

The Future of Global Systems: Collapse or Resilience?

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Introduction

Dystopian futures are readily imaginable in a variety of areas ranging from energy futures to unmanageable urbanization, failed states to WMD terrorism, and global warming to resurgent great power rivalry. Additional possibilities include the revival of fascism, sustained clashes of civilizations, untrammelled nuclear proliferation, global financial melt-down, the rise of global criminals, and a major pandemic. Doomsday scenarios, if not yet a dime a dozen, are certainly commonplace: thinking about the unthinkable, pioneered by Herman Kahn amid much opprobrium, has become a cottage industry. Ken Booth in a recent book entitled *Theory of World Security* concluded that we are in for a “great reckoning,” “a new twenty years crisis,” and a “long hot century.”¹ In a similar vein the author of the current paper has argued that a long-term decline of the state could tip the world from what some observers have described as a new medievalism to a “new dark age.”² Scenarios in which conditions are far more volatile, complex, and dangerous than those currently prevailing require little imagination in a world worried about the costs of energy, environmental catastrophe, food and water shortages, and emerging and re-emerging diseases. Global instability seems to loom just over the horizon and the only issue appears to be how far away it really is. “Strategic shocks” are almost certainly inevitable and the only questions appear to be about how far their ripple effects will go.³ Consequently, efforts to think about and anticipate the forms these shocks might take are essential.

This is not to suggest that such efforts are easy. They have to overcome a tendency to assume that things will remain more or less the same – a tendency which stems from familiarity, wishful thinking, and preconceptions shaped by experience. Paradigm shifts are often resisted mentally, socially and politically. Yet traditional and grooved thinking is increasingly inadequate given the accelerating pace of change. Consider the speed with which the Internet changed communications. Fundamental revolutions in technology and then social connectivity became a global phenomenon in less than a decade. Change in the next two decades is unlikely to slow down. One likely result will be a growing gap between comfortable assumptions and stable expectations on the one side and an increasingly uncomfortable and unstable reality on the other.

In thinking about the future, however, it is important that worst case thinking does not become an excuse for rigorous and systematic analysis. The possibility of improvement rather than deterioration in global conditions should not be excluded. Similarly, the capacity of societies to

respond to crisis in ways that lead to positive outcomes should not be ignored. Moreover, although it is a relatively straight-forward task to identify potential drivers, pressures, and trends which will impose enormous stress on the global system, it is more difficult to identify pathways which point unequivocally to collapse or melt-down. Part of the reason is that there are important countervailing tendencies and pressures which help both to maintain and to reinforce the current system and inhibit, if not prevent, a descent into chaos or a system collapse. These countervailing factors include the potential capacity to manage and accommodate change in ways that minimize its negative impact, the existence of norms, regimes and other governance mechanisms which help to maintain order amidst anarchy, and the sheer resilience of both complex systems and at least some of their constituent parts. These qualities are summarized here in terms of resilience and adaptability. Under some conditions at least they enable systems of various kinds to survive both internal and external stresses. Consequently, they need to be taken into account in any assessment of system outcomes in the twenty-first century.

Against this background this paper seeks to examine alternative global futures in a focused way. It does so by assessing global systems which play a critical part in the organization of social, political and economic life. The systems examined here are:

1. The multilateral global governance system
2. The geopolitical system
3. The Westphalian state system
4. The global urban system
5. The rule of law system
6. The global trade and financial system

Assessing System Evolution

Each of these systems is characterized by considerable complexity. Each system is also subject to both internal and external challenges. The level and intensity of the challenges vary from system to system but any challenge will impose some degree of stress on the system. The outcome though will not be determined solely by the level of stress; also critical is the degree of resilience and adaptability in the system. Different levels of stress combine with different levels of resilience and adaptability to create a range of potential outcomes. These extend from enhanced stability to positive system transformation as the most favorable outcome to collapse of the system at the other extreme. Yet bounding the potential outcomes is not simply about whether these are positive or negative in terms of enhanced stability on the one side or increase instability on the other. Outcomes can be gradual or incremental; or they can be drastic, non-linear, and discontinuous. When added to the prospect of things continuing more or less as they are, this suggests the possibility of at least five types of outcome. Each of these types must now be examined starting with the worst case and moving through the outcomes to the most positive.

The worst possible outcome for a system under stress is collapse. Although definitions of collapse are not always clear, a useful starting point is the pioneering work of Joseph Tainter on the collapse of societies and civilizations. According to Tainter, “a society is collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity” or “loss of sociopolitical structure.”⁴ In his view, the process of collapse “... is a matter of rapid substantial decline in an established level of complexity.”⁵ For Tainter “complex societies are problem-solving organizations, in which more parts, different kinds of parts, more social differentiation, more inequality, and more kinds of centralization and control emerge as circumstances require.”⁶ After collapse these conditions are either absent or have a much smaller presence. Translated into system terms, after collapse the system either ceases to exist or, at best, exists in a simpler and much attenuated form. As Tainter suggests, though, collapse is not simply a matter of scale; it is also an issue of speed.

Partly because of the rapidity with which it can occur, collapse provides little warning. In complex systems, differentiating causes, manifestations, and consequences is particularly difficult. Cause and effect are not readily distinguished, independent and dependent variables merge into interdependent variables, and it is only in retrospect that a coherent picture can be determined - a phenomenon that David Snowden terms “retrospective coherence”.⁷ Extending this argument further, how do we know collapse is happening? What are the indicators of collapse? Similarly what are anomalies and what are trends? Part of the difficulty is that the fundamental long-term causes of collapse might not be evident, let alone understood, until the proximate causes have come into play.⁸ In practical terms, this makes it much more difficult to anticipate collapse. This is particularly true in a complex system where interactions determine outcomes. Simple systems, which typically involve a small number of components with few interactions among them and few feedback loops that accentuate stress, change, or instability, operate within a narrow range and rarely generate marked swings of behavior, serious fluctuations, or surprising outcomes. Complex systems, in contrast, exhibit significant feedback loops as well as random interactions among components that often produce unexpected but far-reaching consequences and unanticipated but serious problems.⁹ Yet not all these problems amount to system collapse. Indeed, collapse is rare. There are, of course, instances in which complex societies or civilizations have collapsed. Although these cases tend to be stark and dramatic, however, their very starkness reflects the fact that collapse, as an extreme event, is somewhat rare. Whereas system decline is a frequent occurrence and can be understood in terms of normal distribution, collapse is characterized by a power law: there are very few cases of this, but those cases have large impact. The dataset for civilization collapse, for example, is rather small. Tainter in his study of the collapse of complex societies identifies only 18 cases (although some of these cases include several examples of collapse).¹⁰

Often change is more gradual and less dramatic – especially if some kind of dampening mechanisms are either inherent or deliberately built into the system. Such mechanisms make it less likely that the system will be subject to positive feedback loops which accentuate instability.

This is not to deny the existence of outcomes which, although well short of collapse, are still undesirable. System decline or system erosion is far less dramatic than system collapse but still has serious consequences. Decline moves towards collapse but is a much more gradual process and is contained by system resilience.

Another possibility is that a system under stress will display sufficient resilience that it remains in a steady state. Maintenance of an equilibrium point, therefore, can be seen as the third possible outcome. A fourth outcome occurs when stress provokes a creative response which enhances system effectiveness and efficiency but does so gradually and incrementally. The final and most extreme (and probably rarest) outcome on the positive side is what might be termed system transformation, when a mix of resilience, adaptability, and innovation, result not simply in enhancement but in a dramatic, rapid, and large-scale improvement that takes the system to a whole new level of effectiveness and stability.

These five outcomes which can be termed respectively - collapse, decline, equilibrium, enhancement, and transformation – are not the end of the story. Sometimes systems which are in decline and even close to collapse rise again in what is often termed the phoenix cycle. In other cases, improved or even transformed systems can prove to have unexpected weaknesses and vulnerabilities that move them into decline. In spite of these complications, a framework using the five major outcomes identified above makes it possible to assess the future of global systems in a fairly rigorous way. This is not to claim too much - the framework is a useful but limited tool. Nor is it to claim comprehensiveness in terms of the systems examined. The analysis does not include environmental, energy and health systems, although it is sensitive to the fact that what happens in these domains will almost certainly create stresses and strains for the systems being explored here.

The Multilateral Global Governance System

Although multilateral global governance mechanisms are characterized more by their limitations than their achievements, they cannot be ignored. The United Nations and an extensive set of regional and functional organizations provide governance mechanisms which, for all their limitations, add a layer of stability and predictability to world politics. Global governance differs from domain to domain but typically establishes norms and standards of behavior, creates procedures for resolving conflicts among member states, offers opportunities for private diplomacy, establishes mechanisms for responding to crises, and to one degree or another, holds member states accountable for their actions.

At the same time, there are major weaknesses in global governance. Many of these are inherent in multilateralism and include opportunities for avoiding responsibility by buck-passing, lowest common denominator responses, a search for consensus as a rationale for procrastination, and free riding. Indeed, there is often a degree of cosmetic conformity in the way states live up to obligations they incur through their participation in the governance system. Yet, in a sense, this

helps to explain why the system is sustainable: the flaws and imperfections in the system ensure that the demands on states are limited.

Nevertheless, there are several underlying changes which highlight the need for reformation of the system. First, since the creation of the United Nations – which remains the basis for global governance – there has been a major shift in the distribution of power in the international system. The permanent members of the Security Council, in particular, represent the distribution of power in the middle of the twentieth century rather than the twenty-first century. The victors of the Second World War are no longer dominant economically and strategically, yet there has been no major shift to accommodate new realities. Second, the changing security agenda has not been reflected in the issues brought before the Security Council: the traditional mandate of threatening peace and security was appropriate when the problems revolved primarily around great power rivalry, but is less compelling in a world where transnational threats challenge the security of nations but do not threaten peace in the traditional sense. Third, neither the UN nor other global institutions have developed a significant capacity for effective crisis prevention let alone crisis management. The result is that crises such as that in Darfur are allowed to fester, bubbling up sporadically to the top of the international agenda but receiving little sustained attention. The capacity of the United Nations to intervene decisively to prevent, contain, or resolve conflict remains a major shortcoming of an institution supposedly dedicated to the preservation of peace and security.

With the underlying power structure and the issue agenda transformed, and the absence of commensurate change in the governance mechanisms and procedures, it might appear that the multilateral global governance system is in serious danger of collapse. Yet, collapse is an unlikely outcome. Paradoxically, the limitations of the governance system make it less vulnerable to collapse than if it were a more ambitious design: reeds bend in hurricanes whereas trees are toppled. Because global governance remains nebulous in terms of objectives and modest in scope and reach, it can creak along. In some instances marginal or incremental improvements are made. The challenge of responding to a broader issue set, for example, has been met largely by the addition of new more specialized bodies within the UN system (the UN Office of Drugs and Crime is a good example) as well as the creation of agencies and regimes that are formally outside the UN. In addition, global governance has been strengthened by the emergence of large numbers of NGOs which provide powerful advocacy and policy networks. Such changes are incremental but have augmented rather than diminished the capacity of the system

This suggests that the system will stagger along until or unless a major crisis sparks overt and impatient demands for change and reform. If the forces of inertia in global governance prove impervious to such demands, the outcome will be a loss of effectiveness and a decline in relevance of governance systems. To the extent that the system can accommodate such demands, however, adjustment and reform could actually lead to enhanced performance and more effective global governance. In sum, because of modest expectations the system does not

have to perform very well in order to survive; and with even small improvements, it can prosper. Partly because the expectations are so low so long as the system exhibits a modicum of resilience and adaptability the outcome is likely to be system enhancement rather than system decline.

The Geopolitical System

Global governance, of course, is not the exclusive preserve of multilateral institutions. Crucial components of global governance are also provided by the dominant powers in the international system and especially the United States which, as the global hegemon, has done so much to shape the existing international order. United States dominance, however, is likely to be increasingly challenged. This could create a great deal of instability and place high levels of stress on the geopolitical system. During the 1990s, wishful thinking and undue optimism was generated by the collapse of the Soviet Union and what appeared to be a unipolar international system. The end of the Cold War was treated by some observers not only as the end of history but the end of great power competition. Chinese economic dynamism and the resurgence of Russia, however, have coincided with problems for the United States in both Afghanistan and Iraq to underline the premature nature of such judgments. An emerging triangle of great power politics appears to be emerging in which the United States, Russia and China vie for dominance in ways that could all too easily lead to system crisis and collapse.

Some observers reject such a prospect as overly narrow. In their judgment, the rise of the European Union and India could make the international system truly multipolar rather than tripolar. The difficulty with this, however, is that Europe remains what Hedley Bull once termed a civilian power¹¹ while India might be an emerging great power but lags behind China and is also embroiled in a major regional competition with Pakistan. Other critics take the opposite position, arguing that tripolarity remains a distant prospect and the United States hegemony remains intact. From this perspective, Russia, in spite of its economic recovery and expansion since the 1998 crisis, remains too dependent for growth on high oil prices, and cannot sustain itself as a comprehensive (as opposed to military power) superpower. Similarly, China has major divisions which could easily derail its emergence as a peer competitor for the United States. Urban rural differences, extensive corruption and crime, significant disaffection with the regime, and a “bachelor bomb” in which men greatly outnumber women, all create the potential for instability. Yet, one potential response to these problems – especially the male youth bulge – is to increase the strength and size of the military. In this sense, responses to domestic weaknesses could hasten the emergence of China as a competitor to the United States – and to Russia. As for Russia itself, the drift of the 1990s has been replaced by a new assertiveness, certainly in its traditional sphere of influence, as well as by an increased awareness that its control over energy resources is an important element of coercive power. It is hardly a stretch, therefore, to see the emergence during the next decade or so of a new great power triangle.

Even with agreement on the emergence of a tripolar system, however, skeptics might argue that this does not necessarily result in unstable geopolitical competition. They point to the Cold War

as an example of great power rivalry which, for all its tensions and crises, was relatively well-managed. Unfortunately, there are critical differences in the emerging system which could increase the potential for volatility and management breakdown. A tripolar rather than bipolar system will contain very different dynamics from those of the Cold War. Although in engineering a triangle is one of the most stable designs, in world politics it is probably one of the least stable. A triangular relationship is more complicated, strategically and politically, than a dyad. Competition to be one of two rather than be isolated is endemic and unavoidable. It is likely to be particularly intense in a world characterized by competition for energy resources. Moreover, the strategic relationship among the three great powers is likely to be further complicated by a novel mix of strategic offensive and defensive capabilities along with the inherent dynamics of a security dilemma in which it is not always clear who is the target of action - but in which actions or programs directed against one of the competitors also have major implications for the other. Add to this the immediacy of communications systems – which leave little time for delayed and thoughtful responses in crises - and it is clear that novel dynamics will be at play in any future great power confrontation. Time pressure and stress could have a debilitating impact on the capacity for crisis management, while the symbolic importance of the outcome in front of a global audience could create intense pressure on decision-makers to “win” rather than compromise.

In addition, the tripolar system has the potential to intersect in some very dangerous ways with two highly intractable regional competitions – India v Pakistan and Israel v Iran – both of which involve nuclear weapons and one of which also involves serious questions about regime stability. Even during the Cold War the capacity of allies to act in ways that might lock in their superpower patrons in undesirable ways, was ever present, although it only came to the fore in the Middle East War of October 1973. With a more complex great power relationship and the added nuclear component at the regional level, future crises will almost invariably lack the simplicity of Cold War crises. In retrospect, United States-Soviet competition was relatively straightforward and evolved in ways which enhanced stability. The prudence demanded by existential nuclear deterrence made the two powers reluctant to become embroiled in direct conflict with its potential for rapid and massive escalation. The prospects for miscalculation were also reduced by the emergence of clearly demarcated spheres of influence and the mutual if tacit recognition of asymmetries of interests in particular regions. In the emerging tripolar world, however, such clarity could be absent – and the more ambiguous the situation, the more opportunities for misunderstanding, miscalculation, and crisis mismanagement. Moreover, the inherent dynamics of the triangle are likely to intersect with regional rivalries and conflicts in ways which create additional opportunities for mistakes and miscalculations. The danger is that in a regional crisis, local and global interactions will create escalation spirals in which positive feedback loops undermine efforts to manage and defuse the situation. The worst case scenario is reminiscent of the Sarajevo crisis in 1914, when alliance relationships combined with military strategies based on the need for speed to take things out of control. The absence of dampening mechanisms contributed significantly to the outbreak of war. Although great power war in the

future will be regarded with far greater trepidation than in 1914, the complexity of the emerging international system cautions against complacency. The collapse of the system into great power hostilities is not something that can be ruled out. In this connection, Robert Jervis's argument that interactions can create outcomes which are neither desired nor expected is particularly compelling.¹² This is not to predict the collapse of the system; it is to argue though that the stability of the geopolitical system will decline and the system will have a serious potential for tipping into collapse.

This is made even more likely by several trends involving the diffusion of weapons technologies. The spread of nuclear weapons both inside and outside the Non-Proliferation Treaty is particularly disturbing. After several decades in which it proved more successful than even its most enthusiastic proponents hoped, the Non-Proliferation regime has clearly begun to crumble.¹³ Israel, India, and Pakistan operated outside the regime and acquired nuclear weapons with a minimum interference from the international community. In contrast, the North Korean and Iranian nuclear programs both involve countries which were signatories to the NPT and have provoked significant efforts to forestall nuclear weapons acquisition. Should these efforts fail, preventing regional nuclear proliferation cascades could also be difficult. In fact, proliferation dynamics have changed significantly. Although the Bush Administration's Proliferation Security Initiative and additional inspection measures have recognized the danger of non-state armed groups acquiring nuclear or radiological weapons, they have had little impact on the dynamics of what James Russell has termed "the non-state proliferation market substructure."¹⁴ According to Russell this sub-structure includes at least four characteristics:

- The "legitimate trade in dual-use items that can be used and diverted for nonconventional and nuclear weapons programs."¹⁵
- Acquisition and diffusion activities by front companies and subsidiaries of quasi-governmental organizations in states such as Iran and Pakistan.¹⁶
- The activities of illicit networks trafficking in radioactive materials.¹⁷
- Demand from violent non-state actors seeking unconventional and conventional weapons that can be used for "strategic effects."¹⁸

In this assessment, the A Q Khan network is not an isolated network which has been successfully disrupted so much as the harbinger of "a world of WMD one-stop shopping involving quasi-state organizations and transnational corporations that service states, warlords, and terrorist groups using legitimate dual-use trade in addition to illicit networks..."¹⁹ What makes this even more disturbing is that criminal and terrorist networks can all too easily become intermeshed with geopolitical competition. This has already happened with Daewood Ibrahim's criminal organization known as D-Company which has been linked to Pakistan's ISI and was involved in the Mumbai bombings in 1993. Such linkages are likely to become a frequent occurrence in South Asia.

As well as the spread of nuclear weapons and the increased availability of radiological weapons, another potentially destabilizing trend is the spread of cruise missiles. This has been compellingly characterized by Dennis Gormley as “missile contagion.”²⁰ In his judgment not only has cruise missile proliferation weakened missile non-proliferation norms, but it has also combined with a growing emphasis on preemptive strategies “to make cruise missiles the ‘first strike’ weapon of choice in several volatile regions of the world.”²¹ The Indian military’s emphasis on a “cold start” strategy, for example, incorporates the early employment of cruise missiles in plans for a lightning strike.²² Subsequently, Pakistan’s surprise test of a land attack cruise missile in 2005, intensified fears in India. The result is an intense security dilemma dynamic which has not only primed South Asia for what Gormley terms a “destabilizing missile arms race” but could also feed into misperceptions and miscalculations in a crisis.²³ This, in turn, could intersect in unpredictable ways with competition among the United States, China, and Russia.

The stresses and strains in the geopolitical system are inherent in great power competition in an anarchic international system. What is most striking, however, is that the geopolitical system is becoming increasingly complex as a result of the intersection of global and regional rivalries, and interactions among states and non-state actors. The danger is increased unpredictability. This is not surprising. “Systems often display non-linear relationships, outcomes cannot be understood by adding together the units or their relations, and many of the results of actions are unintended.”²⁴ This increases the potential for crises which will be even more difficult to manage because of technology diffusion and offensive strategies. At the very least, this suggests the erosion of the system with a real possibility of an uncontrolled crisis or inadequate crisis management leading to system collapse.

The Westphalian state system

The global system of sovereign states is a classic example of a highly diverse, complex system (separate from the geopolitical system just described). Nominally almost all states share the same characteristics of formal sovereignty - which, in turn, is recognized by others. In practice, states differ enormously in governance capacity, size, wealth and resources, and influence in the international system. As this author has written elsewhere, “strong states are characterized by high levels of legitimacy and authority, adequate levels of provision of collective goods, sound economic management, the primacy of the collective, and a high degree of inclusiveness. Weak states, in contrast, suffer from deficits in legitimacy, capacity, provision of public goods, and inclusiveness. In most instances, weaknesses along the various dimensions are mutually reinforcing, while in rather fewer instances weakness in some areas is offset by strength elsewhere.”²⁵ Even though some states have failed (most notably Somalia) and others are often characterized as failing, the system as a whole has continued to adapt – as would be expected given the diversity of states and the capacity of powerful states (strong in terms of governance, economic resources, military capabilities, and diplomatic influence) to manage and maintain the system. At a rough guess, however, it seems probable that no more than 25 to 30 percent of the

states in existence today are effective, well-functional entities with a high degree of legitimacy. Moreover, there are signs that the Westphalian state system as a whole is under stress and, if not moving toward collapse, is certainly facing what appears to be a series of fundamental challenges.²⁶

Perhaps the first and most important of these is legitimacy – or rather, the lack of it. For states to be legitimate they must meet the needs of their citizens, engage in efficient and effective economic management, and evoke the loyalty of significant portions of their population. In addition, they must be inclusive rather than exclusive: individuals or groups must not be “excluded from seeking political influence or receiving a fair share of resources and services because of ... affiliation” or identity.²⁷ When they fail to meet these requirements and have what might be described as a low legitimacy quotient, they are compelled to rely on coercion rather than consent. This is something which can work in the short term but ultimately can prove counterproductive. As Thomas and Kiser note, “extreme coercive action” by the state can contribute to failure by provoking violent opposition.²⁸ This is all the more likely because those whose loyalty has not been evoked by the state and those who feel they have been excluded by the state tend to have affiliations with other entities – warlords, criminals, insurgents - which are often actively opposed to the state. The difficulty is that in the age of globalization more and more legal and illegal immigrants, who in the past might have been easily assimilated, are victims of social, political and economic exclusion and are marginalized or alienated. This suggests that the problems of maintaining state legitimacy might be increasing rather than decreasing. The state could well be a victim of a mixture of rising and disappointed expectations.

A second quality, lacking in many states, is capacity – both to extract and to provide. Indeed, strong and effective states with significant extractive capacity (taxation) typically match this with the provision of collective goods (security and welfare) and sound management of the economy. States, which fail to balance extraction and collective provision, are typically seen as exploitative and consequently have a low level of legitimacy. States with limited extractive capacity are inherently weak, and have limited resilience in the face of adverse economic and political trends. Moreover, many states suffer from what the author has termed “capacity gaps,” as a result of which they also develop functional holes that render them unable to carry out functions regarded as both normal and necessary for modern states. In some cases, the void is filled by various non-state actors who compensate for state weakness or act as proxies for the state. This too can undermine the legitimacy of the state and is a favored tactic for insurgents and even terrorist groups which develop social welfare functions – a strategy that has been adroitly described as “warfare as welfare.”²⁹ In other cases, actors exploit functional holes as opportunity spaces: organized crime, for example, is able to act with impunity where the criminal justice functions of the state are weak or absent.

A third problem is a lack of consensus on political and procedural fundamentals. For many contemporary states agreement on the rules of the political game is absent. In effective liberal

democracies, for the most part, there is consensus on both procedural and substantive norms regarding the exercise of power in society. Furthermore, ample opportunities exist for the representation of individual and group interests - and the expressions of these interests occur within well-defined limits. Acceptance of the political process is widespread and is reinforced by agreement on what is permissible and what is out of bounds. All this ensures that politics is not a zero sum competition and that those who are in power act on behalf of the collectivity rather than simply according to individual or group interests. Conversely, those who are out of power enjoy certain protections and an opportunity to regain power through the accepted process. In many states, however, these conditions are absent. When there is no agreement on the political rules, individual interests tend to dominate collective interests, politics becomes exclusive rather than inclusive, and the state all too easily becomes little more than a kleptocracy serving the interests of narrow elites. This, in turn, contributes to undermining legitimacy.

A fourth problem is that although states nominally exercise sovereignty over their territory and theoretically control who and what crosses their borders, global flows are faster and more difficult to police than ever before. Some of these flows are particularly dangerous for the state, involving products that are prohibited or regulated. The difficulty is that differential prices across borders create similar market dynamics whether the product is legal or illegal. Paradoxically, but not surprisingly, therefore, national borders are the places where sovereignty is both most fully expressed and most obviously undermined. The state seeks to prevent certain commodities and people coming across the border; traffickers, however, have a highly adaptable toolkit that includes concealment and deception, facilitation through corruption and bribery, and circumvention of control posts.

Some would argue, of course, that these dynamics and challenges are neither novel nor unprecedented. Stephen Krasner, in particular, suggests that states are resilient precisely because they are able to adapt to such pressures. In his view “the control and authority of states has persistently been contested”.³⁰ Indeed, “states... have always operated in an interdependent international environment. They have never been able to perfectly regulate transborder flows...”³¹ Consequently, it is important not to exaggerate the novelty of contemporary challenges stemming from globalization. Krasner also argues, in effect, that functional holes are nothing new: states have shed functions which they were unable to manage including relinquishing authority over the way in which their citizens interacted “with the sacred” which was “no small thing”.³² Krasner also contends that the rules of sovereignty could only be supplanted “through an evolutionary process in which key actors” find it “in their interest to choose new and incompatible rules and institutions. It is unlikely that key actors will make such choices, given the inherent advantages of the status quo, the ability of states to simply abandon authority claims over issue areas that they cannot effectively regulate, and the fact that sovereignty can coexist with, but not be displaced by, alternative institutional arrangements”.³³

Much of this is persuasive – and is reinforced by the paradox that even when a state collapses under the weight of ethnic or sectarian conflict, it remains the prize of the conflict. Particularly

important, however, is Krasner's emphasis on self-interest and the advantages of the status quo. Ironically in some ways this emphasis is consistent with the arguments articulated above about the challenges to the Westphalian state: control of the state still offers enormous opportunities for personal enrichment, particularly where the demarcation between public and private remains blurred rather than distinct and where political power is about the acquisition of assets rather than the shouldering of responsibilities. Yet, although this is sustainable in the short and medium terms, it is less so in the long term. At some point, the prevalence and impact of what could be termed "low-quality" states could degrade the reputation of a system which allows these to flourish with impunity. Similarly, although the shedding of functions has been a major form of adaptation, this is far more difficult and problematic when the functions in question are central to meeting the expectations associated with the state. Jettisoning control over religion is one thing; abandoning welfare and management of the economy are quite another. These responsibilities are of this world not the next and for many people the "politics of the belly" is more immediate than the politics of the hereafter.³⁴

Such argument notwithstanding, Krasner's bottom line is compelling: the state system is unlikely to collapse. Yet, it is likely to be increasingly hollow. Problems of legitimacy, capacity, and consensus feed off one another in ways that are not only mutually reinforcing but also add to the difficulties in developing an adequate response. As a result the limits of state power will become increasingly apparent. Although some strong legitimate states will continue to exist, the number of qualified, restricted, notional, or collapsed states is likely to increase. In other words, the Westphalian system, because of its inherent adaptability and resilience, is not likely to collapse suddenly or dramatically but it will suffer from steady erosion. This will be exacerbated by the continued empowerment of non-state and transnational actors. Indeed, it seems very likely that many weaker states will be neutralized, penetrated, or in some cases even captured by non-state groups such as criminal organizations. This is all the more likely because of another global trend which is likely to intersect with the decline of the Westphalian state – the rise of global anomie.

The Rule of Law and the Rise of Global Anomie³⁵

Most modern societies, nominally at least, are based on the rule of law and on the notion of the state providing security for its citizens not only against external military threats but also against internal criminal threats. Yet, in more and more instances, not only is the state unable to provide for the security of its citizens at the domestic levels, but increasing portions of the population are seemingly becoming unwilling to obey laws or accept certain norms of behavior. This is a form of anomie which is generally understood as a kind of behavioral sink, a degeneration of rules and norms and the emergence of forms of behavior which are not constrained by standard notions of what is or is not acceptable.

In some instances this collapse of social norms – which typically reinforce the rule of law - results from external shocks. In such cases, not only are the restraints removed but norms and inhibitions which were once in place no longer apply or guide behavior. This is partly because

the penalties for non-compliance with the norms have suddenly been removed. Yet, it also represents something much more fundamental: a willingness to put morality and decency to one side, a marked absence of respect for fellow citizens who become simply targets to be exploited for financial gain; and a readiness to engage in forms of behavior that are normally regarded as reprehensible. As defined by Passas, anomie is a withdrawal of allegiance from conventional norms and a weakening of these norms' guiding power on behavior.³⁶ Not surprisingly, therefore, a decline into anomie typically leads to comments that the thin veneer of civilization has been stripped away. Life under anomie becomes, in Hobbesian terms "nasty, brutish and short." Iraq after the United States invasion is a classic case of anomie, beginning with widespread looting, moving into an upsurge of violent and sexual crimes, including a massive increase in kidnapping, and culminating in a process of sectarian cleansing characterized by extreme forms of brutality. Other examples, at least for a short time, include New Orleans after Hurricane Katrina. Although cases of looting following natural disasters are not uncommon, the descent into chaos and anomie in the aftermath of Katrina was particularly pronounced. The hurricane not only inflicted enormous flood and wind damage but also destroyed communication systems. This left a vacuum of authority which combined with a large number of people stranded in a confined place, bereft of resources, and uncertain when help would arrive, to provoke or permit forms of behavior that – even allowing for media exaggeration - were well below normal standards for the city.

In some cases, the descent into anomie is rapid; in others it is a long-term trend. Passas, for example, has argued that not all anomie should be linked to strain theory or seen as in terms of sudden collapse. Rather, he argues, it is often a result of structural contradictions in society which create a gap between expectations and the opportunity to fulfill them – a gap which typically results in social deviance or criminality.³⁷ The result, however, is the same: a decline of behavioral norms and standards and the spread of crime both organized and disorganized.

Although the aftermath of Katrina and the aftermath of the U.S. invasion of Iraq are obvious examples of anomie they are far from the only one. The growth of youth gangs and drug trafficking organizations in the favelas of Brazil display many of the same characteristics, while anomie has also been a characteristic of the Mexican drug business: the assassinations of police chiefs, a disregard for innocents who might be caught in the cross-fire, the killing of musicians and journalists, and a significant growth in the number of decapitations are all evidence that "conventional norms are regarded as nonbinding, at least temporarily."³⁸ In a similar vein, Francisco Thoumi argues that one of the reasons Colombia became so important in the cocaine trade is the lack of respects for laws and norms on the part of the population and an acceptance of illegality that is much higher than in most societies.³⁹ Indeed, both Colombia and Mexico, although extreme cases, reflect a much broader trend in Latin America towards the spread of lawlessness and violent crime. This has become so bad that most citizens in the countries of Latin America conceive of security in terms not of national security but of public security. They worry about threats to them and their families from criminals rather than threats to the state from

other states or even terrorists. Much of Africa appears to be suffering from a similar malaise. In West Africa, for example, Nigeria has long been a center of criminal activities, some of which have been imitated and adopted by people in other countries in the region. In many ways, Malcolm Gladwell's notion of contagion accords fully with the notion of anomie and spreading criminality. Gladwell spends much time discussing the "stickiness" or attraction of certain ideas and forms of behavior.⁴⁰ From this perspective, criminal careers as an alternative source of employment appear very attractive in countries where opportunities in the legal economy are limited. Moreover, imitation and emulation are the order of the day. This is not surprising: those who behave within the law are disadvantaged compared to those who do not. Moreover, operating outside the law is likely to appear increasingly attractive in the event that the global recession is sustained. Expansion of anomie is also likely to be given additional impetus by energy and food shortages.

It is possible to go even further than this: global anomie is a problem that exists at the state level as well as at the level of the individual. This is apparent in the spread of corruption in government, in the development in many countries of a "political-criminal nexus" between the elites and organized crime, and the willingness of some governments to protect criminals and drug traffickers. One of the best examples of how a state can succumb to the attractions of lawlessness is Guinea-Bissau, which has become a transshipment hub for Colombian drug trafficking organizations moving cocaine to the European Union. From one perspective, this is a rational decision for a government and people with limited resources and a high level of dependence on a single commodity (cashew nut) for export. After being relegated by globalization and neo-liberalism, the periphery is fighting back. The result though is that the illicit global economy will become a much larger component of the overall economy; in a complex system positive feedback loops strengthen tendencies toward behavior which works and weakens those which do not. Even states which emphasize the rule of law are not immune to this trend – as is evident simply by looking at the increase over the last several years in corruption cases on the southwest border of the United States. Significantly, some of those with responsibility for controlling the borders succumb to the temptations of bribery and corruption.

All this could have important consequences. The spread of anomie is likely to make crime of all kinds – organized and disorganized, violent and non-violent – even more pervasive in the years ahead. It also implies that more and more states will be penetrated or captured by organized crime; these states will still exercise formal sovereignty but are unlikely to observe global standards in efforts to combat organized crime or money laundering. In practice such standards will also become increasingly notional. Moreover, this could lead to a growing divide between states in which the rule of law remains intact and those in which it has broken down. The prognosis is not so much a clash between civilizations but a clash between the forces of law and order on the one side and the forces of lawlessness and disorder on the other. Violent non-state actors such as warlords, militias, gangs, insurgents, and terrorists have become central in many

countries: they inherently challenge the state monopoly on violence and behave in ways that increase disorder and anomie.

If all this seems a stretch consider how criminal activities funded ethnic conflict and ethnic cleansing in the Balkans during the 1990s, the extent to which many conflicts within African states have been linked to the control and exploitation of natural resources, the ability of youth gangs in Central America to intimidate societies and even governments, and the ways in which organized crime and criminal activities have made post-war stability increasingly elusive by acting as spoilers. Bear in mind too that most programs for disarmament, demobilization and reintegration have major shortcomings. In Colombia, for example, many of those who belonged to the right wing paramilitaries and were formally demobilized have created what have been described as “new armed groups” heavily involved in drug trafficking.⁴¹ While some of these groups continue to fight against what is left of the left-wing insurgency, FARC, others cooperate with FARC in the drug industry. Crime makes strange bedfellows.

In sum, the rise of global anomie is not something that appears dramatic or that can be understood in terms of sudden collapse; yet it is a shift in norms and behavior that will almost certainly have major consequences for the global system and will strengthen the forces of disorder within that system. Once again, the danger is long-term erosion rather than immediate and dramatic collapse – at the state level. At the system level, there is a spillover effect which is likely to make global governance even more problematic. Anomie is also likely to be an important trend in urban settings. And it is to the global system of urbanization that attention must now be given.

The Revolution of Rising Urbanization and Disappointed Expectations

The twenty first century, among other things is the century of urbanization. More than half the world’s population now lives in urban areas and this likely to increase significantly during the next several decades. The move from rural areas – like other forms of migration – has been inspired by an expectation that cities offer greater economic opportunities. To a degree they do. As George Martine, the lead author of a United Nations study on population and urban growth noted, cities provide great potential for social development, for economic development, demographic improvement, and [progress on] environmental issues.”⁴² They are the locus for 80 to 90 percent of GNP growth and their “concentration and density make it easier to provide social services, or services of any kind; education, health, sanitation, water, electrical power ... everything is so much easier, much cheaper on a per capita basis.”⁴³

Against the background of this observation, it is clear why urbanization has become so important. The process itself has several distinct dimensions. One important but sometimes over-emphasized trend is towards larger cities – which could bring with them larger problems. In the next decade or so Tokyo, which is currently the only state formally designated as a meta-city (i.e. as having over 20 million inhabitants) will be joined in this category by Mumbai, Delhi,

Mexico City, Sao Paulo, Dhaka, Jakarta and Lagos in the developing world, as well as by New York. This will be accompanied by a growth in the number of mega-cities with populations over 10 million, and rapid growth in the number of cities between 5 and 10 million, as well as in the number of cities with populations between 1 and 5 million. By 2015 there will be 23 megacities, 19 of them in the developing world,⁴⁴ and 37 cities with populations between 5 and 10 million.⁴⁵ There will also be a continued growth in the number of smaller cities. Indeed, as Martine points out, “cities with 500,000 citizens or fewer are experiencing 53 percent of overall urban growth, while mega-cities account for only 9 percent.”⁴⁶ In short urbanization is a multi-pronged phenomenon.

This is not surprising: cities are enormously exciting, have great dynamism and hold out enormous promise to new urban dwellers. But there is also an important downside to the continued growth of urbanization. Many cities will increasingly pose manageability problems. In spite of the rise of smaller cities, the larger ones are likely to present greater challenges: the sheer size of meta-cities and mega-cities will generate immense law and order and security problems, especially in poorer areas, and impose additional burdens on urban infrastructures that are already under pressure. These problems are not exclusive to the larger cities, but are particularly pronounced in them. In some cases, these stresses and strains will prove overwhelming, leading to weak, failing and even collapsed cities. Other trends which point to growing urban disorder include the increased number of urban poor and the growth of slums. As Martine acknowledges, “the poor are now the largest segment of urban society around the world, with urban poverty increasing at a faster rate than rural poverty.”⁴⁷ Moreover human slums have been described as the “emerging human settlements of the 21st century.”⁴⁸ Indeed, “urbanization has become virtually synonymous with slum growth, especially in sub-Saharan Africa, Western Asia, and Southern Asia.”⁴⁹ According to one commentary, there are probably more than 200,000 slums in the world, 15,000 of them in five cities of South Asia - Karachi, Mumbai, Delhi, Kolkata and Dhaka.⁵⁰ These are typically characterized by inadequate housing, over-crowding, limited access to water and sanitation, lack of property rights and, in many instances, high levels of violence. What makes this all the more serious is that by 2030 the number of people living in slums worldwide is expected to reach two billion.⁵¹

In other words although urbanization will fulfill expectations for some, for many there will be only disappointment, frustration, and alienation. This will feed into what might be termed urban anomie which, in turn, will accentuate the broader trend towards global anomie discussed above. This will be further strengthened by a growing trend “toward an increasing “informalization” of the urban economy, as the formal sector fails to provide adequate employment opportunities for young people and adults seeking work. According to the International Labor Organization, “approximately 85 per cent of all new employment opportunities around the world are created in the informal economy.”⁵² Not only does this leave workers open to serious abuse; it can all too often lead down a slippery slope from the informal economy to the criminal economy. And

those who do not find jobs and remain unemployed are perhaps even more likely to become involved in criminality.

In other words the problem is not urbanization as such, but the way in which it interacts with other problems such as the availability of firearms and high levels of unemployment among youths and young men. Unemployed youth are particularly vulnerable. “With nothing to do and nothing to lose, youth often perceive organized criminal gangs as appealing economic and social opportunities.”⁵³ Nowhere is this more relevant than in Brazil. As one analysis of the gang phenomenon in major Brazilian cities point out, gangs are attractive because they provides “access to consumer goods” and enhanced “social status,” access to weapons which empower the disenfranchised, a sense of identity and belonging and even “financial remuneration to their members, whether in the form of fixed salaries, opportunities to sell drugs on a commission basis or as needed infrastructures to commit armed robbery and other crimes”.⁵⁴ One result of this is the high level of firearms-related deaths in Brazil. According to one assessment, the “toxic mix of kids, guns and gangs...is so dangerous that in some cases more young people are dying due to urban violence in countries that are not at war than those in countries that are. A 2002 case study of children in organized armed violence found that between 1978 and 2000, more people, particularly children, died in armed violence in the slums of Rio de Janeiro (49,913) than in Colombia (39,000), a country that is actually experiencing civil conflict.”⁵⁵ Urban youth gangs in Brazil are becoming the Latin American equivalent of child soldiers in Africa,⁵⁶ the only difference being that the wars in the favelas are not recognized as such by the international community.

Even Janice Perlman, whose earlier work did much to dispel myths about the “marginalization of the urban poor” acknowledges that this has become “...more of a reality over the past 35 years, despite improvements in living conditions. Globalization has transformed the local job market; world-class images have defined local “needs”; and international drug and arms traffic (with their concomitant corruption) have transformed local settlements into traps of violence.”⁵⁷ Against this background it is hardly surprising that there is an emerging crisis of urbanization as many cities become increasingly ungovernable and degenerated into what Richard Norton terms “feral cities.”⁵⁸ In his view, a feral city is “ a metropolis... in a state the government of which has lost the ability to maintain the rule of law within the city’s boundaries yet remains a functioning actor in the greater international system.”⁵⁹ He offers a compelling description of the conditions in a feral city, noting that “social services are all but nonexistent, and the vast majority of the city’s occupants have no access to even the most basic health or security assistance. There is no social safety net. Human security is for the most part a matter of individual initiative. Yet a feral city does not descend into complete, random chaos. Some elements, be they criminals, armed resistance groups, clans, tribes, or neighborhood associations, exert various degrees of control over portions of the city.”⁶⁰ They are not so much ungoverned spaces as alternatively governed spaces. This in turn feeds back into the declining appeal of the Westphalian state.

In other words, urbanization carries both enormous promise and enormous peril. This should not be surprising. In a complex world, consequences can be multi-directional. In the final analysis, however, the peril outweighs the promise. This does not mean that the system will collapse, but it does mean that it will become more disorderly and that some cities will collapse into ferality. In turn, the urban component of an emerging global disorder will compound other problems. In this instance, the problem is not vulnerability to external shock as much as to internal corrosion. Other systems such as the global trade and financial system, however, have not only internal vulnerabilities but are also extremely vulnerable to external shocks.

The Global Financial System and the Global Trade System

The economic downturn sparked by the U.S. mortgage crisis has brought to a head some long-standing anxieties about the global financial system and its management. In many respects this mirrors the above discussion about global governance. The institutions for global financial management, particularly the IMF appear increasingly inadequate. This reflects both a failure of adaptability and a failure to develop the kind of crisis management capabilities necessary for managing a domain in which a significant degree of volatility is inescapable. The ability of the IMF to adapt to new challenges and even new realities has been so inadequate that some critics complain that it is in a “time warp.”⁶¹ Part of the problem is an “unsustainable asymmetry: OECD countries shape the IMF’s policies, which affect primarily developing countries and newly industrialized economies.”⁶² Moreover, because of the failure to develop a multilateral capacity for crisis prevention and crisis management, states are taking on the responsibility. The difficulty with this is that in the case of a financial crisis, competing policies rather than coordinated responses could simply exacerbate the problems. A recent report even described the global economy as “looking more precarious, more unequal, and less governed than it has been in previous decades.”⁶³ Lessons from the 1998 financial crisis, which was driven in part by herd behavior and contagion effects, have not been institutionalized in ways likely to provide firebreaks and facilitate containment. What makes this even more disturbing is that there is a serious “global imbalance whereby China and several other East Asian countries have accumulated enormous amounts of US Treasury bills as reserves and created an Asian Monetary Unit (AMU), while the United States attracts approximately 70 percent of global investments to service its trade and fiscal deficits.”⁶⁴ The result is that capital markets, in effect, are primed for a crisis far more severe than the current one.

The global financial system has seen an enormous increase in the bandwidth of financial flows. Although this has both resulted from and facilitated globalization, it does little for global stability. Volatility and the speed and ease of flows give capital enormous freedom or mobility that also has a downside. If money is moved into an economy easily it can be moved out with equal ease; this, in turn can encourage herd behavior and contagion effects which act as a potentially uncontrollable accelerant throughout the financial system. All this was evident in the Asian financial crisis of 1998 and the contagion which resulted from the dominance of positive feedback loops (which accentuate trends) over negative feedback loops (which act as dampeners

or inhibitors). Although some reforms were initiated in the aftermath of the crisis, the fundamental problems are inescapable in an area where confidence, trust, and perceptions are vital. Moreover, it is arguable that since 1998 the deterioration in United States economic power and the declining strength of the dollar have created additional sources of instability. A financial crisis in Thailand is one thing; a financial crisis in the United States is something very different and the chances of uncontrollable contagion are much greater.

There is an added dimension - United States financial vulnerability. With the massive investment of sovereign wealth funds in the United States and – in spite of agreements not to use these for political purposes – the possibility of their withdrawal in response to United States military intervention in the Middle East is very real. Some kind of Middle East confrontation could all too easily precipitate a dollar crisis. Tension or a crisis in Sino-American relations could have a similar effect. China might decide to use its treasury holdings as economic leverage to offset United States military superiority. In the event of an external shock of this kind it is not clear that the global financial system will display sufficient resilience to avoid collapse.

The global trade system is probable more resilient than the global financial system, partly because there is less dependence on perceptions and fewer opportunities for herd behavior. Nevertheless, this too is subject to external shocks which cross domains and have a major effect on functioning of the system. The successful use of a WMD that is smuggled into the United States or one of its allies in an inter-modal container would have enormous impact. Even the discovery of such a weapon in a container prior to its importation would lead immediately to a much more stringent, intrusive, and slow inspection regime. In spite of the creation of the Department of Homeland Security and a general tightening of the trade inspection region in the aftermath of September 11, trade flows continued to take precedence over security. An event of the kind described here, however, would drastically alter priorities, provoke much more stringent controls on the container trade, and make “just in time inventories” much more problematic and difficult. Although this would not lead to system collapse, it would lead to system decline and a marked reduction in global trade. The knock-on effects of this, particularly for developing countries, would be debilitating, exacerbating poverty and inequality. This in turn could further erode confidence in the Westphalian state, render cities even more prone to “ferality” and intensify the movement towards global anomie.

The other event that is likely to have a major impact on the global trade system – is a global pandemic. Not only would this create immense problems in its own right, straining public health capacity throughout the world, but it could also undermine global business confidence, and wreak havoc on the airline and tourist industries, which in turn would reverberate through national economies. The imposition of quarantines and restrictions on travel would have immediate and significant impact. Even though this could be offset to a degree by greater use of the Internet and the maintenance of commerce through the virtual world, physical movements of goods and people would be significantly reduced. Vigorous mitigation efforts would not prevent

a significant dislocation of trade and commerce, resulting in what would be at least a partial reversal of globalization.

Conclusions

The modern world is one of enormous complexity characterized by a series of interlinked and interdependent systems. Yet, most of these systems display considerable resilience. In most cases, therefore, erosion or decline is more likely than collapse. This is perhaps why more states fall into the category of weak or failing than into the relatively small basket of failed states. In some cases, states are on the brink of collapse – yet the capacity for balancing on the brink and not falling over is probably greater than is generally realized. Moreover, sensitivity to the danger of collapse is often enough to stimulate measures to avert it. The implication is that decline is more likely than collapse. Yet this should not lead to complacency as there are two major conclusions from the preceding analysis which are particularly sobering.

First is the vulnerability of systems to cascading effects. In systems without dampeners, shockwaves sometimes increase rather than decrease as they move through the system. Vertical cascades of this kind are neither novel nor surprising. What emerges from the preceding analysis, however, is the possibility of horizontal cascades across systems or what Thomas Homer-Dixon calls “boundary-jumping.”⁶⁵ A crisis in one system can spill over into another system, revealing interdependencies that are not always obvious beforehand. Indeed, systems are rarely separated by impregnable firewalls. These horizontal cascades can be sources of instability in their own right. They impose unanticipated external stress on a system which might be displaying considerable resilience in the face of internal strains. External shocks make adaptation difficult by imposing additional and unexpected stress, in some cases, creating system overload. In short, tight or close coupling is something that can exist across systems and not simply within them.⁶⁶

The second conclusion is closely distinctly related to but analytically distinct from the first. It involves the convergence of multiple strains and stresses in ways that create “negative synergies.”⁶⁷ The decline of the Westphalian system, the growth of anomie, and the problems associated with urbanization are likely to be mutually reinforcing. With three systems in decline and feeding into each other an overload crisis precipitating collapse of at least one of them becomes more likely. In both these cases, it is the addition of external stresses to internal that appears to be particularly overwhelming. At the very least this accelerates and accentuates decline; it also has the potential to tip a system from decline into collapse.

There is a broader conclusion to be drawn from this analysis. Although we are reasonably good at identifying silos of change we are far less adept at looking at the space between the silos and the ways in which different changes interact, sometimes in a beneficial manner but often in pernicious ways. What are often treated as separate systems are, in fact, inter-connected in ways which increase the prospect for a series of adverse developments ranging from financial collapse

to great power crisis. Recognizing this inter-connectivity is one thing; doing something effective to prevent or mitigate its consequences is something else indeed.

¹ Ken Booth, *Theory of World Security* (Cambridge: Cambridge University Press, 2007) offers a pessimistic assessment of current global trends but also emphasizes that radical reorientation in thinking and actions can make things better

² Phil Williams, *From the New Middle Ages to a New Dark Age : The Decline of the State and U.S. Strategy* (Carlisle PA: Strategic Studies Institute monograph, June 2008)

³ For a fuller analysis see Nathan Freier, *Known Unknowns: The Future of Unconventional "Strategic Shocks" in Defense Strategy Development* (SSI monograph, forthcoming)

⁴ Joseph Tainter, *The Collapse of Complex Societies* (Cambridge: Cambridge University Press, 1988) p. 4

⁵ Ibid. p.38

⁶ Ibid p. 37

⁷ David Snowden, "Complex Acts of Knowing: Paradox and Descriptive Self-Awareness" *Journal of Knowledge Management* Vol. 6. No. 2 (May 2002). p.7

⁸ For a useful discussion on ways of thinking see Jared Diamond *Collapse: How Societies Choose to Succeed or Fail* (New York: Viking, 2005) pp. 8-18

⁹ See John Casti, *Complexification: Explaining a Paradoxical World through the Science of Surprise*. (New York: Harper Collins, 1994)

¹⁰ See Tainter, op. cit. pp. 5-18

¹¹ Hedley Bull, 'Civilian Power Europe: A Contradiction in Terms?' , *Journal of Common Market Studies* Vol. 12 No. 2 (1982) 149–164

¹² Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton NJ.: Princeton University Press, 1997) p.

¹³ For a well articulated argument about NPT success see Jim Walsh, *Learning from Past Success: The NPT and the Future of Non-proliferation* Paper prepared for the Weapons of Mass Destruction Commission, (Stockholm Sweden, October 2005) available at www.wmdcommission.org

¹⁴ James Russell, "Peering into the Abyss: Non-State actors and the 2016 Proliferation Environment" *Nonproliferation Review*, Vol.13 No.3 (November 2006) pp. 645-657

¹⁵ Ibid. p.648

¹⁶ Ibid. p.648

¹⁷ Ibid. p.648

¹⁸ Ibid. p.648

¹⁹ Ibid. p. 655

²⁰ Dennis Gormley, *Missile Contagion: Cruise Missile Proliferation and the Threat to International Security* (Westport Connecticut, 2008)

²¹ Ibid. p.10

²² Ibid. pp.139-141

²³ Ibid. p.141

²⁴ Robert Jervis, op. cit. p.6

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- ²⁵ See Phil Williams, “Violent Non-State Actors and National and International Security” Paper prepared as a case study for International Security Network, ETH, Zurich.
- ²⁶ These are developed more fully in Phil Williams, *From the New Middle Ages to a New Dark Age : The Decline of the State and U.S. Strategy* (Carlisle PA: Strategic Studies Institute monograph, June 2008)
- ²⁷ Richard H. Shultz, Douglas Farah, and Itamara V. Lochard, *Armed Groups: A Tier-One Security Priority*, (USAF Institute for National Security Studies, USAF Academy, Colorado: INSS Occasional Paper 57, September 2004) p.8
- ²⁸ Troy Thomas and Stephen Kiser *Lords of the Silk Route* (USAF Institute for National Security Studies, USAF Academy, Colorado: INSS Occasional Paper 43, May 2002) p. 7
- ²⁹ Alexis G. Grynkewich, “Welfare as Warfare: How Violent Non-State Groups Use Social Services to Attack the State” *Studies in Conflict & Terrorism*, Vol. 31, No.4 2008 pp. 350–370
- ³⁰ Stephen D Krasner, “Abiding Sovereignty” *International Political Science Review* Vol. 22, No. 3, 2001, pp. 229-252 at p.231
- ³¹ Ibid. p.234
- ³² Ibid. p.243
- ³³ Ibid. p.231
- ³⁴ For the term politics of the belly see Jean Francois Bayart, *The State in Africa: The Politics of the Belly* (London: Longman, 1993)
- ³⁵ In this section I have drawn heavily on some of the work done by Nikos Passas on anomie, especially his “Global Anomie Theory” in S. Henry and M. Lanier, (eds.) *The Essential Criminology Reader* (Boulder CO.: Westview, 2005) pp. 174-182 and Nikos Passas, “Global Anomie, Dysnomie, and Economic Crime: Hidden Consequences of Neoliberalism and Globalization in Russia and Around the World“ in *Social Justice*, Vol. 27 No. 2 (2000) pp.16-44 The latter article is hereafter cited as Global Anomie.
- ³⁶ “Global Anomie” p.20
- ³⁷ “Global Anomie” p.19
- ³⁸ “Global Anomie” p.20
- ³⁹ Francisco Thoumi, “The Rise of Two Drug Tigers: the Development of the Illegal Drugs Industry and Drug Policy Failure in Afghanistan and Colombia” in F. Bovenkerk and M. Levi (eds.), *The Organized Crime Community: Essays in Honor of Alan A. Block*, (New York: Springer, 2006) pp.125-148
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- ⁴¹ International Crisis Group, *Colombia’s New Armed Groups*, Latin America Report No. 20, 10 May 2007
- ⁴² George Martine. See “The State of the World’s Population – Unleashing the potential of Urban Growth” Woodrow Wilson Center, June 27, 2007 available at www.wilsoncenter.org/index.cfm?topic_id=116811&fuseaction=topics.event_summary&event_id=239720
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- ⁴⁴ Summary Report: Governing Emerging Megacities – Challenges and Perspectives (7-8 December 2006, Frankfurt) p. 4 available at: www.geographie.uni-koeln.de/pearlpune/downloads/2006-12_documentation.pdf

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- ⁴⁹ Ibid. p. 11
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