*. New York: Schocken Books.

Kelly, M. G. (2010). *The political philosophy of Michel Foucault*: Routledge.

Kurz, H. D. (2013). Unintended consequences: on the political economy of Karl Marx. *The European Journal of the History of Economic Thought, 20*(5): 845-849.

Lawson, T. (1998). Economic science without experimentation. In M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie (Eds.): *Critical realism: essential readings* (pp. 144-169). London: Routledge.

Lazzarato, M., & Jordan, J. D. (2012). *The making of the indebted man : an essay on the neoliberal condition*. Los Angeles, Ca.: Semiotext(e).

Leach, M. (2008). Re-framing resilience: A symposium report. *STEPS Centre, University of Sussex, Brighton*.

Lemke, T. (2002). Foucault, Governmentality, and Critique. *Rethinking Marxism, 14*(3): 49-64.

Lopez, J., & Scott, J. (2000). *Social structure*. Buckingham: Open University Press.

Marsden, R. (1999). *The nature of capital : Marx after Foucault*. London: Routledge.

Miller:, & O'Leary, T. (1987). Accounting and the construction of the governable person. *Accounting, Organizations and Society, 12*(3): 235-265.

Miller:, & Rose, N. (1990). Governing economic life. *Economy and Society, 19*(1): 1-31.

Mirowski:, & Plehwe, D. (2009). *The road from Mont Pèlerin : the making of the neoliberal thought collective*. Cambridge, Mass.: Harvard University Press.

Mirowski: a. (2013). *Never let a serious crisis go to waste : how neoliberalism survived the financial meltdown*.

Mitchell, A. (2013). Risk and Resilience: From Good Idea to Good Practice—A Scoping Study for the Experts Group on Risk and Resilience. *Paris: Organization for Economic Co-operation and Development. www. oecd. org/dac/governance-development/FINAL% 20WP, 20*, 13.

Neocleous, M. (2013). Resisting resilience. *Radical philosophy, March / April*, 1-7.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. *American Journal of Community Psychology, 41*(1): 127-150.

O'Malley: (2013). Uncertain governance and resilient subjects in the risk society. *Oñati Socio-legal Series, 3*(2): 180-195.

OECD. (2014). *Guidelines for resilience systems analysis: how to analyse risk and build a roadmap to resilience*. OECD publishing.

OEOECD. (2012). *What Makes Labour Markets Resilient During Recessions?* : OECD Publishing.

OECD. (2016). *Economic Policy Reforms 2016*: OECD Publishing.

Olsen, W. (2003). Pluralism, tenancy and poverty: Cultivating open-mindedness in poverty studies. *Biography*.

Osborne, G. (2014). Chancellor George Osborne's Budget 2014 speech. Retrieved from https://www.gov.uk/government/speeches/chancellor-george-osbornes-budget-2014-speech

Pelling, M. (2011). *Adaptation to climate change : from resilience to transformation*. Abingdon: Routledge.

Pilling, G. (1980). Marx's Capital, philosophy and political economy. Retrieved from http://www.marxists.org/archive/pilling/works/capital/pilling5.htm#Pill8

Porpora, D. V. (1998). Four concepts of social structure. In M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie (Eds.): *Critical realism: essential readings* (pp. 355). London: Routledge.

Rescher, N. (2012). Process philosophy. Retrieved from http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=process-philosophy

Roberts, J. (2006). *Philosophizing the everyday : revolutionary praxis and the fate of cultural theory*. London: Pluto.

Rogers: (2013). Rethinking Resilience: Articulating Community and the UK Riots. *Politics, 33*(4): 322-333.

Rose, N. (1993). Government, authority and expertise in advanced liberalism. *Economy and Society, 22*(3): 283-299.

Sayer, A. (1992). *Method in social science : a realistic approach* (2nd ed. ed.). London: Routledge.

Sayer, A. (2003). Reductionism in social science. Retrieved from http://www.lancaster.ac.uk/fass/resources/sociology-online-papers/papers/sayer-paris1.pdf

Smyth, I., & Sweetman, C. (2015). Introduction: Gender and Resilience. *Gender & Development, 23*(3): 405-414.

Southwick, S. M., & Charney, D. S. (2012). *Resilience: The science of mastering life's greatest challenges*: Cambridge University Press.

Stratton, A. (2011). David Cameron on riots: broken society is top of my political agenda. *The Guardian, 15*, 16.

Sullivan, S. (2006). *Elephant in the room? Problematising 'new'(neoliberal) biodiversity conservation.* Paper presented at the Forum for Development Studies.

Sum, N.-L. a., & Jessop, B. a. (2013). *Towards a cultural political economy : putting culture in its place in political economy*. Cheltenham, UK: Edward Elgar.

Taleb, N. N. (2011). *The black swan : the impact of the highly improbable* (Rev. ed. ed.). London: Allen Lane.

Thompson, K. (2011). Resiliency and freedom: response to Pat O'Malley's 'From risk to resilience'. Retrieved from http://www.thecarceral.org/cn7_Thompson.pdf

Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. (2004). Resilience, adaptability and transformability in social--ecological systems. *Ecology and society, 9*(2): 5.

Walker, B. H., & Salt, D. (2006). *Resilience thinking : sustaining ecosystems and people in a changing world*. Washington, D.C. ; London: Island Press.

Webb, L. (2013). *Resilience: How to cope when everything around you keeps changing*: John Wiley & Sons.

Wight, C. (2006). *Agents, structures and international relations : politics as ontology*. Cambridge: Cambridge University Press.

Williams, C. (2010). *Ecology and socialism : [solutions to capitalist ecological crisis]*. Chicago: Haymarket.

Ziervogel, G., Cowen, A., & Ziniades, J. (2016). Moving from Adaptive to Transformative Capacity: Building Foundations for Inclusive, Thriving, and Regenerative Urban Settlements. *Sustainability, 8*(9): 955.

Zebrowski, C. (2009). Governing the Network Society: A Bio-political Critique of Resilience, *Political Perspectives,* 3(1): 1-36

Zebrowski, C. (2016). *The Value of Resilience: Securing life in the twenty-first century.* London: Routledge.