Capacities for Institutional Innovation: A Complexity Perspective

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Abstract Many capacity development interventions have been driven by the needs of technological innovation rather than the needs of institutional innovation. However, this article argues that the global challenges of the twenty-first century call for institutional innovation that entails a very different dynamic of the relations within society. Changing institutions, be it related to societal norms and values, government policies, market incentives, political systems or organisational processes, requires the 'soft' capacities of communication, trust building, diplomacy, networking, making sense of messy social situations, political advocacy and leadership. The article concludes by outlining four specific capabilities required for institutional innovation: navigating complexity, learning collaboratively, engaging politically and being self-reflective.

1 Introduction

This article will outline an understanding of capacity development as a process of strengthening relationships that enable innovation and resilience in communities, organisations and societies. This is very different from understanding capacity development as the transfer of technical knowledge and skills, which is so often the focus of capacity development efforts. The article will go further to argue that seeing capacity as a 'collective ability for effective relationships' requires a deeper look at the underlying institutions that shape human behaviour and how they are embedded in the complexity of social systems. In particular, the article will look at institutional innovation and outline four key capabilities1 this requires.

In September 2008, Ministers of developing and donor countries met in Accra to discuss progress towards the Millennium Development Goals (MDGs) and aid effectiveness. In the resulting 'Accra Agenda for Action', they recognised that much more needs to be done to achieve the MDGs (OECD 2008). The focus of the 'agenda for action' was strongly directed towards the need for enhanced capacity development; it stated that, 'without robust capacity – strong institutions, systems, and local expertise – developing countries cannot fully own and manage their development processes' (OECD 2008).

Despite this emphasis, the document does not explain what enhanced 'capacity development' actually means in practice. Indeed, there is perhaps incoherence between the above focus on 'strong institutions and systems', and an inability to specify capacity development beyond 'technical cooperation'. This tension between recognising the importance of capacity development, yet the difficulty of explaining, specifying and evaluating it, is endemic to the development sector.

This difficultly led to the OECD Development Assistance Committee producing a report in 2006 on 'The Challenge of Capacity Development – Working Towards Good Practice'. In this document, capacity is defined broadly as 'the ability of people, organisations and society as a whole to manage their affairs successfully' (OECD 2006: 12). The report noted that:

> Until recently, capacity development was viewed mainly as a technical process, involving the simple transfer of knowledge or organisational models from North to South. Not enough thought was given to the broader political and social context within which capacity development efforts take place. This led to an overemphasis on 'right answers', as opposed to approaches that best fit the country circumstances and the needs of the particular situation. (OECD 2006: 15)

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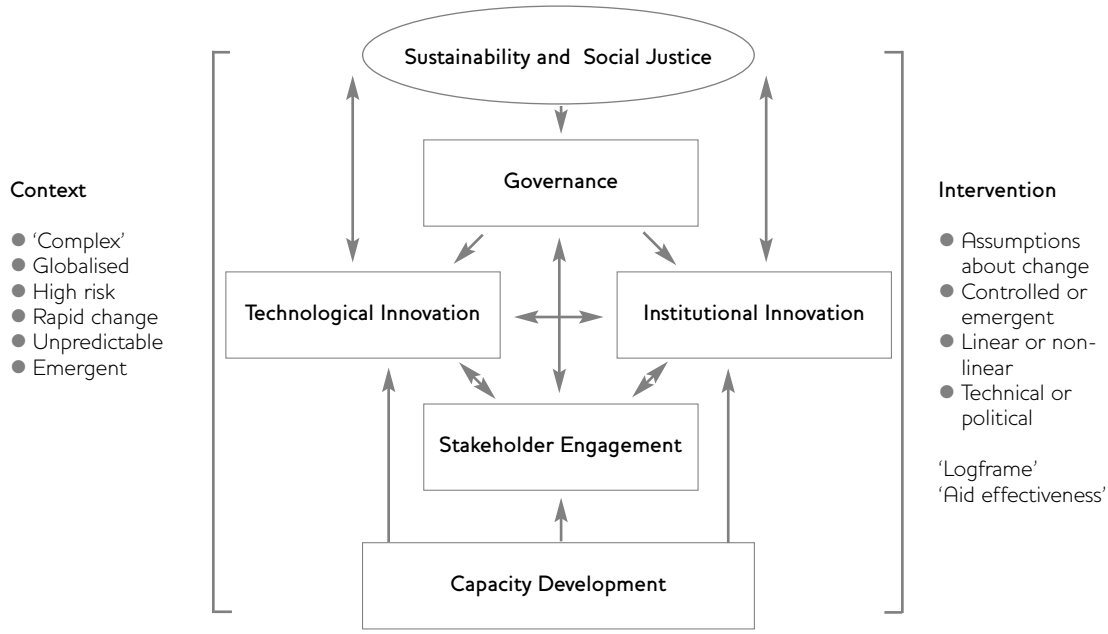
Figure 1 **The dynamics of sustainability governance and capacity development**



In other words, it is about 'governance' – the ability of a society to organise itself and manage its affairs for the greater collective good. And this requires institutional innovation. The article will explore institutions, not as organisations, but as the formal and informal social rules that structure social relations (Giddens 1984; Hodgson 2006; North 1990: 3; Ostrom 2005: 3). The argument here is that our modern societies have become much better at technological innovation than at institutional innovation, and environmental sustainability, social justice and coping with the massive demographic change the world is experiencing, hinge on rapid institutional transformation (Held 2004; Milbraith 1989). Governance is the mechanism for deliberate institutional reform. Hence, institutional innovation becomes critical to a wider understanding of capacity development and its link with governance.

Thus, capacity development becomes a political exercise. Further, difficulties with effective governance mechanisms and limited attention for institutional innovation are far from just an issue for the 'poor South'. They are critical issues for global development in the broadest sense (Beck 1997; Giddens 1990, 1994; Goldblatt 1996). Whether we look at climate change, natural resource degradation, poverty, terrorism, unsustainable food systems or health issues, the early part of the twenty-first century will have to be a time of fundamentally reassessing how, as nations and a global community, we govern ourselves. Consequently, the first part of this article will look at capacity development from a broader perspective of global development.

Social systems and the institutions they embody are inherently complex. Essentially, people and their organisations are not predictable in the way that natural phenomena are. If we are to talk about developing capacities for better governance and for changing outmoded, unjust or unsustainable social institutions, we have to come to terms with complexity. The third section will provide a framework for understanding complexity and will discuss the implications for capacity development.

Finally, the article will look at four areas of capacity development required for institutional innovation and governing in a complex world. These are the capabilities to navigate complexity, be self-reflective, learn collaboratively and engage politically.

2 Global development

A deeper understanding of capacity development requires standing back and looking at the whole

context of development. The term global development is used here to signify tackling issues of social justice and environmental sustainability that are increasingly globalised in that they impact on all nations and on rich and poor alike.

Interestingly, the OECD report on capacity development takes a 'neutral' stance towards capacity development, stating that the definition, 'avoids any judgement on the objectives that people choose to pursue, or what should count as success in the management of their collective efforts' (OECD 2006: 12). Here, I would like to argue quite the opposite: that capacity development becomes rather meaningless in the absence of attention to the objectives of collective efforts. Such attention to shared objectives is not, of course, the same thing as 'outsiders' determining the goals and objectives for others.

Figure 1 illustrates some of the key elements and linkages in the perspective on global development, governance and capacity development being articulated here. The starting points are the interlinked issues of environmental sustainability and social justice. Without attention for these issues, 'development' in the twenty-first century makes no sense at all. Indeed this raises real questions and issues around the capacities needed to collectively understand the consequences for humanity of taking different trajectories in relation to sustainability and social justice.

From this starting point, the focus is then on governance. How, from local to global levels, do people organise and manage themselves given these challenges and the dynamics of the modern globalised world. While the notion of governance has become popular in the language of development (ODI 2006), we need to ask: 'What is it that we are trying to govern?' Essentially, it is about governing, or directing, the human capabilities for both technological and institutional innovation.

The twentieth century, it can be argued, gave pre-eminence to technological innovation and the sorts of capacities, mindsets and methodologies that made scientific discovery and technological development possible (Beck 1997; Capra 1982; Habermas 1984; Milbraith 1989). To tackle the challenges of sustainability and social justice, far more attention will need to be given in the twenty-first century to institutional innovation and the coupling between technological and institutional innovation.

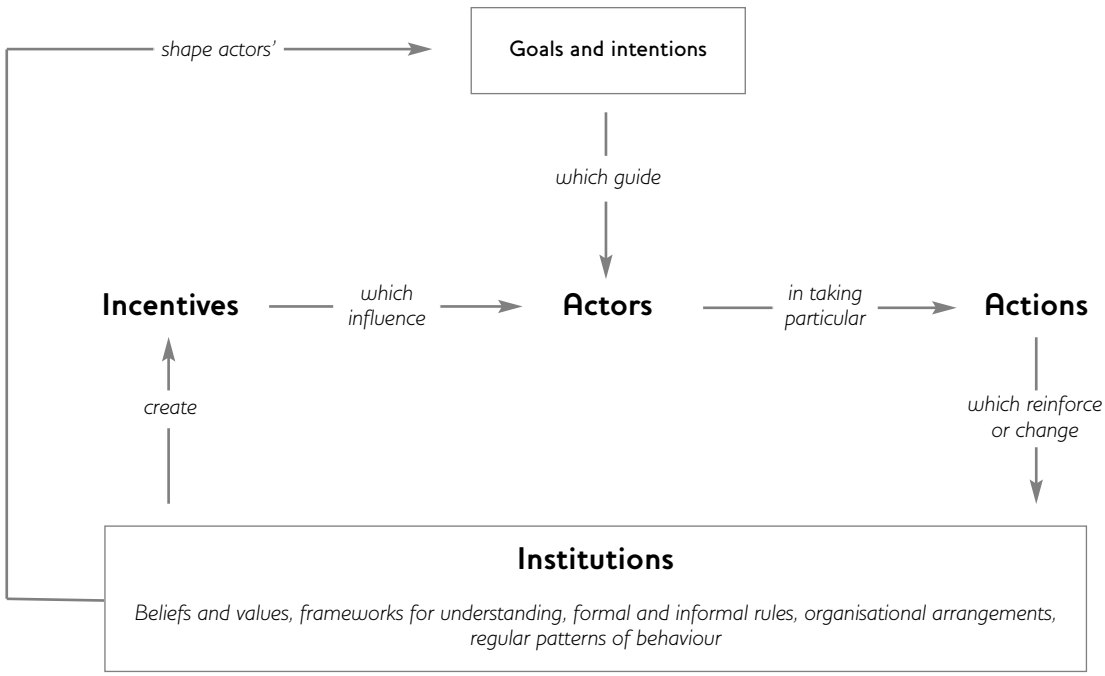
However, institutional innovation requires a very different dynamic of the relations within society than do technological innovation and technologically driven economic development. Significantly, it requires much interaction and learning between citizens and government, business and civil society players. This calls for various forms of multi-stakeholder engagement (Woodhill and Van Vugt 2008), social learning (Wals 2007; Woodhill and Röling 1998) or what is more broadly referred to as participatory democracy, deliberative democracy (Dryzek 1996; Gaventa 2006) or collaborative governance (Ansell and Gash 2007).

The left side of Figure 1 illustrates that 'development' is now occurring in a dynamic and globalised context that is highly complex and in which there are high risks for humanity depending on how 'progress' unfolds. Further, this context is emergent, working from the insights about complex adaptive systems (Beinhocker 2007: 18; Waldrop 1992) (which is what human systems are – further elaborated in Section 4) it means that the direction of change can perhaps be influenced but it certainly cannot be controlled. The right side of the figure illustrates assumptions about intervening in processes of social change. Historically, change strategies have often been modelled on a linear and mechanistic 'worldview' (Beinhocker 2007: 21–44; Capra 1982; Taleb 2007), which creates a mismatch with the 'reality' of the context.

All these factors then provide a context for key questions about capacity development. What are the capacities needed for?

- Framing and understanding the challenges of environmental sustainability and social justice?
- Governing in a highly complex globalised world when faced with the risks of environmental collapse, violence and terror driven by inequities, poverty or competition over declining resources?
- Directing technological innovation towards the challenges of our times?
- Driving the fundamental and rapid institutional changes that are needed for communities and societies to become more

Figure 2 **Institutions and action**



responsive and resilient to the issues they face?
- New dynamics of engagement between citizens, their leaders, business, government and civil society?

To take this further, I will look more closely at the concept of institutional innovation.

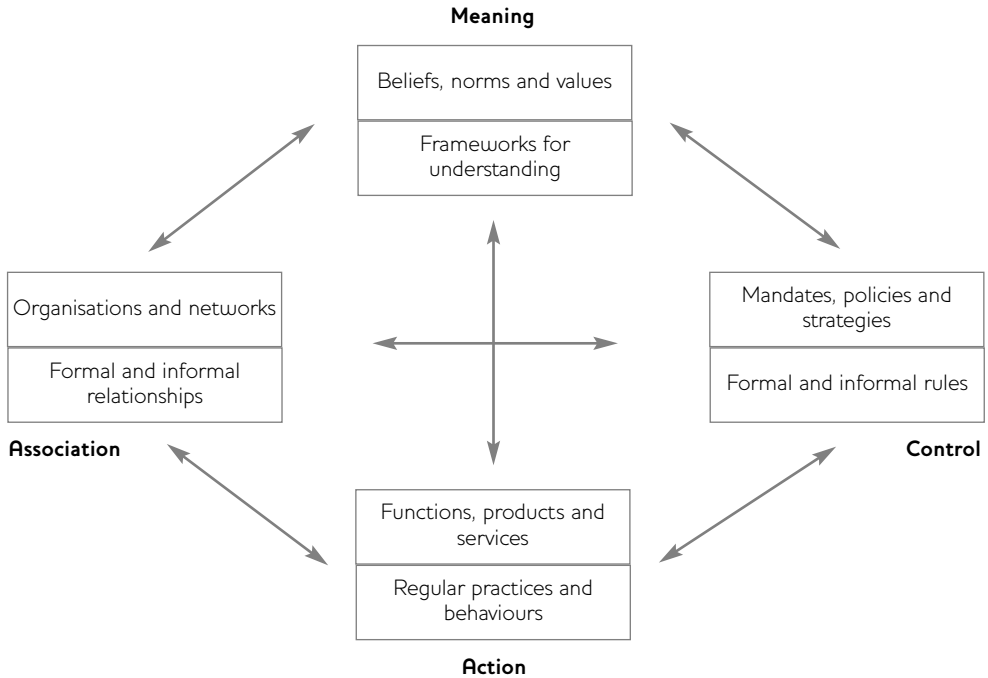
3 Institutional innovation

For societies to prosper, adapt and cope with problems and crises they need both 'hardware' and 'software'. When America failed to deal effectively with Hurricane Katrina, it was not because of a lack of machinery, military transport, or communications equipment – it was the 'software' – the institutional arrangements – that were the problem. There was poor communication between different agencies; weak leadership; even racist attitudes towards those being affected (Herring 2006). Similarly, when poor farmers in Africa want to improve their farming, it is not just better varieties of crops they require. Often issues of land tenure, lack of knowledge about markets or an inability to access financial services are the real barriers. For a good education system, it is not just school buildings, books and computers that are important. What really makes the difference is the incentives teachers have to help them be good teachers and the attitudes parents have about supporting their children's development.

Improving the 'software' side of how societies function is what is meant here by institutional innovation. When we talk of social or political change, what we are really saying is that we want various 'institutions' to be different. However, institutional innovation is not an easy business. To start with, institutions are not easy to visualise. If we talk about building roads or schools, constructing irrigation schemes, breeding better crops and livestock or creating a new medicine, everyone immediately understands what is being said. It is also pretty clear what sort of technical skills and capacities are needed to do these sorts of things.

However, when we enter the world of changing institutions, be it related to societal norms and values, government policies, market incentives, political systems or organisational processes, it all becomes much more fuzzy. But not less important! Further, the 'soft' capacities of human communication, trust building, diplomacy networking, making sense of messy social situations, political advocacy and leadership, are often more difficult to develop. The complex

Figure 3 A framework for exploring the complexity of institutions



Source Vermeulen, Woodhill, Proctor and Delnoye (2008); Woodhill (2008a,b).

nature of institutional change also means that the direct impact of such capacities is difficult to demonstrate directly. Added to these challenges, it must be recognised that changing institutions often means upsetting existing power relations and threatening those who benefit from the status quo.

For all these reasons, 'development' finds it much easier to focus on technological innovation and the technical capacities this requires rather than to engage deeply with the implications of institutional innovation (Baser and Morgan 2008; OECD 2006).

A starting point for tackling this imbalance is to create the capability for understanding and being critical about social institutions.

3.1 Understanding institutions

Broadly speaking, institutions can be understood as 'rules' that make ordered society possible (North 1990), such as language, currency, marriage, property rights, taxation, education and laws. Institutions help individuals know how to behave in given situations, such as when driving in traffic, bargaining at a market or attending a wedding.

Institutions are critical for establishing trust in society. We put our money in a bank because we trust that all the institutions of the financial system will protect it. We board an aircraft because we trust the institutions related to air traffic control and the monitoring of aircraft maintenance to keep us safe. As illustrated by the recent financial crisis, failure or loss of trust in such institutions creates a major social and political uproar.

By definition, institutions are the more stable and permanent aspects of human systems. Some institutions, once developed, lock societies into a particular path of development. For example, the simple convention of which side of the road to drive on is very hard to imagine changing now it has been established (Woodhill 2008b).

Many institutions have evolved without much conscious design, and they interrelate with each other in a complex network. The rules of language make it possible for laws to be established, and these laws are then upheld by courts and policing systems. People obey laws because of a whole system of societal beliefs, values and norms. Our lives are embedded in this highly complex web of social institutions,

and we take many of them for granted, not questioning their origin or the underlying assumptions and beliefs on which they are based.

Institutions essentially create incentives, both positive and negative, for individuals and groups to act in particular ways. People behave either to reinforce or undermine an institution. Social change is essentially a dynamic of social structure and individual action (Giddens 1984: 5) (Figure 2).

Individuals and organisations have their own goals and objectives that are shaped by wider institutional and cultural environments. Deciding to take certain actions at particular times involves many interconnected and sometimes conflicting factors. Choices can counter a dominant institutional influence, whether legal or cultural. Hence, institutions are not a straitjacket for human decision-making and action.

There is no widely accepted framework for analysing institutions (Hodgson 2006). The multiple perspectives and lack of practical tools make it difficult to understand how institutions influence a particular situation, whereas numerous tools exist for stakeholder, problem and power analysis. Yet, thinking critically about institutions is key to social change-focused development.

People are rarely concerned with any single institution. Whether our focus is on education, market access, health or the environment, we must consider a messy web of many interacting institutions.

Figure 3 shows a simple framework for asking critical questions about different types of institutions and how they interact. It deliberately takes a very broad perspective, including organisations and regular patterns of behaviour, alongside the more narrow view of institutions as merely 'rules'. The framework is based on four institutional domains – meaning, association, control and action – which connect to structure social interaction. Each of the four domains has two sub-domains.

Formal and informal institutions are equally important, and often reinforce each other. Institutional analysis often focuses too much on formal rules, such as policies and laws (North 2005: 50; Ostrom 2005; Soysa and Jütting 2008). This framework shows the importance of asking questions about a wider set of factors that interact to shape the incentives for actors to behave in particular ways.

Consider the current concern about food quality and safety that is a key issue in linking countries with developing economies and small scale farmers with the increasingly globalised food system. Consumer beliefs ('meaning') – perhaps about the health risks of genetically modified organisms – and buying behaviour ('action') have a significant role in shaping business strategy and government policymaking ('control'). A framework for scientific understanding and research ('meaning') underpins food quality and safety regulation and procedures. Organisationally, government agencies are responsible for food safety issues, and many different businesses interact along the value chain ('association'). Government food safety agencies are mandated to develop policies and establish rules and regulations, while the agrifood industry independently develops its own policies, standards and rules to meet consumer demands and legal requirements ('control'). These arrangements lead to the institutionalisation of supporting actions, such as regular monitoring of imports by a food safety authority or agribusiness introducing bar-coding and tracing services ('action'). Some behaviours ('action') by different actors, including corruption, may disregard the formal rules and be driven by informal customs and rules ('control').

What the above example illustrates is that being able to eat safe and healthy food out of our supermarkets, and for small scale producers from Africa, for example, to supply this food, requires a highly interconnected set of formal and informal institutional arrangements. Innovating to improve this situation requires much more than just the laboratory facilities and scientific capacities to analyse food. It requires processes of community education, being able to facilitate interaction between policymakers, food producers and retailers. It requires dialogue with politicians and transparent means of enforcing regulations. Tackling these issues has significant implications for the types of capacities needed and for the way capacity development is promoted.

4 The complexity of institutional innovation

Human organisations, societies and market systems are complex adaptive systems (Beinhocker 2007). This means that they are 'a dynamic network of many agents (which may represent cells, species, individuals, firms, nations) acting in parallel, constantly acting and reacting to what the other agents are doing' (Waldrop 1992).

In such systems, order emerges 'bottom up' through the independent yet coordinated action of many individuals. Through a complex network of feedback mechanisms, the system is constantly evolving in response to changes in both the internal and external conditions. Small inputs into the system can have very large (non-linear) impacts on the system's overall behaviour, as can small changes in starting conditions. Complex adaptive systems also exhibit patterns of behaviour linked to what are called attractors. An attractor is what a system settles towards in a state of dynamic equilibrium that can be seen as a particular (and often complex) pattern of behaviour (Beinhocker 2007; Ramalingam and Jones 2008).

Understanding institutions is central to grasping the complexity and dynamics of social change. What makes social systems complex is the multitude of interacting institutions, combined, of course, with the often unpredictable nature of human behaviour. Policymakers and practitioners must understand two points: first, nobody has consciously designed the institutional frameworks of our societies. They have evolved, over long periods of time, by adapting and responding to all sorts of experiments, new ideas, power plays and external shocks. Second, changing institutional arrangements is no simple task. The results are often unpredictable, with some expected outcomes not occurring and other unplanned changes happening instead (Beinhocker 2007; North 1990).

Intuitively, we all know that much of what we deal with in life is 'complex'. Yet the scientific and engineering mindset of the twentieth century has too often led us to try managing complex situations in a linear way. Linear planning, and scientific analysis, is based on establishing clear cause–effect relationships, and then using this knowledge to predict the outcome of a design or an intervention. In complex systems, cause-effect relationships often do not exist or cannot be assessed ahead of time (Kurtz and Snowden 2003).

Sometimes, linear approaches make a lot of sense. Each time we fly in an airplane we should be mighty thankful that engineers work linearly. However, to protect us from terrorist attack, security systems must function differently. They need to be able to sense the unexpected and make insightful interpretations from a mass of messy data.

The development sector is starting to embrace the complexity idea (Fowler 2008; Mowles, Stacey and Griffin 2008; Ramalingam and Jones 2008). Thinking more deeply about institutions and complexity raises major dilemmas for development intervention. On the one hand, tackling poverty, achieving social justice and protecting the environment clearly require institutional transformation. On the other, institutions cannot be effectively changed in a neatly planned, top-down manner, and there is a limited role for outsiders. Easterly (2006) makes this point in his devastating critique of Western Aid, arguing that development requires a shift from 'planning' to 'searching'.

Taking this complexity seriously implies very different ways of planning, implementing, monitoring and evaluating development initiatives and hence the need for different capacities.

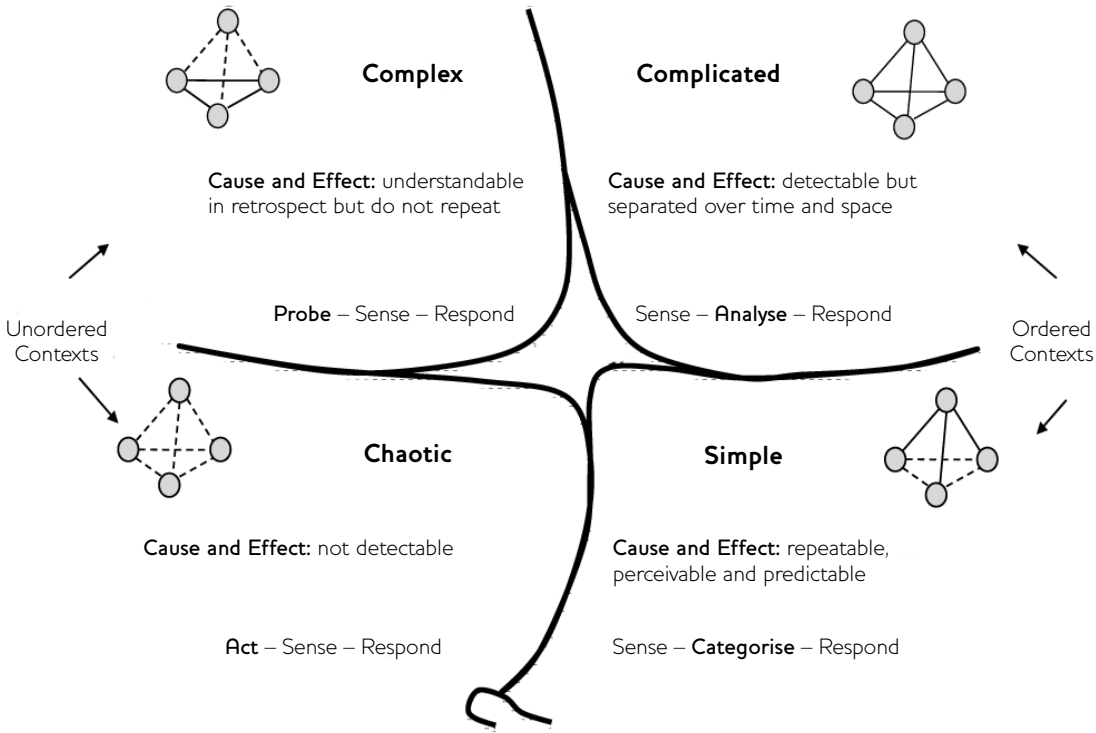
5 Capacities for institutional innovation

This section sketches out four areas of capacity that are critical for institutional innovation – navigating complexity; learning collaboratively; engaging politically; and being self-reflective. Of course, this is not the full story but it points to a different way of considering capacity development. These are capacities that enable different perspectives to be taken and that seek to better connect individuals to themselves, to others and to their social environment. These are emergent capacities that, if cultivated, enable a greater degree of resilience based on institutional innovation.

5.1 Navigating complexity

A core capability for institutional innovation is being able to operate within the inherent complexity and unpredictability of social systems.

Figure 4 **The Cynefin Framework**



Source Cognitive Edge (www.cognitiveedge.com), reproduced with permission.

Complexity thinking can help people better understand how to intervene with systems in a structured, yet non-linear way. One emerging practical application is the Cynefin framework (Kurtz 2003; Snowden and Boone 2007). David Snowden, a former director in the IBM Institute for Knowledge Management, developed the framework to help managers and leaders better understand the implications of complexity for strategy. The framework can help identify the types of leadership patterns, learning processes and intervention strategies that are appropriate for different levels of complexity.

The Cynefin framework (Figure 4) identifies five contexts: simple, complicated, complex, chaotic and disorder (when the context is unclear). This differentiation recognises that not everything we want to achieve in development is complex. However, it also points out that applying approaches that work for simple and complicated situations to complex and chaotic situations will fail. For example, identifying 'best' and 'good' practices is fine for simple and complicated situations, but fairly pointless for a more complex problem. Yet, so often this is exactly what development agencies value and demand.

In complex contexts, it is necessary to 'probe' – to experimentally test out a range of interventions to see which ones work or fail – and then use this knowledge for scaling up or replicating (Kurtz and Snowden 2003). This essentially constitutes an evolutionary approach to 'design'. In chaotic or crisis situations, high turbulence requires acting to restore some degree of order with little time or information for analysis.

Much, but not all, institutional innovation involves engaging with the complex context – and when we talk of failed states, we are often in the chaotic context. Yet, much development planning and many policy processes focused on institutional transformation operate as if the context was complicated or simple rather that complex or chaotic.

Capabilities are needed, first, simply to recognise complexity and to understand the

implications for planned intervention. Working with complex situations is as much about attitudes and mindsets as it is to do with any 'practical tools'. However, the capabilities for rapidly learning and adapting are of critical importance. Large organisations and bureaucracies often have enormous difficulty in coping with complexity. For such organisations to function, layers of rules are institutionalised. This makes learning and adapting difficult, particularly when there is a strong hierarchy of decision-making. There are no easy answers, but for any large organisation to remain relevant in turbulent and complex times, be it an aid agency, UN organisation or an auto manufacturer, new organisational cultures, management strategies and individual competencies are critical.

5.2 *Learning collaboratively*

To tackle many of the world's most pressing problems, various forms of multi-stakeholder engagement and collaborative learning are required (Hemmati 2002; Woodhill and Röling 1998). It is clear that government alone is unable to solve problems and that interaction between government, business, civil society and citizens is needed. It is also clear that innovations, and in particular institutional innovations, arise not from academic research and 'experts' alone, but from the interactions between the many different actors involved in a particular problematic situation (Röling and Jiggins 2001). Essentially, the more effective we can be at collaborative learning, the greater will be our capacity for institutional innovation.

Again, this might sound like blinding common sense. And it is. Yet, the vast investments our societies make in knowledge creation and 'innovation' are highly skewed towards research disconnected from change processes in society. The incentive structures are largely oriented towards publishing in academic journals with little academic merit being bestowed on researchers who help society to engage in collaborative processes of learning. This is another hangover of a 'scientific' driven view of human development and progress.

Institutional innovation then requires investments in the capacities needed for multi-stakeholder engagement and collaborative learning. This means developing the qualities of leaders so that they are able to recognise the value of, and support, such processes. It means developing a depth of facilitation capability. It means making process facilitation a core part of the professional competencies taught in educational establishments. It means reconfiguring the capacities of knowledge institutions to complement their research and academic pursuits with taking an active role in supporting innovation processes in society.

5.3 *Engaging politically*

Institutional innovation is not a neutral process. It involves challenging, disturbing and sometimes overthrowing existing dynamics of authority and power (North 2005). Institutional innovation is then, in the broader sense of the term, a political project. Being naïve, or ignoring the dynamics of power and authority is a common criticism directed at processes of collaborative learning and stakeholder engagement (see Pettit, this *IDS Bulletin*). Many proponents of such processes, including this author, would strongly argue that they can be an effective way of tackling power and authority and that they are a political response. That said, the reality is that they are often established in a rather mechanistic way with insufficient understanding and attention for power dynamics. Further, multi-stakeholder collaboration is only one of a wide range of political responses. Hence, the specific attention to political engagement.

Politics is played out in many different ways – from brute force and violence through to charismatic leadership, art and education. Indeed there is little that humans do that is not in some way 'political'. Rapid and profound institutional innovation, of the sort that is required to tackle climate change, overcome poverty or respond to the Western epidemic of unhealthy eating, requires a new understanding and use of politics. Some insights into this can be found in what Giddens' (1994) refers to as a 'framework for radical politics'. He argues for new forms of politics to repair relations between the individual and society, to make life choices about how to live in an era of limited resources and to regenerate mechanisms for collective decision-making, when it is clear that the forces of the state and the market are problematic.

There is a burgeoning discourse and literature on alternative conceptions and models of democracy

and democratic engagement (Beck 1997; Dryzek 1996; Gaventa 2006; Held 1996, 2004; Hutton 1997). This analysis points to the care that must be taken in simplistically advocating for a particular model of greater political engagement, be it civil society democracy, participatory democracy, deliberative democracy or empowered participatory governance (Gaventa 2006).

Perhaps an overarching capability is having a historical, philosophical and political perspective on how systems of governance work. Such deeper reflection is all too often seen as something that should be left to ivory towered academics rather than being a core capability that we all need, to play our part in rethinking how to govern ourselves.

More pragmatically, any individual, organisation or network wanting to engage politically needs at least the following capabilities. One, the capability to see and critically examine power relations (see Pettit, this *IDS Bulletin*). Second, is the capability to make judgements about what sort of political engagement is appropriate (VeneKlasen and Miller 2002), be it demonstrating at one extreme, through various forms of advocacy and or even child education at the other. Third, are a broad set of capabilities related to processes of lobbying, advocacy and policy influencing. Fourth, and related to the latter, are the capabilities for utilising the media (and internet) in all its forms (e.g. www.informationtoactivism.org).

Political engagement does not begin and end with activist groups and organisations. Ultimately, political engagement calls for ordinary people to become active citizens (VeneKlasen and Miller 2002). One can enter into an in-depth discussion of the capacities that this implies. This is, however, a step too far for the space allowed for this article.

5.4 *Being self-reflective*

Institutional innovation occurs, in complexity terms, as an emergent property of how all the actors (people) in the system (community, organisation, society) interact. Whether in small groups or whole societies, the kind of change that is possible is highly determined by the collective influence of individuals, mindsets, values and beliefs. This might seem like stating the obvious. However, much policy development and many development interventions still operate with strong undercurrents of mechanistic, rather than complex assumptions about how change happens (Woodhill 2008b).

Social change is an emotional process. One only has to hear politicians campaigning to realise how much they appeal to people's fears and emotional needs. Yet when it comes to policy development or the design of development projects and programmes, the emotional side is often absent. Design and planning fall back to on instrumental models upholding the scientific ethic of keeping 'emotional biases' at arm's length.

The overall implication here for capacity development is that institutional innovation requires investing in the capacities of actors in a situation (citizens) to be self-reflective. This means looking at and understanding one's own emotional drives and responses and looking at where they come from (Scharmer 2007). It means questioning one's own assumptions and beliefs. It means looking inward when problems with others emerge rather than, from the security of one's own prejudices, judging and blaming others (Rosenberg 2005). This is not easy. Western inspired education and training systems have largely excluded such core capacities for self-reflection and introspection from curricula.

In practical terms, there are some simple implications for capacity development. One involves investing in activities and processes that give people the time and space to develop themselves and their self understanding. Another is including feelings and emotions as a normal part of discussion and exploration in collaborative processes of change. A third is recognising that the emotional and self-reflective aspects of development demand 'safe' environments for people. This means working to create trusting environments in which people can give and receive open and honest feedback to each other.

Institutional innovation ultimately depends on human relations, and the quality of leadership and facilitation processes that mediate such relations (Gorzynski 2009; Scharmer 2007). In turn, these depend on individual capacities for self understanding, critical reflection and authenticity (see Pettit, this *IDS Bulletin*).

6 Conclusion: capacities for collaborative governance in a complex world

If 'development', institutional innovation or 'transitions' are to be goal-directed and intentional, what are the mechanisms for such guided social change? Emerging from the points raised in this article about the nature of institutional innovation in complex human systems, society seems confronted with a considerable dilemma. On the one hand, it is clear that the modern world is faced with very serious threats – be it growing inequality and endemic poverty, climate change or ecosystem collapse – which demand a goal-orientated and purposeful change to mitigate severe negative consequences. On the other hand, history, a deeper understanding of institutions, complexity theory and political science all point to the fallacy of believing that social, economic and political change can be easily controlled and directed. Is there, then, some middle ground between giving in to fate or trying to tackle issues in a linear and top-down way? Is there some way of enabling human systems to evolve in more desirable ways? It seems that the only real option for tackling this dilemma is to enhance societies' overall learning capacities (Woodhill 2002; Woodhill and Röling 1998) in ways that enable a greater responsiveness and resilience to emerging risks. In essence, this means tackling change processes and creating governance mechanisms bottom-up by distributing understanding, improving feedback linkages and enhancing capacities for adapting to change in a dispersed and non-hierarchical, yet coordinated, manner (Oswick, Anthony, Grant, Keenoy and Mangham 1999; Röling and Jiggins 2001). This aligns with the basic ideas of how complex adaptive systems function and with evolving ideas of collaborative governance (also termed participatory/discursive/dialogical democracy) (Beck 1997; Dryzek 1997; Gaventa 2006; Giddens 1994; Held 1996).

To embed and strengthen such processes of learning, institutional innovation and resilience in our communities, organisations and societies, requires a fundamental rethink about the notion and focus of capacity development. This article has briefly outlined four capabilities that are necessary for institutional innovation – being self-reflective; navigating complexity; learning collaboratively; and engaging politically.

If such capabilities were seen as core to development efforts and embedded in aid agencies themselves, we might be able to move away from the short-term, pre-planned and tangible result-focused strategies that in complex contexts generally fail. Institutional innovation challenges us all, but particularly our academic and research institutions, to rethink how to engage critically (Nielsen, Fear, Rosaen and Bawden 2006) with society. How can we respond strategically to the crises of unsustainable resource use and social injustice while recognising the futility of seeking greater prediction and control in complex human systems? The contours of answering this question are perhaps emerging around the deepening debates in the development sector on complexity and capacity development.

Notes

1 For distinctions currently being made between capacity, capabilities and individual competencies, see Baser and Morgan (2008) and Wigboldus *et al.* (2010).

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