

Risks and resilience in the new global era

Alex Evans and David Steven

For all that policymakers try to impose their narratives on a chaotic world, it is *risks* – complex, unpredictable, perhaps even unmanageable – that have defined the first decade of the twenty-first century.

Think of 11 September, 2001 and its aftermath, and how preoccupation with terrorism and fragile states has driven foreign policy ever since. Or the seismic upheavals seen in international financial markets over the last year, the first run on a British bank in living memory, the demise of some of the US's most powerful institutions, contagion across a growing number of borders, and a global stock market crash. Or the looming shadow of long-term scarcity issues – food, water, energy, land and atmospheric 'space' for emissions – which are already driving an increase in global volatility.

Tip O'Neill famously observed that 'all politics is local', but today, the drivers of political success and failure are predominantly global. In a world as complex and interdependent as ours, risks multiply. Their impact, meanwhile, is unevenly distributed. While one group of people reap the benefits of an action, others feel the pain, as conflict, economic turbulence, disease or resource shortages disrupt their lives. Failure can also cascade from one system to another, a prospect that has become increasingly likely in a 'just-in-time' world.

In response, we need to get serious about how to make global, national and local systems more resilient. This is an imposing challenge. A new politics will be needed, one that is internationalist by default, but also hard-headed about the perils of globalisation. Governance systems will have to take on arduous new functions and slough off some old ones. Renewed attention must also be paid to subsidiarity, the tricky task of determining which function should be discharged where.

But this is not primarily a technocratic challenge. Resilience relies on the energy and initiative of the society as a whole, and is ultimately a matter of culture, values and identity. Policymakers will thus need to ask some uncomfortable questions. What is it about our societies that we are trying to protect? Do our policies augment or diminish us? Have we remained *ourselves* during a time of disruptive change?

What makes us vulnerable

The starting point is to understand four distinct types of vulnerability.

First, there are *shocks*, sudden catastrophes that hit with minimal warning. These 'black swans' are not only unforeseen, but more importantly, their *impact* is highly unpredictable. There's nothing new about our susceptibility to shocks, of course, but our vulnerability is growing as societies become more complex and interdependent. A virulent

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new haemorrhagic fever in the Congo is clearly a problem for everyone in the vicinity. Stir international travel into the mix, however, and the danger becomes universal.

Risk is thus 'manufactured' by the way we have chosen to live. In the United States, for example, the economic cost of a hurricane of a given intensity is doubling roughly every decade. A \$500b storm is predicted for the 2020s (Pielke et al, 2008). The 2003 European heat wave, meanwhile, caused thirty-five thousand deaths in one of Europe's worst ever disasters. The tragedy passed almost unnoticed, with the typical victim isolated from social structures and community support (Kosatsky, 2005).

Stresses have a different dynamic. These slow-burn pressures may have no discernible impact over a long period, but can then cause dramatic change once a threshold is crossed. An irrigation system can become salinised to the point where the land's productivity drops rapidly; or a fishery collapses in a sudden reaction to years of over-fishing. Often these changes will be irreversible. In the coming years, our climate may see sudden and disastrous increases in greenhouse gas concentrations as one of a number of tipping points are hit. At the same time, we can expect to see a proliferation of other stresses, as rising population, affluence and expectations imposes severe pressure on global systems. Recent intense concern about the security of the world's food supply, and pronounced spikes in the prices of other resources, are a harbinger of what is to come. Systems, at global, national and local levels, seem certain to behave in unexpected ways as they find that, along key dimensions, there is no longer any room to expand.

Then there is our vulnerability to *deliberate disruption*. Crime has globalised as rapidly as business and shows similar patterns of innovation. Its threat is underestimated (as is its impact on the most vulnerable). Add political motivation and the result is a 'networked actor' that systematically scans for points of weakness in its host society. In Iraq, terrorist groups have become proficient at analysing complex networks like power grids or oil distribution systems. Their attacks are designed to garner maximum return on a modest investment. Such techniques are now proliferating internationally in a 'bazaar of violence' (Robb, 2007). In the Niger Delta, for example, oil revenue has been cut substantially by insurgent activity. A substantial portion of this lost production is stolen on its way to market, in a fusion of terrorist and criminal activity. Increasingly, we will come to realise that complex systems are vulnerable to anyone with a grievance and basic understanding of some simple techniques – a problem that will intensify as technological innovation continues to accelerate (above all in the field of biotechnology).

The final vulnerability is the way we weaken our critical systems through neglect, ignorance or stupidity. Globally, we have underinvested in infrastructure and pared systems down to the point where there is no margin for error. We have also been careless in the way we have allowed risk to be exported across institutional and geographic borders. The current financial crisis is a case in point. No one – regulators, rating agencies, the investors themselves – had a clear picture of how much risk had been allowed to accumulate in the 'shadow banking system'.

Then there is the question of the resilience of our values. In the 'global war on terror', the United States, in its role as leader of the Western world, has rushed to abandon the high ground. It has picked fights it cannot control or win, and has allowed its human rights abuses to become a powerful recruiting sergeant for its adversaries. All too often, in other words, we are enthusiastic (and predictable) participants in the disruption of our own systems.

Reasons to be cheerless

So how seriously should we take these vulnerabilities?

One perspective comes from the field of ecology – the study of complex living systems. These systems are never at equilibrium, relying on a continual flow of energy to maintain their integrity. They are thus always in flux and tend to move through an ‘adaptive cycle’ with four phases. Rapid growth occurs when resources are plentiful, and is followed by a conservation stage as the system becomes increasingly well-adapted to its environment. Efficiency increases, as resources become more intensively used, but this has a cost. New entrants are locked out of the system, lowering levels of innovation and flexibility. The system thus becomes less able to cope with environmental change. At some stage, a collapse or *release* phase follows.

A disturbance that exceeds the system’s resilience breaks apart its web of reinforcing interactions. The system comes undone. Resources that were tightly bound are now released as connections break and regulatory controls weaken. (Walker and Salt, 2006)

A brief period of reorganisation follows, as opportunists exploit resources that have been freed by the collapse. This lays the groundwork for a new regime. The stage is set for growth to resume once more.

A complementary point of view is provided by the anthropologist, Joseph Tainter, who studies the decline of civilisations (Tainter, 1988). Tainter believes that complexity is a problem-solving strategy. Societies tend to become more complex over time as they respond to successive challenges. This comes at a cost. Inexpensive solutions are adopted first; more expensive ones later. Eventually, diminishing returns kick in, creating conditions in which a society is likely to fail. Either the society lives off its reserves to the point where it cannot respond to a fresh crisis; or it simply stops delivering adequate benefits to its citizens, so that independence becomes more attractive than interdependence.

The society ‘decomposes’ as people pursue their immediate needs in smaller groups, rather than adhering to the long-term goals of their leadership. (Tainter, 1996)

As in the ‘adaptive cycle’, complexity is lost rapidly at this point. In the short term, horizons shrink and loyalty is invested in more immediate forms of authority. In the longer term, resources may be freed for a new period of growth.

To these neo-Malthusian viewpoints, we should add a third perspective, one that updates the story of Pandora’s box. Its most powerful contemporary narrator is the counter-insurgency expert, John Robb. He argues that we are seeing the birth of a new breed of ‘global guerrilla’. Rogue states will remain a threat, but increasingly security will be challenged by groups who are ‘super-empowered’ by technological innovation.

In part, this is due to easier access to devastating weapons. But organisational innovation catalysed by fast, cheap and ubiquitous communications is just as important. Modern insurgencies are open-source networks that make decisions rapidly and sustain an extraordinarily high rate of innovation. Traditional organisations look leaden and flat-footed

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in contrast. Robb argues that the conflicts in Iraq and Afghanistan are merely a staging post on the road to an increasingly dangerous future.

'The threshold necessary for small groups to conduct warfare has finally been breached', Robb writes,

and we are only starting to feel its effects. Over time, perhaps in as little as twenty years, and as the leverage provided by technology increases, this threshold will finally reach its culmination – with the ability of one man to declare war on the world and win.

Listening to Malthus

It is tempting to dismiss this thinking as apocalyptic.

'Limits to growth' have been declared before and then breached, leaving Malthusians discredited. In response to Malthus, economists have argued that innovation brings increasing, not diminishing, returns. According to Paul Romer, growth comes from 'better recipes' not simply more cooking. Every generation frets that they will be soon be hit by the double whammy of finite resources and unintended consequences. But in reality, there are always many more new ideas to be discovered. 'Possibilities do not add up', Romer writes. 'They multiply' (Romer, 2007).

This optimism underpins the Stern Review, which argues that the world is capable of more than overcoming what Stern describes as 'the greatest and widest-ranging market failure ever seen'. Unchecked climate change will be disastrous, Stern argues, cutting global consumption levels by as much as a fifth. A solution, however, will impose only very modest costs (around one per cent of GDP), but have a number of ancillary benefits. Better policy will cut wasteful use of energy, remove distorting subsidies, and open up substantial new business opportunities in 'green' sectors. The current system may have failed but, with the right policy environment, we can expect a more productive one to take its place.

There are also criticisms of the assumption that technological change will lead to a more dangerous world, with many analysts arguing that we are much safer than we think. Political scientist John Mueller, for example, has criticised our 'false sense of insecurity' about terrorism. When compared to other threats, he argues, terrorism does little damage. Chemical and biological weapons cause panic, not mass destruction, while the chance of terrorists using nuclear weapons are 'extremely, perhaps, vanishingly, small' (Mueller, 2006). Marc Sageman has argued that Al Qaeda is a less sophisticated actor than often claimed and that it has degraded under pressure into a 'leaderless jihad' (Sageman, 2007). Far from being an existential threat, it can be fairly safely contained.

There is evidence, meanwhile, that states are less likely to fight each other. Nuclear proliferation has proceeded more slowly than was expected in the 1960s and 1970s. There were no weapons of mass destruction in Iraq. Pakistan and India have pulled back from the brink of nuclear conflict. And, of course, we survived the Cold War without a major nuclear attack. All in all, perhaps there is no need to fear the contents of Pandora's box.

Running through these arguments is an underlying faith that interdependence itself has crossed a threshold, and that globalisation cannot now be unpicked. Maybe so, but history should convince us to take seriously the risk of a fundamental systemic reverse at an international level. In the early part of the last century, as Keynes recalled, globalisation was

regarded as 'normal, certain, and permanent, except in the direction of further improvement' (Keynes, 1919). But it failed, without much warning, on a political, economic and social level. Two world wars were accompanied by economic protectionism and inter-ethnic conflict. It took much of the rest of the century for the consequences of this to unravel.

The lesson we should take from this is that in any complex system, the line between co-operation and competition is a narrow one. That is why we are interested in our systems' resilience. Are they sufficiently flexible to respond both to catastrophe and longer-term challenges? Or will their ability to deliver shrink, at a time when the demands on them continue to grow?

A collective action problem

In formal terms, resilience is defined as

the capacity of a system to absorb disturbance and reorganise while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks. (Walker et al, 2004)

Perhaps the best practical definition we have come across is the one offered by the *Harvard Business Review*. It states that resilience results from being able to face up to reality, improvise in the face of unfamiliar challenges, and at the same time find a source of 'meaning' in the challenges that encourages long-term thinking while affirming a sustaining sense of purpose (Coutu, 2002).

Both definitions emphasise the need to change while maintaining a coherent identity. Systems that are brittle, that try to remain static at all costs, are precisely the ones that are most vulnerable to collapse. On the other hand, systems that are flexible, adaptable, that deal with crisis through renewal are the ones that will tend to survive. This is, in other words, a classic collective action problem. The central determinant of a system's resilience is the ability to act collectively, coherently, and with the right balance between short and long-term interests.

In a *high resilience system*, risk – and response to that risk – is distributed throughout the system. Individuals and their groups see their interests as compatible with the collective. They have a common understanding of the challenges a society faces and take decisions accordingly, but this understanding is not a straitjacket. Different actors play to the strengths and will often compete fiercely. But there is a balance between initiative and co-ordination, and broad buy-in to overarching institutional frameworks.

In a *low resilience system*, on the other hand, risks are felt disproportionately by some groups and responses are inadequate, over-centralised, or both. Longer-term interests are heavily discounted, individuals pursue narrow self-interest; and conflict between groups intensifies. As a result, key institutions are increasingly seen as failing to 'deliver'.

This can be seen in people's response to an emergency. Despite popular perceptions, the evidence shows that the public does not usually panic when disaster strikes. In New Orleans, after Hurricane Katrina, the lurid stories of rape and murder were mostly media fabrications. In general, according to David Alexander, disasters 'are characterised by great social solidarity, generosity and self-sacrifice, and perhaps even heroism' (Alexander, 2002).

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The exception is when a key resource is scarce, such as during the UK's fuel strikes or when a crowd tries to escape a fire through a narrow doorway. A similar dynamic can be seen in a bank run – or in the recent food price spike, where some countries exacerbated the problem by restricting exports even as others made it worse by trying to build up strategic national reserves. Climate negotiations are bedevilled by a similar pattern. Progress can be rapid at first, as countries focus on the collective threat, but stalemate follows, as countries squabble over their share of a fixed emissions cake.

In these cases, conditions are ill-suited to frame a collective and coherent response. Unfortunately, a similar analysis could be made of many if not all of our global systems. These are powerful engines of growth but, as configured, they are inherently unstable. As Anthony Giddens has argued, there's a new 'riskiness to risk' – a situation that, without remedial action, is likely steadily to worsen (Giddens, 1999).

Facing up to reality

To understand why this is the case, consider the fundamental drivers that will determine our collective security in the first half of the twenty-first century.

During this period, we will see a rising population, connected in more – and more complex – ways. Interdependence will increase, but so will global imbalances: more population growth in poor countries; more connection growth in rich ones. Inequality and expectations are almost certain to increase together, at a time when supply of strategic resources is limited. It is a potentially toxic combination of unfamiliar stresses and demand constraints, with growing numbers of shocks of greater intensity, and the potential for opportunistic attack from the discontented. In response, global systems will need to function with unparalleled innovation and efficiency, while not running down reserves or becoming suffocated by complexity, and simultaneously making the transformation from high to low carbon growth.

Faced by a challenge of this scale, the only sources of vulnerability that can really be controlled are our own attempts to manage global systems. As Brian Walker and his co-authors argue:

Because human actions dominate in social-ecological systems, adaptability of the system is *mainly a function of the social component* – the individuals and groups acting to manage the system. Their actions influence resilience, either intentionally or unintentionally. (Walker et al, 2004)

The key words here are intentionally or unintentionally. To what extent can we increase the resilience of global systems by design? Conversely, to what extent will the 'social component' of globalisation remain beyond conscious control?

The answer to this question is that *governments* can probably do much less than they might hope (especially given the need for them to act in concert). Many of the risks the world faces are unpredictable. Other stresses are inexorable in their impact and cannot easily be mitigated. Preventative action, meanwhile, often has unintended consequences, as the impact of bio-fuels on food prices has shown. Governments are also unlikely to prevail in the face of terrorism, given the increasing opportunities that insurgents will enjoy.

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Instead, we will have to live with a mix of containment and paying the 'tax on living' that their activities exert. In a serious emergency, meanwhile, 'first responders' are likely to be quickly overwhelmed, with people needing to rely on themselves and others – a truth that becomes more pertinent the more serious the disaster. And the transformation to a low carbon economy, meanwhile, cannot be achieved without broad involvement from citizens, civil society and business.

This is not intended to be a counsel of despair. On the contrary, the real point here is not about the limitations of 'the authorities' or of centralised responses, but of the *potential* of ordinary people – as citizens, consumers, carers, thinkers, workers, parents and so on – to be a source of resilience. Foreign Secretary David Miliband made this point in a recent speech to the Fabian Society, in which he highlighted a fundamental shift of power from governments to people, with a

rise of the better-educated, and if not better-educated better-informed, citizen who knows, in real time, about how other people, often far away, live their lives; who is more distrustful of traditional sources of authority; who is yearning for greater freedom and power; who is more able through technology to produce and distribute information, more able to hold power to account. (Miliband, 2008)

Yet there is also a profound ambiguity at play here. The same tools and techniques that can empower a 'civilian surge', such as the hopefulness of the online activist network Avaaz.org, can also be used to power a network geared towards propagating repression and violence. 'Super-empowered' individuals and groups can be a force for ill as well as for good; for every Gandhi, there is a bin Laden. But that, in many ways, is the point. As we have discussed, part of what defines resilience is making sure that *our* system maintains its identity in the face of threat. We therefore need a politics that reaches out to an active citizenry through clear values – values that are more resilient and appealing than those of others.

Resilience is fundamentally about integrity and the capacity to remain 'whole'. It involves the ability to flex and to absorb threats, and to respond to them in a way that protects, reinterprets, and fulfils identity. It can be summed up as follows: has a threat *diminished* us, or are we *rising* as we respond to it?

The politics of resilience

The politics of resilience, then, presents a challenging agenda – one that takes us far beyond how well we respond to localised natural disasters.

In a complex and unstable world, it helps join up our thinking about a series of disparate challenges and provides a clear rationale for collective action. As Robert Cooper has argued: 'If states are to retain control, the first condition is that they should make peace with each other so that they can face the common threat of disorder together' (Cooper, 2003).

Facing common threats will require much more than goodwill, however. At present, all arms of international relations are in crisis. Military forces are struggling to understand a world where war is usually 'amongst the people', to use Rupert Smith's phrase (Smith, 2005). Development agencies are having to accept that poverty reduction cannot simply be accomplished by the transfer of resources. Many diplomatic services, meanwhile, badly

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need to renew their 'theory of influence' in a world where issues trump geography, and non-state actors are an increasingly powerful force. Fundamental reform cannot happen in one country alone.

Instead governments need to work together to develop approaches that are integrated and interoperable. The starting point is greater 'shared awareness' of the nature of the threats that accompany globalisation, and an honest admission of the limits to government power (Evans and Steven, 2008). This should then encourage governments to reach out in two directions – upwards towards the international system, and downwards towards the world's citizens.

But this is not simply a neutral question of governance; it is also a fundamentally political agenda. The politics of resilience holds both good and bad news for all major streams of political thinking: conservative, liberal and social democratic.

For conservatives, resilience's appeal to tradition and identity is a strong one. However, the conservative instinct to resist change of all kinds is a clear threat to a system's ability to adapt. Two quotes from the conservative philosopher, Michael Oakeshott, capture this dichotomy well. On the one hand, he writes that:

In place of a preconceived purpose ... such a society will find its guide in a principle of *continuity* (which is a diffusion of power between past, present and future) and in a principle of *consensus* (which is a diffusion of power between the different legitimate interests of the present).

On the other:

Change is a threat to identity, and every change is an emblem of extinction ... Changes, then, have to be suffered, and a man of conservative temperament (that is, one strongly disposed to preserve his identity) cannot be indifferent to them. (Oakeshott, 1991)

Liberals, meanwhile, have long argued for the diffusion of power. As Hayek argued, centralised control is not possible over systems 'which no brain has designed but which [have] grown from the free efforts of millions of individuals' (Hayek, 1974). He, after all, was awarded a Nobel prize over thirty years ago for his 'penetrating analysis of the interdependence of economic, social and institutional phenomena'. Classical liberalism, however, has consistently been troubled by government attempts to create public goods. The result is an instinctive opposition to regulation, which leaves little room for attempts to manage unstable global systems.

Social democrats, finally, understand the importance of public goods and are prepared to act forcefully to protect the vulnerable. They are also willing to act boldly to manage global instability. However, they have the weakness of being instinctive meddlers, crowding out the initiative of other actors and risking over-centralisation in the face of distributed risks.

This is a time when states will be under pressure to take on new, and onerous, responsibilities, such as taking responsibility for regulating carbon and other scarce resources. Unprecedented institutional innovation will be needed if these responsibilities are to be discharged without imposing unsustainable levels of cost. It is surely therefore

time to put the 'nanny state' out of her misery, while we search for a more sustainable relationship between government and state.

In the end, resilience is about a politics that is 'progressive' in a pure sense. Rather than following the ideological imprint of a bygone age, we need to be prepared to take a broad view of the systems that we depend on – and re-order our priorities to ensure that every action we take helps strengthen and defend them. That takes courage, and a far-sighted vision of the future. The question is not 'what risks do we want to avoid?' but 'what do we want to be resilient for?'

Alex Evans is a Non-Resident Fellow at New York University's Center on International Cooperation and **David Steven** is Managing Director of River Path Associates. They are both Demos Associates and jointly edit GlobalDashboard.org, the global risks website.

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