**Embracing Complexity: A Framework for Exploring Governance Resources**

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**Abstract**

The premise of this article is that when comparing governance systems, a greater focus on the complexity of the environment facing nation states would provide a step forward. National regimes should not be compared in a vacuum but rather with respect to the governance challenges they are likely to face in an unpredictable world. It is necessary to recognize the adaptive complexity of the systems generating those challenges and yet how they also providing the ingredients for emergent solutions. It is argued that exploring interactive capacity rather than formal structures will provide a stronger indication of whether governance challenges are likely to be met. It is concluded that different types of national regimes could in principle deliver effective interactive governance capacity in different ways, but each can generate tipping points that could lead to failure.

Key words: complexity, governance, adaptive systems, failure

What type of governance regime is best suited to the challenges of governing in the twenty first century? This article offers a theoretical framing to explore that question. The argument is presented in four stages. First, drawing on a core insight from governance research it is argued that the focus must be on the interactive capacity within systems, that is the ability to enable state and non-state actors to work together. Second, it is contended that the context for governing is becoming more unpredictable and fast moving and that the governance challenge is best viewed in theoretical terms as managing a complex adaptive system. Third, the core behavioural parameters of such a system are explored to establish what kind of governance regime would be best suited to the challenges involved. Behaviours are not fixed but rather emergent and outcomes have low predictability. The fourth stage in the argument rests on a rudimentary comparison of the governance resources available to established democratic and a developing authoritarian regimes. The aim is to explore comparative capacity to meet governance challenges that are often surprising, always intensely complex in their inter-connections and prone to rapid changes in direction.

**Interactive Governance**

A core idea to emerge from the governance research of the last three decades is that governing is about relationships and dynamics, as much as it is about formal structures. Table 1 captures the differences in emphasis between two perspectives. The formal way of thinking about governance still has value and remains dominant in the areas of constitutional and legal studies, matched by a much wider impact on a range of other disciplines. It tends to focus on legal frameworks and instruments as the starting point for good governance. Divided formal institutions buttress those arrangements through instilling a practice that gives resources to different factions to defend their interests. Finally, individuals respond within the system as rational calculators according to the constraints and incentives set out by the legal and institutional setting in which they are operating.

What drives the framework is the assumption that *the* governing problem is how to avoid too much power being in the hands of too few. Institutional competition, therefore, delivers the checks and balances for effective government by providing formal institutions to provide challenge. Legally enforceable rules and elections also check the behaviour of the state and would be governors. People- either in government or ordinary citizens - respond to the incentives and constraints placed in front of them as rational calculators. This assumption underlies an understanding of how the dynamics of the system operate. Individuals will use the institutional options available to them to pursue their interests directly and in the case of citizens, the mechanism of voting, to register their preferences and express their assessment of the performance of the government.

**Table 1: Formal and interactive frameworks for exploring governing capacity**

|  |  |  |
| --- | --- | --- |
| **Level of analysis** | **Formal capacity** | **Interactive capacity** |
| *System* | Legal frameworks and instruments | Adaptive and Learning |
| *Institutional* | Checks and balances | Partnership resources and building trust |
| *Individual* | Rational reasoning | Boundedly rational and intuitive |

This formal thinking about governance is reflected in the demand for “good governance” (World Bank, 1992) as a core objective in international development. The argument is for a governance system that would deliver clear accountability in political decision-making, a strong legal framework, and transparency in the way that government and business conduct their affairs. These ingredients are held to be required for effective development. These ideas about the virtues of good governance have become widespread and part of the everyday discourse of development practice. They are also observable in much of the debate (for a recent update see Abramowitz and Repucci, 2018) about the respective standing of authoritarian and democratic regimes. Fukuyama (2016), operating largely within a formal governance framework, argues that China has established a viable impersonal state but has yet to achieve the rule of law and mechanisms for democratic accountability. He advises China to sequence the former before that latter. The underlying assumption is that by building up formal layers of institutions to steer governing the system becomes both more predictable and more pluralistic in its sharing of power.

There is another way to think about governance arrangements. The starting point is to focus on dynamics rather than structures, to look at the relationships within the system of governing, at interactive capacity. Here the underlying assumption is that *the* governing challenge is to create the capacity to get things done. The challenge is developing enough collective power within the system to achieve favourable outcomes (compare this argument to Stoker, 1995 about regime theory) in contexts that are characterised by difficulty and complexity. As Scott (2008: 116) argues: “The move to include difficulty and complexity, however, requires relaxing the assumption of optimizing behavior. Actors can still be purposive in models that assume complexity and difficulty, but, by definition, actors must lack the capacity to solve every problem that comes their way. Instead, they do the best that they can given how they interpret their environment”. This perspective is associated with a view that people are task oriented rather than institutionally or legally focused. Their behaviour is boundedly rational and is shaped by what it is they are trying to do and is less predictable, as they are not simply rational calculators.

Herbert Simon, the originator of the term bounded rationality, argues human behaviour is “shaped by a scissors whose two blades are the structure of task environments and the computational capabilities of the actor” (Simon, 1990:7). Cognitive limitations play their part, but their impact is mediated by the task at hand. Gigerenzer and colleagues have developed this perspective further by offering the concept of ecological rationality which can be summarized as the idea that human reasoning is adaptive rather than logical in its motivation (Gigerenzer 2007, 2008). The best type of reasoning is the one that is most suited to the environment or task with which we are faced, and that reasoning may mix elements of instrumental and calculated rationality with hunches, guesses, intuition and emotion.

The interactive understanding of governance then has a different approach to individual behaviour. It also thinks differently about structural and institutional levels. A core insight of the governance literature of the last three decades is that effective governing acknowledges the need of diverse social actors to work with one another. Two core premises underlie this insight that “any organization is dependent upon other organizations for resources” and that in “order to achieve their goals, the organizations have to exchange resources” (Rhodes 2007: 1244-5). As Klijn and Koppenjan (2012: 4) put it a shared core assumption of research on governance networks is that “(p)olicy and service delivery is formed and implemented in a network of interdependent actors”. This idea is also embedded in work on collaborative governance, seen as a strategy for governing that rests on bringing together public and private actors to build common goals through face-to-face exchanges, buildings trust and developing commitment often through building on incremental achievements (Ansell and Gash, 2008). As Table 1 records at a system level the interactive governance perspective would examine learning capacity and adaptability. Are there mechanisms in place that allow for change and development, either evolutionary or more radically in the way the system works? At the institutional level the focus is on the ability of institutions to help provide the resources for partnership, including trust and commitment.

There are attractions in both frameworks for exploring the challenges of governance. But the formal approach has the character of being normatively, anchored around a specific understanding of good governance and its lens provides a framing of the challenges of governance as if they are fixed in time. The informal model too has normative dimensions, especially in its concern with co-operation and partnership. But does it perhaps relate more to the reality of governing challenges in the twenty first century? It could be argued that the capacity of a governing regime needs to be judged against the kind of challenges it is likely to be asked to manage (Ansell et al, 2017). All regimes might set themselves the goal of social and economic development but if the context in which those goals are pursued is becoming more unpredictable and volatile which practices of governance are more likely to deliver results? Answering this question takes us to the next steps in this article.

**The Unpredictable Governing Context of the Twenty First Century**

There are a range of factors that help to define the context for governing in the twenty first century which give an unmatched flavour of rapid change, volatility and shock. The first driver is the scale and pace of technological innovation. Technological change was a core feature of earlier centuries but what is noteworthy about the twenty first century is just how dependent and integrated the basic functions of society are and how they have become embroiled with technological features that are barely understood by policymakers, let alone citizens. This observation applies to the energy supply, transport and communication systems but also to finance and banking, health care and food supply and distribution. In more specialised areas such as the trading systems of financial markets - that in turn manage pensions, credit flow, and commercial exchanges central to modern economies - the pace of innovation has arguably out stripped the capacity for government intervention. Galaz and Pierre (2017: 12) show that new actors and novel technologies are changing the nature of financial markets making trade faster, more information dense and more globalized than ever. These changes are “transformative with the emergence of a new ‘machine-ecology’ with intricate system behavior and new forms of systemic financial risks”. The governance challenge thereby created, they argue, is extremely complex when it comes to this form of the ultra-fast trading from automated systems taking less than a second to be completed and from systems that exhibit a difficult to predict flow of surges and shocks. The pace of innovation in technology shows few signs of slowing and practices and we are witnessing what has been termed the 4th Industrial Revolution where technological innovation has a greater reach linking millions of people and machines and combining physical, digital and biological worlds. The founder of the World Economic Forum, Schwab, comments that: “The changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril. My concern, however, is that decision makers are too often caught in traditional, linear (and non-disruptive) thinking or too absorbed by immediate concerns to think strategically about the forces of disruption and innovation shaping our future.” (quoted in Marr, 2016).

A second and connected driver of innovation and rapid change is the greater capacity for the rapid transmission of ideas and ideologies around the world because of the availability of and ready access to global communication tools. The impact is potentially, again, profound in terms of supporting a shift from old to new power, as argued by Timms and Heimans (2018). Old power is based on is based on controlling structures, specialism and expertise but the new power driven by greater connectivity is characterised by crowd sourcing, open sharing and conditional affiliation and more overall participation. Old power is not dissolved but it is being challenged by internet-based terrorism and cyberattacks on the negative side and rapid expressions of public mobilisation to bring about rapid change such as the #MeToo movement.

Third, there is the impact of global climate change. Maslin (2014) notes that the scientific consensus prediction is that global mean surface temperature could rise between 2.8C and 5.4C by the end of the twenty first century, bringing in its wake rising sea levels, increased unexpected weather events and threats to the food supply and livelihoods of billions of people. Crucially, and notwithstanding the doubts of some, responding to climate change ‘challenges the very way we organize our society’ (Maslin: 2014: xviii). The profound and global changes created by climate change will make demands on governing structures in terms of preventative action and rapid response to disasters that are not perhaps unprecedented but do provide a more sustained challenge than that experienced before.

The final factor driving a governance challenging governance environment is the emergence of surge events that rapidly unfold. The speedy spread of pandemic diseases provides one example of a context that challenges traditional governance practices. The emergence of failures in health checks in the food chain or deliberate contamination can lead to periods of rapid and heightened public concern. Another example would be the European migration crisis of 2015. In 2014 just over a quarter of a million irregular migrants entered the EU but in 2015 six times that many- 1.82 million – entered the EU (Frontex, 2016:10) and the numbers remained high but at a somewhat lower level for 2016 and 2017. The surge in migrants was driven by the impact of the civil war in Syria, the aftermath of the Libyan conflict and a range of other global factors economic and political that created a startling and impactful crisis for governments throughout Europe, as well as difficult and dangerous circumstances for many migrant families.

These four factors- technological innovation, the rapid spread of ideas and movements, the impacts of climate change and surge events- create a context for governance that in theoretical terms might be best described as a complex adaptive system. Diverse entities interact but not according to fixed rules and driven by adaptative behaviour which in turn can create profound and rapid changes in the system. Understanding these types of system is becoming a central starting point for thinking about governance challenges.

**Complex adaptive systems: A starting point for understanding governance**

The idea of complex adaptive systems has a long a diverse history and multifaceted debates associated with it (Page, 2011). However, a straightforward definition is provided by Holland (2014: 24): “complex adaptive systems are composed of elements, called agents, that learn to or adapt in response to interactions with other agents”. The environment in which these actors operate have three features: uncertainty, difficulty and complexity (Scott, 2008). Uncertainty refers to the absence of information. Difficulty reflects the influence of many variables on an issue and where therefore there are several potential solutions to be found but not necessarily one optimal solution. Complexity is the key to the environments that are our focus of attention. “Complexity refers to dynamic environments that contain multiple actors who interact with one another. The response to a natural disaster like a hurricane creates a complex web of interactions whose outcomes are unpredictable. Complex environments cannot be solved in any sense. At best, the complexity can be harnessed” (Scott, 2008: 117).

Complexity creates emergent and unpredictable policy environments. Policies must be designed, it is argued, not through command and control mechanisms but by way of softer tools (Geyer and Cairney, 2015, Morçöl, 2012). Cairney (2012) identifies four key insights for policymaking from complexity theory. The first is that policy systems are multifaceted and influenced by a variety of varying forces, so that a policy that works in one context may not automatically work in another. The second idea is that systems are to a degree self-organising and certainly difficult to control; it should come as no surprise to policymakers that their interventions do not always match their initial intentions, in terms of outcomes. Third, it is argued that the environments in which policy interventions are launched are occupied by actors that are changing their outlooks and perspectives. The landscape for policy is not stable and always changing. Finally, to intervene effectively in this environment requires a good understanding of the outlooks of the different actors and it is unlikely that top-down or imposed polices will work.

Policy issues bring in their wake a variety of challenges. Some policies may carry a high risk for example big infrastructure problems. Some issues may stretch the capacity of the governing system, by for example demanding IT or scientific skills that are not available. Some may demand uniform application across a divided and uneven policy terrain, such as the commitment to build more low-cost houses but in the context of an uneven geography of development. But it many ways complexity trumps all. It is embedded within each of the other challenges but also adds the idea that an adaptable approach is required. The message that complexity demands a different way of working is widely understood in debates about how to improve policymaking in last two decades. The UK’s Institute for Government sums up the need effectively: “Policy-makers should see their role more as one of ‘system stewardship’, rather than delivering outcomes through top down control…(They) need to reconceive their role increasingly as one of creating the conditions for others to deal with policy problems using innovative and adaptive approaches. Incentives need to reward those who energetically search out experience and ideas, network, facilitate and understand the systems within which they operate” (Hallsworth and Rutter, 2011: 9). This approach, if it was to be widely adopted, would make a significant agenda for change in many countries.

The work on complex adaptive systems (CAS) takes the argument a few stages further. CAS as an approach is a variation of systems theory at its heart is not the behavior of the system but rather the performance of agents. They -at least in their human form- are boundedly rational actors making decisions within a system on a moment to moment basis. But as agents gain experience, they learn rules about what works well, generally. The rules in these circumstances become the guide. But, in addition, agents are capable of rule discovery by testing whether new behaviour brings greater reward. If the feedback is positive then that behaviour will become a stronger rule. Eventually, rules can be combined to provide building blocks for more complex behaviours. But crucially ‘the payoff to an action depends on the actions of others. For this reason, people often refer to complexity models as dancing landscape models’ (Scott, 2008: 120).

The above rather abstract depiction of the behaviour of agents is valuable for the purposes of this article in that it helps to provide an explanation of a core property of complex adaptive systems which is that what happens within them is not fixed but rather is emergent. Or as Duit and Galaz, 2008:303) put it ‘*co-evolutionary processes* driven by agents’ attempts to increase individual fit gives rise to temporary and unstable equilibriums, which in turn generate the *shifting system behavior with limited* *predictability’* (italics as original). There are features of CAS theory that seek to build on this insight and are particularly relevant given a focus on governance (Duit and Galaz, 2008). The first is threshold effects are commonly observable within systems where something reaching a level or point at which a larger process of change starts to happen rapidly; tipping points are a related concept. Another idea is emergent social traps where a shared set of behaviours are reinforced but weaken capacity among those agents for adapting to change. Both ideas derive from a core idea in CAS that niche behaviour clusters are common in complex adaptive systems as different agents develop different responses to the challenges they face. Sometimes these responses are sufficiently powerful that a niche behaviour spills out to the wider system with unpredictable consequences. On other occasions, the niche behaviour becomes a kind of social trap, where groups have developed an understanding of how the world works that in turn threatens to hold them back but gives them a powerful but uncertain impact on the wider system. There might be here be a connection with for example the role of so-called “left behind” communities in driving unusual political events such as the UK’s vote to leave in the EU or trump’s lection as president of the United States of America (Jennings and Stoker, 2016). Another interesting idea is the potential for a cascade effect where an unforeseen chain of events due to a small act in one part of the system leads to a major impact affecting all the system. This proposition is premised on an assumption that is widely recognised within governance analysis: the importance of inter-connections between actors.

**Comparing Regimes**

The argument thus far suggests that governance systems need to be compared in the context of the challenges of the twenty first century. Those challenges are likely to be characterised by their unpredictability and their location in complex systems with diverse agents, who are connected and interactive and striving to adapt and change to improve their position. The idea of stewardship rather than command and control is suggested as a way of characterising an over-arching governance strategy in this context. The theory of CAS provides some further clues as to what features a governing system might need to harness complexity rather than simply be undermined by it. How should a governor orient themselves to the multitude of agents that populate a complex system? Axelrod and Cohen (2000) suggest three broad principles to guide practice. First, they argue it is important to support *variation* in the way that agents behave, and the learning opportunities thereby provided. The second is to both build and understand the dynamics of interaction between agents. Building reciprocal interaction or *partnerships* enhances the prospects for trust and co-operation. Understanding patterns of interaction within populations, in terms of the heuristics or rules to guide behaviour within the group, enables knowledge of what practices can be spread and what are successful in one group but might not be in another. A third set of strategies relates to how to select, learn and adapt. Leaders need to support the spread of valuable activities and stop those that are destructive. Governors need to be good detectors, that is they need to be able to pick up and interpret early signs of changes and developments. They need to be able to identify short term measures of success and not simply rely on long-term targets.

So how to different types of national regimes stack up against these criteria? In making comparisons of the governing systems of the world a common distinction is drawn between countries that rest *more* on democratic principles and those that operate according to a *more* authoritarian code. Countries can be placed towards one end of a spectrum stretching from democratic to authoritarian. But there are many countries with some hybrid elements, indeed there is a long line of research into so-called hybrid regimes that combine democratic and authoritarian traits (Diamond, 2002). Democratic regimes are characterised by not only free elections to decide who should run government but substantial freedom of organisation and expression for citizens from the state and protection for all through the rule of law; overseen by an impartial legal system. Authoritarian regimes, in contrast, chose leaders of government through processes that are more closed and have systems of governing that provide less formal legal protections and in practice a tendency to limit freedom of expression and association for citizens.

The distinction between these two types of regime dichotomizes the world excessively between democratic and authoritarian states. There is significant variation within those two categories. Within democratic countries there are on the one side the established democracies with a sustained practice of universal suffrage for a century or more and then there are the newer democracies that were established in various waves from the 1970s onwards. As Dirk Berg-Schlosser (2015: 354) notes within the authoritarian category there are multiple alternatives: “the Chinese (single party, mixed economy), Russian (authoritarian rule, dependence on primary products) and Iranian (theocracy or ‘mullahcracy’, weak economy) ‘models’ are each very specific and cannot easily be copied or followed elsewhere. There are a number of relatively stable authoritarian states dominated by certain dynasties (as on the Arabian Peninsula) or some families and clans (as in Central Asia) based on extractive resources, mainly oil, but their future, as the Arab Spring has demonstrated, is uncertain as well”.

To bring more focus to the discussion we narrow the comparison to that between an open, established democracy and flexible and developing authoritarian single party state. The United States of America (USA) will be used as an exemplar of the former regime and China as an example of the latter. The USA has all the trappings of an established democracy with a subtle balance of power between different tiers and levels, and between the executive, law courts and elected assemblies. Its policy processes have long-standing openings for special interests and lobbies, as well as citizens directly and there is a free and mixed media environment. It provides a good example of a mature democracy. China, in contrast, provides an excellent example of a developing authoritarian state. Even its most ardent critics could not deny the extraordinary changes that it has achieved over the last few decades. It represents for the purposes of our comparison a good example of a flexible, developing authoritarian state, in contrast to, some other authoritarian regimes that appear more under threat and less able to adapt to new governing challenges. Our analysis of adaptive capacity then reflects the best option that could reasonably be put forward from either the democratic or authoritarian camps of nation states, that are of a size and influence to make an impact on the international stage.

Table 2 breaks down the three criteria suggested in the work of Axelrod and Cohen (2000) by drawing in a range of literature from public policy and governance studies (Ansell and Gash, 2006; Chhotray and Stoker, 2009; Klijn and Koppenjan, 2012; Rhodes, 2007; Peters and Pierre, 2016). The starting point is the system’s resources for encouraging variation and experimentation. The next four insights focus on partnership resources and the final four on adaptive and learning capacity resources. In each case we are looking at potential, hence the focus on resources rather than directly on capacity. Moreover, it should be emphasised that the differences between the prospects for democratic and authoritarian regimes are expressed in relative terms. Neither type of regime is guaranteed to access any of the various types of resources specified for effective interactive governance and the mix of resources in different examples or cases of regimes will vary. Table 2 makes general theoretical judgements about the prospects for different types of resources being available.

**Table 2: Comparing Governance Resources**

|  |  |  |
| --- | --- | --- |
| **Resource** | **Established Democratic Regime** | **Developing Authoritarian Regime** |
| **Variety and Experimentation** |  |  |
| Opportunities for local variation | Present without sanction | Only when sanctioned |
| Commitment to experimentation | Similar | Similar |
| **Partnership resources** |  |  |
| Legitimacy and trust | Easier | Harder |
| Technocratic competence | More diffuse | More focused |
| Shared values and understandings | Similar | Similar |
| Ability to show quick and substantial results | Weaker | Stronger |
| **Learning and Adaptive Capacity** |  |  |
| Decision processes | More complicated | Less complicated |
| Predicting problems | More problematic | Less problematic |
| Openness to explore issues | More likely | Less likely |
| Knowledge Asymmetry | Less of an issue | More of an issue |

***Comparing resources for experimentation and variety***

For democratic regimes the initial demands presented in Table 2 are certainly possible to be meet. Some systems are more centralised than others, but all systems allow scope for local autonomy to some degree. The federal structure of the United States, for example, provides a rich ground for local initiative and that resource it not dependent on it being sanctioned by the central authority of the Federal government. Moreover, it is not only the constitutionally independent “states” of the United States that are a source of innovation but also its large cities. Katz and Bradley (2013) identify a metropolitan revolution that has helped local governments in the USA respond to difficult economic changes with dexterity and skill, producing new economic opportunities. City leaders “are integrating their economic growth strategies with their assets and their competitive specializations, creating metro economies that export more and waste less, have sectors that serve as engines for both innovation and job creation, manufacture and ship more of what their workers invent and build, and create spaces where families can live, work and prosper”( Katz and Bradley, 2013:ix). Other studies provide further examples of cities exploiting their resource for autonomy in order to generate economic recovery (Power et el, 2010; Katz and Nowak, 2017). More generally, it can be established that in both the theory and practice of policymaking there is a strong embracing of the idea of trial and experimentation to stimulate innovation (Bason, 2017; Osborne and Brown, 2013), with a growing capacity to use randomised control trials to test and learn (John, 2017). This finding is not to suggest that there are not policy failures or limits to innovation created by institutional inertia (King and Crewe, 2013) but in broad terms democracies have the potential to meet the resource demands of autonomy and trialling to respond to complex adaptive environments.

A commitment to providing for variety and experimentation is seen one of the key attributes of successful authoritarian regimes such as China. Bell (2015: 185) argues that “experimentation with different forms of economic, social and political reform in between local and central levels of government …is key to explaining China’s adaptability and success over the past three decades”. The practice of innovation and the opportunities for experimentation it would seem can be present in authoritarian states. The difference is that compared to democratic-leaning regimes experimental capacity must be specifically sanctioned. As Heilmann (2008) describes the case of China as an example of ‘experimentation under hierarchy’ where national leaders, committed to stimulating reforms against vested interests, used experimental projects and the legitimatizing of local initiative to achieve their objectives. The strategy expressed an available innovation resource but with the ultimate control still resting at the centre.

***Comparing resources for partnership***

The strengths of democratic countries in terms building partnerships are considerable. Ansell and Gash’s (2006) careful study, drawing largely on evidence from practices in the USA, identify what makes for good collaborative governance and list qualities that are quite widely available within democratic governing systems. There is a capacity for building trust between levels of government and between government and citizens and sectoral interests such as businesses or wider civil society organizations. That capacity of course is not always realized but it can be achieved. There are the relevant competences and technical capacities to support partnerships and a base of shared values, if overlain by conflict over policy values and interests. Perhaps the ability to demonstrate quick wins is the one area where democracies struggle a little, as decision-making processes can be complex and subject to delays.

In the case of authoritarian regimes, the issue of building trust and confidence between government tiers may be more problematic than in democratic regimes not least when there are issues of corruption, vested interests or incompetence that can undermine capacity. Although it could be argued that competing mandates between levels of government can create tension and lack of trust within democracies. Many authoritarian regimes may be able to create a dynamic of legitimation and trust between government and citizens to bolster the governing system. Gerschewski (2013) argues autocracies have three pillars of stability: legitimation, repression and co-optation. The last two are those most directly associated with the regime type. Opposition is controlled or repressed in various means and some key players are bought off in various ways to ensure their support. But legitimation also has a role Although the primary mechanism for governance used in democratic regimes, legitimacy is operating in authoritarian regimes. It may flow from traditional claims to rule, such as acceptance of the inherited rights of absolute monarchical dynasties in Saudi Arabia, deference towards the spiritual authority of religious leaders in theocracies like Iran, preference for military rule in Thailand, acceptance of office holders and leadership elites determined by internal nomination processes in one-party states like China.

Performance legitimacy is often identified as key to the stability of China. The bargain is that the regimes delivers economic growth and welfare gains in return for its control. But what marks out China’s capacity to meet that challenge given that its government bureaucracy does not match the ideals of a Weberian-style independent civil service, guided by elected representatives and framed a commitment to the rule of law? China seems to have followed a different path to achieving a quality of government needed to deliver economic and social gains. Rothstein (2008: 537-8) explains the China paradox by noting “the reformed public administration model in China differs from the traditional communist model in that in addition to party loyalty and ideological coherence, since about 1990 there is also a strong emphasis on competence, education, and performance to deliver services”. Bell (2013) develops this argument by suggesting that it is the commitment to meritocracy that has helped China to achieve its growth outcomes and allows it to demonstrate quick results and performance success. While some argue that in the long run a lack of rule by law and inclusivity in governance will undermine the Chinese system by limiting the inputs into its governing Rothstein (2008:545) retorts: “The problem with (this) analysis is the lack of attention to the public administration side of the equation….what goes on at the “output” side of the political system has empirically been shown to be most important for creating political legitimacy. The efficiency of the cadre model may contribute to the overall sustainability of the Chinese model of governance despite its lack of “inclusive” political institutions”.

The key point to emerge from this discussion is that from the perspective of a more dynamic understanding of governance favoured in this article it is possible to see resources for partnership being available in both democratic and authoritarian regimes. The issue is not the regime types as such but how the dynamics of governance operate within the regimes.

***Comparing learning and adaptive resources***

Democracies do appear to have considerable learning and adaptive resources. Their decision-making processes are generally complex and perhaps best characterized by a pattern of muddling through, with the USA as a key exemplar (Lindblom, 1979)**.**  There may indeed be an issue with over-confidence on the part of democracies in their capacity to muddle through and survive crises, leading them to recover from challenging experiences but be poor in predicting and avoiding disaster (Runciman, 2013). The pattern is one of brinkmanship, confusion followed by experimentation and recovery. For democracies adaptability and learning are messy processes. But what makes the dynamic sustainable to a degree is the openness of the political system and the extent of knowledge and capacity within wider private sector and civil society that matches if not surpasses that of government. The strength of non-government organizations and the sharing of power is a core feature of successful democracies (Lijphart, 2008; Hendriks, 2010). Participation and civic engagement, while by no means universally or evenly spread, remains a bedrock of the culture of democracies.

Learning and adaptability are resources that can be found in authoritarian systems as well. The commitment to experimentation has already been noted as a key feature of China’s governing system. The streamlined decision-making structures and more strategic overview of issues confronting the system, might mean that authoritarian regimes could arguably be better placed to respond to challenges and predict problems than the democracies, with their muddling through style. But there are constraints faced even by those best performing authoritarian systems, such as China. Bell (2013: 192) argues: “experimentation with innovative policies meant to address new challenges is desirable if successful experiments are consistently replicated and scaled up to other parts of the country”. However, he goes on to note that in the case of China political constraints, or changes in outlook within the party leadership mean that successful experiments are sometimes relabelled as failures. One substantial constraint on adaptability is the very reliance on a central elite to stimulate or sanction innovation, compared to more free-flowing dynamics of democracies. Limits to freedoms in civil society or the private sector do not provide the ideal context for the emergence of new ideas and options.

There are positive opportunities to adapt through techniques of learning and adaption. Several countries have trialled models of policymaking that rest on a mix of “create-test-adapt” where new policy or service initiatives are developed, tested and then either adopted or modified in the light of testing (see article by Peter John in this special issue). These developments, combined with a design approach to developing policy, may encourage a greater capacity for adaptability. Design with its approach driven by first developing a shared problem definition among policy actors, followed by the creative stimulation of reform options, followed by a rapid trial and feedback on reform interventions, matched by adaption and change to increase the effectiveness of the intervention may provide some hope of a more developed and quick responsive learning capacity for governing systems(Stoker, 2013) .

**Conclusions**

It should be noted that there are significant limitations to the empirical examples and commentary provided in this paper. The claim for value in the article lies in its attempt to reframe our theoretical outlook on comparing governing regimes. It rests on three arguments. The first is that regimes should not be compared in a vacuum but rather with respect to the governance challenges they are likely to face in an unpredictable world. Second, meeting those governance challenges involves recognizing the adaptive complexity of the system generating those challenges and yet also providing the ingredients for emergent solutions. Third, exploring effective interactive capacity rather than formal structures and rules provides a stronger indication that governance challenges are likely to be met. It is concluded that different types of regimes could in principle deliver effective interactive governance capacity in different ways.

The article operates at a very high level of generality and to develop it further a greater focus public policy and policymaking as the instrumentalities for governing would be beneficial. Attempting to link characteristics of policy and policymaking with the nature of adaptive governance would again strengthen the paper. It is possible to hint at some of the policy processes that would be best suited to complexity (the discussion below draws on Hallsworth and Rutter, 2011). Policy goals need to be clear but general not detailed as actors in the adaptive environment need to be free to find their own ways to goal achievement. Rules also need to able to provide boundaries but must allow for flexibility. They should be more guidelines rather than rigid formulas to be followed. Feedback on policy success or otherwise is also key. Learning, monitoring and understanding are all fundamental to what is a more stewardship manner of governing. Finally, of course it is necessary to adapt and respond to new information and understandings, to have the flexibility in policy tools to do things differently. It is one thing to have the resources for governing but the right policy instruments will be essential for turning those resources into good practices.

In addition to the cautionary note about the thinness of the empirical application of the framework offered in this article there is another issue to consider that goes to the heart of understanding complex adaptive systems. Both democratic and authoritarian systems of governing have the capacity to trigger tipping points that make the prospects for governance failure significantly greater. For democratic regimes the main threats are pathologies in the political process that give rise to undermining challenges from populism; a political phenomenon that appears to be strongly observable in the last decade (Muller, 2017; Urbinati, 2014; Stoker, 2018). For authoritarian regimes the threat is when technocratic collaboration and a system that allows for local experimentation and adaptation gives way to a narrower leadership cadre and develops a systematic level of corruption (Bell, 2013; Mizner, 2018).

There are those that see exactly signs of emerging failings in our two exemplar countries. Levitsky and Ziblatt (2018) in *How Democracies Die* describe negative features of the rise of populist government in the United States of America, particularly in the Trump era. Susan Shirk (2018) warns of the return to personalistic rule that is emerging in China. It is probably too early to judge whether these assessments are correct, but the point remains that regimes that are democratically inclined and those that are tending towards authoritarianism also have potential tipping points that will render them less likely to meet the challenges of governing. However, the democracies may have more potential corrective devices because of the sharing and forced turnover of power. Gaining capacity for governance to deal with complex and adaptive environments is an option for different types of national regime but sustaining capacity within the system is not automatically guaranteed. Dealing with a world of fast policy and unpredictable governance means that no governing system can rest on its past accomplishments and must rather strive for new ways of working.

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