Resilient Development in Central America? Rethinking Progress

Katherine Reilly, Assistant Professor, School of Communication, SFU[1]
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THIS IS A FIRST DRAFT AND IS NOT TO BE CITED.
Comments can be forwarded to: kreilly@sfu.ca

Between concerns about climate change, the 2008 global financial meltdown, and widespread theorizing about the 'limits to capitalist growth' (Heinberg 2011; Jackson 2009; Meadows, Randers & Meadows 2004), the word 'resilience' has been on the lips of both intellectuals and international policy-makers of late. The UNDP's new mantra, for example, is 'Empowered Lives, Resilient Nations.' Recent soul-searching by the international NGO community recommends preparing for "a decade of turbulence" characterized "primarily by risks, with poor people usually the most vulnerable" (Evans 2011). The recent Commission on the Measurement of Economic Performance and Social Progress convened by French President Nicholas Sarkozy in the wake of the 2008 financial crisis, and chaired by Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2009), found that objective measures of productivity need to be complemented by subjective assessments of wellbeing and sustainability. And according to the World Bank's *World Development Report 2010: Development and Climate Change*, the question we face is, "not just how to make development more resilient to climate change. It is how to pursue growth and prosperity without causing 'dangerous' climate change" (WDR 2010, 1).

All of this talk about resilience has piqued my curiosity. As a scholar of "international development" I've long been experiencing an existential crisis. I mean this in a very real and personal way. For example, the committee that hired me at SFU told me that they had specifically avoided writing the words "international development" into the announcement for my position. It would be fair to say that the big global development institutions have been contemplating their mortality as well, under the attack of authors such as William Easterly who lay bare their shortcomings and conceits (Easterly 2006). We regularly hear the twinned mantras of 'development is dead' and 'neoliberalism is hegemonic.' But meanwhile there is no doubt of global inequality and insecurity. This leaves both the big development institutions and intellectuals such as myself wondering what purpose we can serve.

But then resilience came along, and I thought that perhaps we might be witnessing an exit strategy in formation. So I started to take a closer look at the concept. I found that the World Bank's vision of resilience conforms to the standard growth model narrative in which adaptation is mainstreamed into development planning (Sebellos and Kreft 2011). It mirrors the definition of economic resilience offered by the Organization for Economic Cooperation and Development (OECD) as "the ability to maintain output close to potential in the aftermath of shocks" (Duval and Vogel 2008, 3). True to its idealist underpinnings, meanwhile, the UNDP's definition of resilience casts greater light on nation building. Here resilience is defined as:

[1] Thank you to Robert Prey, Ayumi Mathur and Rob McMahon for their contributions to my resilient communications study group, some of which have been taken up in the theoretical portions of this paper.

> The strength of a person or community to resist shock, manage crisis and grow stronger. Resilience in particular ensures that societies, communities and families can withstand crisis—whether it is a natural disaster or a food price shock—and bounce back with limited long-term damage, and be better prepared for the next crisis. (ibid, 3).

The document goes on to explain that "nations cannot be resilient without empowered people who have the tools and knowledge they need to achieve success. … people will be less served by nations and institutions that are unable to withstand crises and provide for their people." (ibid, 5).

In either case, the idea of resilience offers the convenience of continuity with, well, continuance. Resilience is perhaps the ideal exit strategy for international development organizations. In a world full of crisis (climate change, terrorism, financial collapse, civil unrest, pandemics) who could argue with institutional structures designed to ensure, maintain and/or restore stability? Meanwhile, intellectually, resilience draws on an autopoietic or 'systems theory' logic of stabilizing feedback loops that accords well with both complexity theory and contemporary discourses of hyper-globalization. Following this logic, international development becomes synonymous with risk management that makes the world safe for the continuation of progress. From global investors to slum dwellers, who wouldn't want less risk and more progress in their lives?

But when defined in this way, resilience is not an ideal exit strategy for me. At play here is a deeply liberal and a-historical approach to thinking about resilience and its relationship to development. Whether applied to globalization or ecology, systems theories have a tendency to bracket life processes and social phenomenon within totalizing theories that overlook the social relations that give rise to history (Schiller 2007). As a result, they exclude considerations of power from their analysis. Also, when resilience becomes an addendum to progress it takes on a hypocritical cast, serving to maintain processes that produce the need for greater resilience. So, with this in mind, I've set out to construct a historical approach to thinking about resilience that is grounded in a critical approach to 'the international,' as well as an alternative notion of progress.

Specifically, I posit resilience to be the outcome of developments that emerge through a process of uneven and combined development (UCD) (Trotsky 1961, 1962; Rosenberg 2005). UCD is an approach to historical materialism that offers a corrective to mainstream takes on international relations. As a corrective, however, it lacks historically specific mechanisms, so I rely on informational globalization to theorize the mechanisms that give rise to resilience in the contemporary moment. When resilience is defined as the outcome of social processes that happen within a relationally structured globe, then it no longer offers a justification for progress-as-growth in a world that faces finite limits, but rather it becomes a spotlight on the balances that *we* strike within spaces or moments of intensive networking. For me personally, this is an exist strategy I can abide.

Since this is a working paper, I've decided to do something really daring. I'd like to pose the question, if we were to look at Central America in terms of resilience instead of growth, what would we see?

Part 1: Rethinking Resilience

Resilience and Development: Contemporary Thinking

Work on resilience has its roots in two very different traditions of research: psychology and ecology. In the former case, resilience has focused on individual responses to adversity within social systems (Waller 2001), while in the later case resilience has focused on the persistence of ecological systems (Holling 1973) or the magnitude of disturbance an ecological system can absorb before experiencing a fundamental change (Gunderson and Holling 2002). In either case we can identify two patterns of evolution within the resilience literature.

In a recent photo exhibit called 'Resiliencia' (Instituto Cervantes, Madrid, 2009) curated by Claudi Carreras, resilience is depicted as the ability to recuperate original form and shape after a shock. Press releases use words like 'survival' and 'strenght of will' to describe the exhibit. The photos (featuring images from Latin America by 10 regional artists) contain single individuals surrounded by devastation, poverty or urban decline, or portraits of time-worn and stone-faced 'survivors' of history looking not at each other, but into the camera.

First several authors describe a gradual evolution within the resilience literature away from reductionist efforts that sought to identify key variables determining the presence or absence of resilience, and towards eco-systemic perspectives in which resilience is understood to be the outcome of interactions within a given context. So for example, in the realm of psychology resilience was originally seen as a personality trait, then attention turned to learned coping mechanisms, and most recently has come to be seen as arising through interactions with the larger social system (Waller 2001; Richardson 2002; see Buzzanell for a communicative take on this issue 2010). In studies of the natural world, a similar evolution can be traced from resource management through sustainability to resilience perspectives [citation needed].

Second, there has been a gradual evolution in efforts to bridge human (including both economic and social processes) and ecological visions of resilience. This work has looked at both the ability of social systems to cope with external shocks including from

environmental disturbance, and the ability of ecosystems or socio-ecological systems to maintain their integrity in the face of disturbances (such as natural disasters or civil unrest) or strain (as from resource pressure) (see Brand and Jax 2007).

Together these two trends have had an important influence on development policy. There has been a gradual shift in the risk management policies of international development agents from vulnerability reduction to capacity building and finally to resilience, or more generally from mitigation to adaptation to resilience (Gaillard 2010; Cannon and Muller-Mahn 2010). The vulnerability discourse focused on identifying the qualities of societies that make them susceptible to risk, and generated policies focused on mitigation. The capabilities discourse recognized the importance of the coping strategies of a community, and therefore focused on identifying inherent capabilities and supplementing them with education. Finally, the resilience discourse has come to understand resilience as internal to development and thus recommends that development planning should strive to generate resilience socio-economic systems that are able to 'bounce back' from adverse events.

These trends mirror larger shifts in the ontological structures underpinning mainstream development thinking. Specifically, there has been a shift away from models built on order, reductionism, predictability and determinism (Rihani 2002: 66) to models that take as a given the idea of nonlinear systems characterized by networked relations and emergent properties (Capra 1996). Of particular importance to thinking about resilience is the notion of autopoiesis—the notion that feedback loops in any network of communication present the possibility of self-regulation (Luhman; Maturana and Valera). Feedback has important implications for development theory. As Capra (1996: 82) points out:

> …a community that maintains an active network of communication will learn from its mistakes, because the consequences of a mistake will spread through the network and return to the source along feedback loops. Thus the community can correct its mistakes, regulate itself, and organize itself.

The Panarchy Model (Gunderson and Holling 2002; Berkes, Colding and Folke 2003) represents the pinnacle of current thinking on resilience as a process of adaptation built into socio-economic processes of development. The model offers a way of thinking about how much disturbance a socio-ecological system can absorb before tipping from one set of mutually reinforcing dynamics into another. As a scalar model, Panarchy looks at both the processes that regulate relationships within a particular level, as well as the processes of interaction that take place between levels. Scalar dynamics revolve around relationships of revolt and remembrance; the small innovations happening within smaller systems can put pressures on higher up systems to change, while the deep pockets of memory that give stability to larger systems will put pressure on lower down systems to stay the same. Meanwhile, within each system there is an 'adaptive renewal cycle' at work that balances processes of renewal and consolidation with processes of release and reorganization. Crucially the key variables shaping resilience within the Panarchy Model are the potential of the system measured in terms of accumulated resources and structures, and the degree of connectedness within the system.

The utility of the Panarchy model ultimately rests in its ability to predict shifts within or between different system configurations (Peterson 2000 in Armitage and Johnson 2006, 2). Ideally, according to the theory, any given system will evolve and change without being any less productive (i.e. drawing down its accumulated resources) or organized (becoming less connected) (Holling 2002, xv). But when used as a comparator, the implication is that systems with more social, economic, political, etc. capital, and more 'organization' (or more connections) are more resilient, and therefore better, than systems that are lacking in these traits. It is a short step from here to a mere hypothesis that masquerades regularly as truth, which is that developed countries are necessarily more resilient than underdeveloped countries, and that poor people are necessarily less resilient than are wealthy people (see for example Jerneck and Olsson 2008).[2] This argument rests on a whole series of assumptions about the relationship between resilience, property and immobility (settlement). This is often overlaid with a return to the vulnerability approach to risk management in which researchers seek to identify the capacities that give rise to resilience (see for example Norris et al 2008) and development practitioners seek to carry these to the needy within fixed locals (Gaillard 2010, 223).

Rethinking Resilience Historically

Recent work has begun to question these assumptions. For example, Bunce, Brown and Rosendo show how developmental interventions in Mozambique and Tanzania have served to undermine resilience rather than build adaptive capacity (2010). More generally, the Panarchy Model has begun to come under scrutiny for its lack of attention to the role of power within human social dynamics. Cannon and Muller-Mahn argue, for example, that "the notion of resilience…is dangerous because it is removing the inherently power-related connotation of vulnerability and is capable of doing the same to the process of adaptation" (2010, 623). They go on to argue that this problem results from the systems theory approach inherent to resilience thinking:

> Its source in natural systems makes the concept of resilience inadequate and even false when it is being uncritically transferred to social phenomena, precisely because human systems embody power relations and do not involve analogies of being self-regulating or 'rational'. The resilience argument exists within a very limited explanatory framework that gives privilege to 'rationality', is 'scientistic', has idealized ideas of actors behaving in an 'optimal' way, and has a general unwillingness to accept people's behaviour on the basis of alternative and equally valid 'rationalities'. (ibid)

A particular effect of the systems approach to thinking about resilience is that it has excluded consideration of human agency and power from the purview of the model. While it is possible to apply dynamic systems thinking to social systems, it must be done in a way that recognizes social systems to be:

[2] Careful attention needs to be paid here to the difference between resilience and vulnerability. Marginalized communities may indeed be at greater risk (more vulnerable). But for that same reason, they may well be much more resilient.

> …a complex system of sorts, with the distinction that [their] self-organizing capabilities are partially conscious and reflexive. In a situation of competing interests, and explicit self-interests, the key question for resilience is … resilience for what, for what purpose, and for whom? (Armitage and Johnson 2006)

And in his extensive review of the Panarchy literature World System Theorist Nicholas Gotts (2007) finds a number of points of weakness with the model. For example, cross-system dynamics that, according to autopoietic thinking, ought to be explained by internal innovations or historical legacies often turn out to be the result of interventions by foreign or colonial interventions. Also, according to the Panarchy model, systems ought to adapt through the evolution of their parts, but there are many historical examples of systems in which agents pursue adaptations to the detriment of the system. Overall, Gotts finds that there is a lack of attention to the role of elites 'and the often violent and oppressive ways in which they maintain themselves.'

A key problem with the Panarchy model is that, when applied to social systems, development continues to be framed as a process of accumulation. The implication is that more is better. Potential is measured in terms of accumulated resources, while organization is measured in terms of the degree of connectivity within the social network. More of both translates into more resilience, because you have more resources to draw down before there is a fundamental shift in a system's configuration. While this approach may adequately describe ecological systems, it is problematic when applied to socio-ecological systems, not least because it is precisely our propensity for accumulation as driven by greater connectivity that is threatening the resilience of socio-ecological systems.

Argentine blogger Espacio-R links this photo to the following observation about 'belonging': "Sin lazos interpersonales no hay resiliencia, sin una identidad cultural y sin pertenencia, los lazos sociales son ficticios, sólo contactos sin significado."
resilienciasociocultural.blogspot.com/2009/08/culturahistoriaidentidad.html

An alternative approach to thinking about resilience would draw our attention away from autopoietic organization of 'the social' and towards historically nonlinear process of development. In this vision, resilience becomes a statement of the balance that has been socially constructed through time within specific geographical spaces with implications for wellbeing. The resilience of a group now comes to depend on the balance that it strikes between three possible responses to any given situation: absorption, adaptation and amelioration. Absorption is the drawing down of resources to maintain the current system configuration. Adaptation implies a shift in the current system configuration to accommodate a new stream of resources. Amelioration refers to new knowledge that makes it possible to impact the stream of resources.[3]

One implication of this approach is that resilience depends less on the store of capital and degree of connectivity of a group, and more on the ability of a group to make use of capital and connections in ways that advance wellbeing. This puts the responsibility for resilience on a community rather than assuming it arises out of external threats or inheres within static social relations. [I haven't fully though this through yet, but I suspect this will line up nicely with Callon's thinking about performative economics as the *cultural enactment of markets* (Berndt and Boeckler 2009).] A second implication of this approach is that wellbeing must necessarily be defined internally to the group, as it will become part of the process of balancing possible responses. Adapting to the shock of resource constraints, for example, may mean downgrading expectations in the short term while ameliorating production in order to improve the long-term outlook. A third implication is that resilience itself becomes a dynamic outcome of internal processes of balancing wellbeing, rather than an addendum to fixed measure of progress.

Resilient Development as an Uneven and Combined Process

This is not to suggest that resilient development be relegated to geographically-conscribed autonomous communities, and this is where the contributions of Uneven and Combined Development (UCD) come in. UCD is a theoretical framework first put forward by Leon Trotsky (1961, 1962) to account for the variable dynamics of capital expansion in the world system. Recently, International Relations scholar Justin Rosenberg (1996, 2005, 2006, 2007, 2008, 2009, 2010) has suggested that Trotsky's insights can offer critical scholars a new purchase on supra-national dynamics in the world system.

Trotsky started from the premise that human development is intrinsically uneven and differentiated. This simple observation was followed by his second proposition - that all development is combined development. "All societies coexist with and interact with others…" as Rosenberg puts it, "super-add[ing] a lateral field of causality over and above the 'domestic' determinations arising from each and every one of the participant societies" (2008: 88). Thus the international both conditions and arises out of its dynamic interaction with the local. In other words 'the international' is conceived of as *internal* to any particular instance of social development.

By positing development as both 'uneven' *and* 'combined' Rosenberg argues that Trotsky is able to reorient the focus of social theory - from a static collection of social units

[3] Upon reflection I'm unhappy with the language I've employed here. I don't mean to suggest that interactions between humans and the natural environment, that links between social world and ecological world, are cast exclusively in terms of resources.

to a dynamic process of social development. "Rather than viewing societies as preformed discrete entities that then coexist and interact, Rosenberg invites us to conceive of this process of interaction as itself constitutive of these social orders"[4] (Allinson and Anievas 2009: 54). In other words, "global interconnectedness is not the empirical diagnosis of a recent development that must be explained", as Albert (2007: 173) puts it, "but rather forms the very background condition of the social world, its *conditio orbis*, from which every social theory must start in the first place."[5]

UCD doesn't become a theory, however, until the causal mechanisms get added in, and these will be specific to a given historical moment. Rosenberg (2008: 86) readily admits that on its own UCD "lacks any tools for specifying the causal properties of those processes of social life to whose multiplicity and interaction it draws attention." As Allinson and Alexander explain "U&CD is *not a theory in itself*. It is rather a methodological fix in the larger research programme of historical materialism." (2010: 208; emphasis added). We are currently experiencing an informational mode of capitalist development (Castells) and thus we can look to this modality for the main causal mechanisms lending historical specificity to UC&D.

In this relational take on the global, the social processes that are continuously constructing the 'here' take place within the patterned flows that organize the supra-local into a set of dynamics commonly known as the 'international system.' The term 'local' does not denote a fixed portion of the 'global' but rather an intensification of connections and flows. These connections interweave flows of money, people, and goods, as well as information. The flows will adjust as they come into interaction with the local social processes that are constantly working to construct 'the here'. Taking resilient development and UDC together, the social processes that work out a balance between adaptation, absorption and amelioration will be constitutive of a locality in interaction with its environment, and these processes will take place within the larger context of patterns flows that structure supra-local relations. The resilience of any given location will be determined by how its agents are suspended in this web of relations, whether as power holders or power seekers, as excluded or included, as exploited or exploiter, as oppressed or free. And it is this dynamic process that will give rise to the pattern of interactions known as 'the international.'

Box 1: A Relational Approach to the Global
Robert Prey, Graduate Student, CMNS, SFU

When faced with the question of what 'the global' is, the most common answer is that it is what encompasses all the places, locales, subjects and objects that make up our world. In other words - it is the container. Relational thinkers stridently disagree with this conceptualization. Latour (2009, 142) argues that "the global is a form of circulation" not the container. In other words, the global circulates through the networks of objects that sustain it. When we use the seemingly self-explanatory words "global" or "local" what we

[4] This position translated into the language of systems theory essentially states that all societies are 'open systems'. The advantage UCD offers over nonlinear systems theories of complexity and autopoiesis is that it is historical.
[5] Such an understanding directly counters the premise of "globalization theory" which claims that a new world based on interconnectedness has arrived and must be explained.

are doing is merely describing points of view on networks that are neither local nor global, but are "more or less long or more or less connected" (Bridge, 1987, 620).

This is because, as Escobar (2006, 108) explains, "most social entities exist in a wide range of scales, making the situation much more complex than in conventional notions of scale." He gives the example of interpersonal networks that build up to larger assemblages such as the coalitions of communities that form the backbone of global social justice movements. The British geographer Nigel Thrift (2002, 40) goes one step further by arguing that there "is no such thing as a scale. Rather, size is an uncertain effect generated by a network and its modes of interaction." It is a mistake, therefore, "to believe that some things (like people or ideas or situations) are "local" while others (like organizations or laws or rules) are 'global'" (Thrift, 2002, 38). In fact, according to Latour and his followers, it is a complete waste of time to try to enter 'the global' because you will never find the door:

> There is no access to the global for the simple reason that you always move from one place to the next through narrow corridors without ever being outside. Outside you would as certainly die as would a cosmonaut who, much like the famed Capitaine Haddock, simply decides to leave the space station without a spacesuit. Global talks are at best tiny topics inside well-heated hotel rooms in Davos. (Latour, 2009, 142)

For all the reasons discussed above, John Urry (2003, 122), recommends that we replace "the linear metaphor of scales…which has plagued social theory from its inception" with "the metaphor of connections." Such connections should be regarded as "more or less intense, more or less mobile, more or less social and more or less 'at a distance'" (ibid).

Information and Knowledge as Mechanisms of Historical Change

So what then is the role of communication in this framework? Of course any social process can be seen as communicative, but we can think of social processes as being shaped by the interaction between knowledge and information flows in a world increasingly shaped by knowledge management. Knowledge management in this sense does not refer to the mainstream 'knowledge hierarchy' from managerial systems theory (Ackoff 1989; Wallace 2007). Rather it draws on a dialectical approach put forward by Fuchs (2004, 2005) in which knowledge both informs and arises out of the processes of cognition, communication and co-operation that drive complex processes of social emergence.

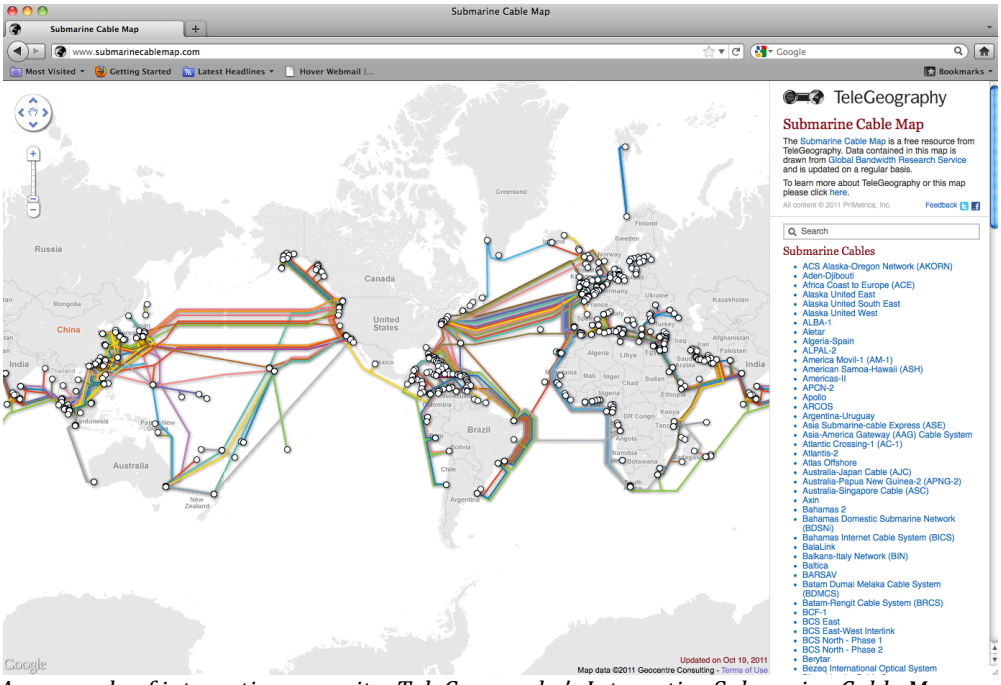
In this view, "Cognition refers to the individual dimension, that is, to the elements of social systems, communication refers to the interactional dimension, co-operation to the integrational dimension, that is, to the social system itself that is constituted by the interaction of its elements" (Fuchs 2004: 1.). Within the context of a particular social system, individual actors use their cognition to process data into subjective knowledge. Communication requires the objectification of that knowledge so that it can be transmitted to others. When synergies are encountered during communication between two actors, it

becomes possible for Cooperation to take place and this can result in the production of new formulations of objectified knowledge.

Objectified knowledge becomes codified in social norms, institutions and traditions as a way to reduce the complexity of our interactions in society, and this means that our cognition, communication and cooperation are enabled and constrained by pre-existing social structures that give shape to the social system. The constant interplay between knowledge production and social structures is what "enables the system to change, maintain, adapt and reproduce itself" (2005, 9). For Fuchs, therefore, knowledge management is defined as "a fundamental human process in the sense that human beings permanently have to co-ordinate their cognition, communication, and co-operation in social relationships" (2004, 10).

When we understand knowledge management to be a dialectical process of social emergence, information becomes a driving force in social change. With this in mind, Fuchs argues that "In a human living system, data is a manifestation of information, when it is interpreted and integrated into the cognitive system it is transformed into knowledge, knowledge that is embedded into practical experienced situations is transformed into practical knowledge" (2005, 11). Thus, in total, knowledge is a social manifestation of information.

We can extend this argument in two ways to better accommodate our vision of UCD. First, not only is knowledge a social manifestation of information, but information is also a technical manifestation of knowledge. In this sense, the 'local' knowledge intensive processes that determine the balance between absorption, adaptation and amelioration are both a social manifestation of information, and a technical determinant of information. In simpler terms, knowledge intensive processes that give rise to social structures take place in the context of global flows of information, but can also shape those flows.



An example of interaction capacity: TeleGeography's Interactive Submarine Cable Map: www.submarinecablemap.com

Secondly, it is important to keep present the extent to which knowing is linked to being which in turn linked to physicality. That is to say, our conceptions may shape our actions, but those actions will ultimately manifest in real places. If resilience depends, as has been argued here, not so much on stores of capital and levels of connectivity but on the capabilities, skills, know-how etc. that you can bring to those resources, then resilience will be an inherently knowledge-intensive activity. But if knowledge-management happens in interaction with information flows, then this means that the resilience-cum-knowledge of a community will depend on its location within these global flows. This is especially true given the relationship between patterns of material and informational flows at the global level and material and knowledge processes within fixes physical spaces.

According to this logic, dynamics of exclusion, exploitation and oppression must be understood as internal to processes of social construction that are suspended within patterns of networked interactions. Within knowledge intensive processes we can ask whose ideas count in processes of objectification and how those processes shape social relations through time. At the level of information flows, we can study the 'geopolitics of interaction capacity,' which is the question of how transportation and communication circuits structure the capacity for interaction between social units (Buzan and Little 2000: 81).

Part 2: Resilient Development in Central America?

So far this paper has argued that a new tool is necessary, and it has constructed the tool. The logic of this tool could be examined on it own merits, but we can also see if this tool can be applied to a real world case, and whether there is utility in doing so. Here is where this paper becomes truly a 'work in progress'—this is a first, searching attempt to think through the implication of these ideas for our understanding of Central America.

First a word about why I find Central America to be a particularly interesting test case for this model. Central America is a region where the study of UCD runs up against intriguing questions. This region was one of the earliest landfalls of Spanish colonization, and as a result, it has long been subject to 'globalization'. It started out at a combined entity called the Reign of Guatemala, and subsequently broke apart into separate states, but these states have pursued numerous tenuous attempts at political, cultural and economic reincorporation (Hernandez 1994) meaning that the region features a de facto federalist political organization. The isthmus also forms a geopolitical, economic and cultural point of inflection, serving as a connector between North and South, and as gateway between East and West. For Francis Pisani, this makes Central America the 'Plexus of the Americas,' a space that is "a product of the particularly intense relations and exchanges between the societies it is made up of" (2007, 29). So development in the region is undoubtedly subject to 'combined' conditions.

But it is also a region characterized by intense unevenness in development patterns, not just between states (although this is certainly the case) but also within states, and within networks that stretch across the region. In my view, uneven patterns of development distinguish themselves more clearly within and between social networks than within and between sovereign entities in Central America. This means that there are many features of Central American politics, economy and society that cannot be explained unless we pay attention to the UCD nature of historical evolution in the region.

Central America also features a rich and complex ecological configuration, as well as a rich and complex socio-economic history, and this means that resilience is an important consideration for Central Americans. This is true on two fronts. First, given the susceptibility of the region to disasters such as Hurricane Mitch in 1998 and the 2001 earthquake in El Salvador, risk, sustainability and mitigation are important considerations for Central Americans. Second, given the lengthy history of inequality, civil unrest, and economic turmoil in Central America, people in the region are highly attuned to questions of adaptation, absorption and amelioration.

Given all this, if we were to look at Central America in terms of resilience (as it has been defined here) instead of growth, what would we see? When we apply these ideas to the Central American case, do they reveal any interesting conclusions?

A First Approximation

As a first approximation to this question, we can ask, when we look at Central America in terms of *growth* (or progress), what do we see? Works in this vein will typically hinge on two key considerations. First, they will respond to a pattern of productivity—a certain arrangement of outputs (supply) and consumption (demand) that when summed up equals the national product—and they will ask 'why this pattern of production and not some other pattern'? The answer to this question will turn to issues of planning, infrastructure, education, health, innovation, entrepreneurialism, banking, resources, etc. The answer might also consider regional or global factors and how they shape patterns of production. Second, they will identify the pattern of distribution of that product and ask, why this distribution and not some other? The answer to this question will consider issues of regime type, culture, institutions, power, justice, regulation, etc. Note that in this case, a unit must be identified. Typically this will be a geo-political unit—a municipality, a nation-state, or a region—which means that works in this vein will inevitably take up questions of governance (policy, decision-making, etc.). *Typically* resilience is thought of in terms of the continuation of productivity, thus it becomes an addendum to the questions considered here.

If we look at Central America in terms of resilience, what would we focus on? First, we might look for flows and concentrations of money, people, goods and information, and we might ask, why these patterns and not some other patterns? To answer these questions, we would want to consider the geopolitics of interaction capacity, or in other words, how patterns of exclusion, exploitation or collaboration structure flows of money, people, goods and information. We might also want to look at patterns of objectified knowledge (i.e. historically derived institutions) and how they structure flows and concentrations as well. Second, we might look into spaces of concentration to see what balances are struck between adaptation, amelioration and absorption, and ask, why these balances and not some others? This question would have us look at the power dynamics at work within specific processes of knowledge construction. What patterns of communication and cooperation are at work here? Whose knowledge counts and whose knowledge is sidelined? Notice here that we do not focus on a geo-political unit, but rather on a concentration of flows, and this means that works in this vein will inevitably take up questions of interaction (exchange, collaboration, trust, brokering, etc.)

When we consider how each of these approaches would 'digest' the much studied issue of gangs in Central America, some important differences begin to emerge. When the

focus is on growth, then gangs are typically examined as an element that either contributes to or undermines productivity and/or distribution. Gangs might be treated like a sort of cancer on the system that prevents 'citizens' from leading a secure and productive life, or they might be treated as a symptom of the corruption of that system that threatens the 'social order' and 'rule of law.' But when the focus turns to resilience then gangs are a space-in-construction in which people are making decisions about how they will balance creativity, consumption and investment given the implications of that balance for their wellbeing. They will make these decisions given the web of flows in which they find themselves suspended—flows that might include information about the social, political and economic context at the local, regional and international levels.

In the first case, more development is assumed to be a good thing, and gangs are treated as a treat to development or symptom of underdevelopment that must therefore be addressed. In the second case, gangs become something that 'develop' in some places, and not in others, given our *combined* global experiences, and *uneven* local historical trajectories. They are not good or bad—they just are. Having said this, their decisions will still have implications for how much gets produced, and (most importantly) who will benefit from that production (probably not who you expected). But since there is no assumption that more development is necessarily better, we could just as easily consider the implications of their decisions for socio-ecological balance (i.e. the environment), or socio-psychological balance (i.e. happiness). In this way resilience is understood not as the handmaiden of continued growth, but rather as a product of historical relations and contemporary decision-making.

Is this a useful way to think about Central America? Some readers may be checking in with their Enlightenment sensibilities at this point. Isn't the whole point of international development to make the world a safer place for democracy? If gangs are a threat to peace and social justice, then shouldn't we work towards institutional arrangements that rid honest people of this criminal plight? But there are several reasons why this approach offers a better way to think about development in general, and Central America in particular. First, this approach provides a workaround to 'development is dead' and 'neoliberalism is hegemonic' discourses. Development is always happening – the question we need to focus on is how it happens in different places and with what implications. Development becomes a legitimate topic of investigation once again since no one is presuming normative ends. Second, this approach allows us to pull back the curtain that is democratic governance and politics in Central America, and take a closer look at what actually drives history in the region. In this way we can focus on the factors that actually shape development, rather than Western normative and institutional aspirations for how development *ought* to be shaped. Let me explain this last thought by way of an example.

Several years ago I was asked to chair a panel at the Canadian Political Science Association Annual Congress. The panel was on political parties in post-democratization contexts. One of the presenters was using statistical modeling to study the question of how and why the number of political parties dwindled over the course of the first three elections following a transition to electoral democracy. This was a question not only of why some parties disappeared (or got incorporated into other parties), but also a question of why some other parties persisted. The presenter had a good explanation for party disappearance - he argued it was because of the failure to win an election – but had no ready answer for the second part of his puzzle. I suggested he re-examine his central

assumptions about the nature of democracy and the objectives of electoral participation. Thinking of the Guatemalan context, where there is a multitude of political parties, but party institutionalization is low (Asies 2004; Mack 2006), I argued that parties are not necessarily formed to win elections, but rather for other reasons, especially in 'open' or uncertain contexts, such as channeling resources or having influence over processes of social construction. What this example suggests is that in the case of Guatemala democracy and elections can be a red herring, distracting our attention from the forces that are actually at work. If we want to understand the ongoing process of development then we need to look beyond ideal type notions of how regimes function to the actual processes that are moving histories forward.

Where are the intensifications of flows?

With this in mind in this section I make a first attempt to uncover some major flows and concentrations in Central America, as well as the geopolitics of interaction capacity in the region. I have attempted to sketch this out in Table 1. The second column contains typical characterizations of governance and social process at the given level. The third and fourth columns offer an approximation of concentrations of flows at that level. I am thinking of the millennial period in Central American history when I fill in this chart, an era marked principally by post 9-11 anti-terrorism rhetoric and legislation, and the negotiation of the Central American Free Trade Agreement (CAFTA) with the United States.

The principle regional political body in Central America is the Sistema de Integracion Centroamerica (SICA), which was established in 1993 in the post civil-war period to oversee the political, social and economic integration of Central America. At that time, regional integration was seen as a means to promote peace and democratization throughout the isthmus. With this in mind, SICA includes a 'Comite Cosultivo' for civil society and business interests.

But by 1997, transnational elites in both Central American and the Caribbean began to demand greater trade liberalization so they could compete with the newly deregulated markets created by the 1994 North American Free Trade Agreement (NAFTA) in Mexico (Bair and Peters 2006). Specifically, when NAFTA threatened to divert foreign investment in assembly operations away from Central American and the Caribbean, the countries of these two regions began to press the United States for *bilateral* trade agreements (Klak 2004, 90). This is an important point because the bilateral activities of national governments began to undermine the processes of regional integration underway in Central America. As SICA sought to remain relevant to the changing economic scenario, its *discourses* of peace, democracy and regional integration began to give way to those of global economic integration, as is thoroughly documented by Bull (1999). Eventually, however, it became clear that Central American integration would become wrapped up in NAFTA's regional competition with Asian manufacturing. As Hussain explains, a free trade agreement would "dampen North American industrial outmigration by making CA father than Asia the industrial destination" (Hussain 2006, 64).

Table 1: Central American Flows and Concentrations

	Typical Characterization	**Flows**	**Concentrations**
International Level	Export processing zone; North American commodity chain; Geopolitically strategic isthmus; Canal zone; Eco-tourism	Migrant labor; Trafficked goods; Money; Trade; Maquila labour product; Information	Brokers, borders, tariffs, regulations, institutions or political bodies
Regional Level	Unaccountable *de facto* federated governance structure that sets key tenets of the economic development model.	Migrant labor; Trafficked goods; Money; Trade; Information	Brokers, Business lobbies; Mesoamerican People's Forum; Criminal Organizations; Regional associations; SICA
State Level	Fragile and Contested States lacking in legitimacy / authority.	Appeals for legitimation - both domestic and international	Military, Oligarchy, Political Parties, Public Service
Governance	Low Intensity, Polyarchic or Delegative Democracy. Weak public institutions.	Corruption. Coercion. *Mano Dura.* Populist Discourses.	Public Coffers; President's Office; Military/Police; institutions
Mediating Groups	Articulations, Networks, Alliances, Political Parties, Religious Groups, etc. NGOs, Social Movements, Associations	Mobilization, legiti-mation, Recruitment, Dissemination, Communication	Leadership roles; Construction of spheres of security and legitimation (spheres of ontological security)
Society	Insecurity, Exclusion, Exploitation, Escape, Entrepreneurialism, Solidarity	Ideas; Labour; People; Trade; Service; Care Escapism, disaffection, disengagement, radicalization, solidarity	'Turn inwards, turn away from state, turn towards alternate centers of power.' Family, church, gangs, arts, transnational networks.

As Central America's economic 'role' in global trading networks began to crystallize, the SICA fell away as an effective regional political space. As a result, economic decision-making began to take place behind closed doors, beyond the reach of constituencies which had enjoyed the benefits of participation in the SICA process. The Central American Free Trade Agreement (CAFTA), announced during a state visit by President George Bush to El Salvador in January 2002, was actively sought after by Central American trading partners. The Mesoamerican People's Forum (MPF) emerged as a replacement for the CC-SICA as a space for regional civil society articulation, but it was unable to stop the CAFTA process. The agreement achieved successful implementation throughout Central America by 2006.

What can we conclude from these processes? When we consider the impact on productivity, several authors suggest questionable gains. Rather than changing the position of Central America vis-à-vis other countries in the global market-place, processes of economic integration have served only to transform the basis of Central America's economies from the export of commodities to the export (figuratively speaking) of cheap labour. As Taylor's work on world city networks shows, the region remains peripheral in the global economy: 'a region beyond world cities.' The service industry in particular consists of small non-global firms which, "operate beyond their normal geographical range

by forming alliances or having other, similar relationships with firms in other regions" (Taylor 2003, 78-79). Manufacturing sectors, meanwhile, have tended to adopt a subcontracting model in global commodity chains. This model fails to generate endogenous growth as it provides little opportunity for forward or backward linkages in the local economy, or for the advancement of workers (Bair and Peters 2006; Robinson 2003, 300; Klak 2004, 89). Finally, market niches available for specialized products from the region are "narrow, highly competitive, and fraught with obstacles" (Klak 2004, 78; see also Robinson 2003, 302). The result has not been virtuous growth nor fundamental changes to the relations of production, but the insertion of Central America into global production networks that provide menial employment but little else to the local economy. Klak concludes that: "…current economic and political trends are not really globalized, but rather highly uneven geographically, in terms of both impacts and control. Peripheral regions are certainly shaped now, in the era of globalization, as they have been under previous phases of capitalism, by the ideas and actions of outside investors and political leaders" (2004, 79).

Signs of protest against the Central American Free Trade Agreement (CAFTA) are also signs of different visions of how the region should 'combine' its development for the least unevenness. The photo on the left suggests community autonomy, while the sign on the left calls for 'integration from the communities'.

When we consider the impact of these shifts in terms of flows and concentrations, however, the impact is very significant. As power has shifted from the state or government level to regional spaces, and economic flows have become integrated into regional networks, a power vacuum has emerged within traditional sovereign spaces. People who are excluded from these circuits have turned inwards, turned away from the state, and turned towards alternate centers of power. This creates a series of other flows and concentrations that also transcend state borders, but that respond to a different set of elites. These include criminal networks that traffic in drugs, weapons and people, the protestant and evangelical religious organizations that have proliferated in the region over the past 20 years, and also spaces for civil society. For example, we cannot understand the history of the MPF outside of this context (Reilly 2010). The de facto federated governance structure of the region, plus its contested states and low intensity democracies are both a

result and a symptom of the shift away from domestic and towards regional decision-making as Central America re-negotiates its incretion into global commodity chains. The local result is a disarticulation and reformulation of other forms of circulation as individuals seek out the centers of power that will allow them to make new types of decisions around whether or how to balance adaptation, absorption or amelioration within a shifting context.

Resilience for whom and for what?

Having explored the geopolitics of interaction capacity, we can now take a closer look at local patterns of knowledge management, and how these shape resilience in the region. Recall decisions with a 'resilience effect' arise within constructed social spaces. Following Fuch's theory of knowledge management, these will be social networks in which the actors find common grounds in terms of how they objectify knowledge. Given this common ground, they will arrive at similar decisions in terms of how to balance adaptation, amelioration and absorption with implications for resilience and ultimately wellbeing. These spaces are not nested like Russian dolls, but rather will arise and interact in complex ways within and across scales. These knowledge-intensive processes are suspended, in turn, within the more solidified patterns of information circulation that were discussed above. So, for example, a local network of environmental activists will find themselves subject to the provisions of the CAFTA agreement, as well as moving within the spaces of the Mesoamerican People's Forum. The group will make internal decisions based on their own objectified knowledge, but they will do so with reference to the information circulating in the larger environment.

So how do these knowledge intensive processes function? We can begin to approximate an answer to this question by considering a specific case study. Anja Nygren's 2004 legal ethnography of resource tenure in the Rio San Juan region of Nicaragua provides a useful touchstone.[6] In her work, Nygren studies the efforts of the Aleman (1997-2002) and Bolaños (2002- 2007) governments to institute land titling throughout Nicaragua in accordance with the neoliberal argument that rural development will result from increased productivity, which in turn rests on clear property regimes. She argues that efforts to institute a state-backed *de jure* system of land titles run up against the plethora of legal

[6] Given the subject matter, it is particularly important to consider how the physical environment enters into knowledge-intensive processes. In a recent literature review, Carey observes that scholars of Latin America "now understand that environments emerge historically from a mix of both nature's agency and cultural constructions" (2007, 252) and that this "provides a foundation for understanding the ways in which power discrepancies, identity, social relations, and the evolution of expertise influence human-environment relations" (263). Nygren's work does tend to treat the environment like a resource, rather than as an agent with its own proclivities. Her work can be extended by recognizing the agency of the environment within local processes of knowledge construction. One way to do this is by studying 'communication-events' perpetrated by the environment: events that give rise to new patterns of cognition, communication and collaboration (Rosario Raguillo, University of Guadalajara). Events ranging from bumper crops to natural disasters will cause knowledge producers to rethink how they balance their interactions with the world around them. Another approach would be to analyze the discursive influence of environmental metaphors on knowledge management (Adam 1990, 157). When the environment is perceived as a hostile enemy this will have far different implications for human responses than when it is perceived as a wounded being or the pachamama.

orders instituted by the Somosa, Sandinista, and post-war regimes, a series of normative orders validated by state institutions at various points in time, as well as relationships that different groups hold with the idea of natural resources. These relationships range from subsistence farming and forest extraction to environmental stewardship and tourism to large-scale ranching and export farming. As a result "…many kinds of conflicts exist between the government, which aims to establish 'law and order' and promote 'rational' land-use patterns … and local inhabitants, who state that the order promoted by the government is one-sided and ignores local people's rights to resources" (2004, 126).

It is likely that the negotiation of the CAFTA agreement intensified conflicts and adjustments in resource management among the different actors within the Rio San Juan area. The deal would have intensified government pressure to stabilize a land title regime, and meanwhile, the negotiation of the deal would have contributed to the delegitimation of the national government given its concessions to regional political processes. So the CAFTA agreement, with both its neoliberal economic policies and its de facto federated process of negotiation, will have had important implications for the Rio San Juan community.

Nygren argues that "What is at stake in these struggles is an increasing resistance to coercive policies of resource regulation and a growing demand to recognize the existing diversity of normative orders regulating issues of land tenure and resource access" (2004, 124). That is to say, local groups demand that they get official recognition for the set of strategies they have established to support their family from the land, regardless of the historical regime out of which that strategy emerged. The conclusion Nygren draws from this work is that the law needs to be conceived of in 'pluralistic terms' within the Rio San Juan context. That is to say, property rights are not a question of legality versus illegality—it is too difficult to establish who has the best legal claim to the land—but rather a complex series of processes that are tied up in both competition and negotiation and that need to be understood in their own right. In other words, land tenure has arison out of complex processes of knowledge objectification between and among different groups within the community.

What I find particularly fascinating about this case is the fact that land tenure arrangements have been layered on top of each other over time in the context of various different efforts to draw on the region for control of state and economic prosperity. But ultimately, no one system of political control or economic organization has been able to dominate. Within this context, people have made their own local decisions about whether it is best to draw down their resources, invest in improvements, or move on to a new situation, given their own understanding of their relationship to the land. This has had implications for the resilience of the community as well as the resilience of the land. Development has happened. Accumulation, however, has been much slower, and has done little to prop up any one system of political control or economic development. This situation is reminiscent of Bebbington's argument that:

> Power, meaning, and institutions are constantly being negotiated, and these negotiations open up spaces for potentially profound social and institutional change. Understanding how these spaces open and how they are used is a critical research challenge, and will take us beyond some of the oppositions that haunt much development theory. (2000, p. 497)

This is akin to my own suggestion that we need to study how knowledge about human-environment relations circulates among different groups and what this means for how resilience is objectified and enacted in social, economic and political practices. So rather than relying on the laws that hold together the state of order for the purposes of development as progress, we can focus on the processes through which norms of human-environment interaction emerge, with implications for resilience.

These series of observations give rise to questions about power struggles within and between groups. Whose knowledge counts within spaces of decision-making? Whose knowledge systems achieve dominance in competition between different groups? This is very well-tread territory, and I do not seek to reproduce debates about indigenous knowledge systems versus science here (see for example Sparks 2007, Ch 4). Rather I would like to point that when we focus our attention on resilience rather than growth, then the role of knowledge changes. When we think about development in terms of accumulation and redistribution, then we tend to think about knowledge-power in terms of who controls the decision-making process, either by shaping the process, or by manufacturing consent. But when we think about development in terms of resilience, then all decision-making will have effects, one way or another. This makes <u>*all of us*</u> responsible for resilience, but it does not erase relations of power. The important questions here revolve around 1) individual logics of cognition and communication, as well as 2) the sum total effect of the decisions of all groups.

The question of how individual logics of cognition and communication function within particular local groups directs us to the gap that often exists between what we think privately and what we choose to communicate publicly. My work on the Mesoamerican People's Forum, for example, found that the discourse of 'open social processes' surrounding the event masked the political tensions at play within the space (Reilly 2010). The space was not very effective in terms of advancing the agendas of the individuals it purported to represent. It was, however, very effective in terms of advancing the position of individual leaders within the space.

Many of the groups who find themselves in conflict with each other in the Rio San Juan region would have sent delegations to the MPF meetings. Nygren describes for example conflicts that have erupted between campesinos who engage in forest cultivation and environmental NGOs who lobby for strong environmental controls within protected areas. Both of these groups would have found fault with the CAFTA agreement, and would have had a presence at the MPF, but for very different reasons. Campesino groups feared that free market regulations would put pressure on small holders to sell off their land to multinational food producers. Environmental groups, meanwhile worry about the impact of either type of farming on protected areas. Both groups need to adjust their decisions around adaptation, amelioration or absorption given the changing conditions for their development in the CAFTA era.

But the participation of these groups in the MPF was probably shaped more by the leaders' own efforts to balance adaptation, amelioration or absorption within changing conditions for *their leadership*, than followers' efforts to negotiate changing conditions for resource management. The negotiation of CAFTA implied the collapse of the CC-SICA as a space of articulation for NGOs within Central America. Meanwhile, as the new millennium dawned, fascination with the Central American peace process waned, and many civil

society leaders fell on tough times. Given the changing political and economic context, leaders within the Central American left found that they needed to build up and/or maintain power bases to shield their positions within an uncertain environment. The MPF became a space into which people could be mobilized. This allowed leaders to leverage 'solidarity tourism' to shore up their own legitimacy, however it meant that they needed to work hard to shape networked flows within forum spaces to limit the potential for erosion of established positions. These dynamics provide an illustration of how the disconnect between cognition and cooperation can shape power flows within particular spaces with implications for how amelioration, adaptation and absorption are balanced. In sum, when we focus on resilience over accumulation, our concern shifts from the dominant framework for the legitimation of knowledge, to overlapping or counter-indicated agendas within particular spaces of decision-making. The question is not so much how much resilience and for whom, but rather what kind of resilience and how?

There is also the question of how the totality of decision making about how to balance adaptation, amelioration and absorption plays out within a given context. This is a difficult question to answer without pursuing fieldwork in the Rio San Juan area. But we can speculate about the ways in which different groups may be responding to the impacts of the CAFTA agreement on their situation. Nygren, for example, documents how neoliberal economic policies, including land titling, have intensified land concentration in the Rio San Juan area. Anti-CAFTA movements argued that the CAFTA deal would intensify these processes. As small-holders sell off their cheap land to speculators or commercial operators (oftentimes under duress, but also to avoid debt, or make money) the displaced families must find new means to survive. This combination of activities leads to a cumulative shift in the decisions that people make about how they will make use of resources (absorption), how they will work to improve their situation (amelioration), or how they will adjust their expectations (adaptation). Displaced families may, for example, take up squatting within ecological reserve lands, move to urban centers or migrate into neighboring Costa Rica.

These shifts will have implications for the resilience of different communities and different ecological regions. These decisions are not a result of a lack of economic development, but the result of decisions made in the context of given economic policies. So in total, Central Americans, including the groups in the Rio San Juan region of Nicaragua, are subject to the *combined* logic of free trade. But the ways in which that free trade agreement shapes local knowledge processes will have *uneven* effects on the decision-making of different groups, with different implications for the resilience of local communities. Future research could flesh this out with empirical observations. How does the way in which the geopolitics of interaction capacity shapes local knowledge processes lead to particular patterns of resilience, and with what implications for well-being?

Some Concluding Thoughts

Resilience should *not* be thought about in terms of *systems* that bounce back and re-normalize after a crisis. Indeed, 'bounce-back' resilience is a bizarre concept to apply in a context such as Central America, where the economic system serially renegotiates its articulation with global circuits of exchange, and political systems have experienced repeated turmoil for a century. Under such conditions, resilience must concern itself with

the processes that people engage in to persevere, with implications for collective wellbeing and sustainability, given particular patterns of information flow at the 'combined' level. Some groups latch onto strategies such as *de jure* law and property rights, particular governance arrangements, and free markets because that is the best way for them to persevere. Other groups find other networks, concentrations of power and strategies beneficial. The resilience of any given group will depend on how their uneven strategies situate them within combined historical processes with all the power struggles and contingencies that this implies.

I've cast a spotlight on the balances that we strike within spaces or moments of intensive networking, given particular conditions. This make some people feel uncomfortable. Am I suggesting that poor folks are responsible for their own poverty, or that the vulnerable should be left to their fates? No, I do recognize that people make decisions within contexts not of their own making. But I also wish to recognize the agency of people to shape those conditions. This is an absolute imperative with it comes to thinking about resilience. As we head towards climate-induced weather patterns that will seriously affect the living conditions of large populations, we need to find different guiding concepts around which to organize our political, economic and social activities. Resilience seems a likely candidate and can offer a welcome substitute for growth. This can be a resilience that is locally produced but that is recognized to take place within combined contexts. Such a concept becomes a very pure expression of power, and thus worthy of our consideration.

What role then for the World Bank or for Katherine Reilly? Resilience as risk mitigation or vulnerability reduction has become another justification for the existence for the World Bank. Resilience justifies my interest in development as well, but in a very different sense, as I consider how it allows us to rethink that system.

Bibliography

Ackoff, R. L. (1989) From Data to Wisdom. *Journal of Applies Systems Analysis* 16: 3-9.

Adam, Barbara (1990) Knowing Through Metaphors. *Time and Social Theory*. Polity.

Albert, Mathias. (2007) 'Globalization Theory': Yesterday's Fad or More Lively than Ever? *International Political Sociology* 1, 165–182.

Allinson, J. C. and Alexander Anievas (2009) The uses and misuses of uneven and combined development: an anatomy of a concept. Cambridge Review of International Affairs, 22:1, 47–67.

Armitage, Derek and Derek Johnson (2006) Can Resilience be Reconciled with Globalization and the Increasingly Complex Conditions of Resource Degradation in Asian Costal Regions? *Ecology and Society* 11(1): 2.

Asies (2004). *Guatemala: Monografía de Partidos Políticos 2000-2004*. Guatemala: ASIES, December.

Bair, Jennifer and Enrique Dussel Peters (2006) "Global commodity chains and endogenous growth: Export dynamism and development in Mexico and Honduras." *World Development* 50(2): 203-221.

Bebbington, A. (2000). Re-encountering development: Livelihood transitions and place transformations in the Andes. *Annals of the Association of American Geographers*, *90*(3), 495-519.

Berndt, Christian and Mark Boeckler (2009) Geographies of circulation and exchange: constructions of markets. *Progress in Human Geography* 33(4): 535–551.

Berkes, F., C. Folke and J. Colding (Eds) (2003) *Navigating social-ecological systems: building resilience for complexity and change.* Cambridge, UK: Cambridge University Press.

Brand, Fridolin Simon and Kurt Jax (2007) Focusing the Meaning(s) of Resilience: Resilience as a Descriptive Concept and a Boundary Object. *Ecology and Society* 12(1): 23.

Bridge, G. (1997). Mapping the terrain of time - space compression: power networks in everyday life. *Environment and Planning D: Society and Space* 15(5): 611-626.

Bull, Benedicte (1999). "'New regionalism' in Central America." *Third World Quarterly* 20(5): 957-970.

Bunce, Matthew, Katrina Brown and Sergio Rosendo (2010) Policy misfits, climate change and cross-scale vulnerability in coastal Africa: how development project undermine resilience. *Environmental Science and Policy* 13: 285-497.

Buzzanell, Patrice M. (2010) Resilience: Talking, Resisting, and Imagining New Normalcies into Being. *Journal of Communication* 60: 1-14.

Buzan, Barry and Richard Little (2000) The Theoretical Toolkit of this Book. *International Systems in World History: Remaking the Study of International Relations*. Oxford: Oxford Universitiy Press.

Cannon, Terry and Detlef Muller-Mahn (2010) Vulnerability, resilience and development discourse in context of climate change. *Natural Hazards* 55:621-635.

Capra, Fritjof. (1996) *The Web of Life*: Anchor Books.

Carey, Mark (2007) The Nature of Place: Recent Research on Environment and Society in Latin America. *Latin American Research Review* 42(3): 251-264.

Chalaby, J. (2005) From Internationalization to Transnationalization. *Global Media and Communication*. 1(1): 28-33.

Easterly, William. (2006) *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. Penguin Press.
Elliott, Jennifer A. (1996) *An Introduction to Sustainable Development*, London: Routledge.
Escobar, Arturo. (2007). The 'ontological turn' in social theory. A Commentary on 'Human geography without scale', by Sallie Marston, John Paul Jones II and Keith Woodward. *Transactions of the Institute of British Geographers*, Volume 32 Issue 1, Pages 106 - 111
Fuchs, Christian (2003) Globalization and Self-Organization in the Knowledge-Based Society. *TripleC: Cognition, Communication, Co-operation.* 1(2): 105-169,
Fuchs, Christian (2005) Knowledge and Society from the Perspective of the Unified Theory of Information (UTI) Approach. In Petitjean, Michel (Ed.) Proceedigns of FIS 2005: Third Conference on the Foundations of Information Science. Paris, July 4-7, 2005. http://www.mdpi.org/fis2005/proceedings.html.
Fuchs, Christian (2004) Knowledge Management In Self-Organizing Social Systems. *Journal of Knowledge Management Practice*, May.
Gaillard, J. C. (2010) Vulnerability, Capacity and Resilience: Perspectives for Climate and Development Policy. *Journal of International Development* 22:218-232.
Gotts, Nicholas M. (2007) Resilience, Panarchy and World Systems Analysis. *Ecology and Society* 12(1): 24.
Gunaratne, Shelton A. (2007) A systems view of 'international' communication, its scope and limitations. *Global Media and Communication*. 3(3): 267-271.
Gunderson, L. H. and C. S. Holling (eds) (2002) *Panarchy: understanding transformations in human and natural systems.* Washington, DC: Island Press.
Heinberg, Richard (2011) *The End of Growth: Adapting to our New Economic Reality*. New Society Publishers.
Holling, C. S. (1973) Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4:1-23.
Holling, C. S. (2002) Foreword: The backloop to sustainability. In Berkes, F., C. Folke and J. Colding (Eds) (2003) *Navigating social-ecological systems: building resilience for complexity and change.* Cambridge, UK: Cambridge University Press.
Howard, Alex (2011) Global Adaptation Index enables better data-driven decisions. O'Reilly Radar September 15. http://radar.oreilly.com/2011/09/global-adaptation-index-open-data-speed.html Accessed September 15, 2011.
Hussain, A. Imtiaz (2006). *Running on empty in Central America?: Canadian, Mexican, and US integrative efforts.* Lanham, MD: University Press of America.
Jackson, Tim (2009) *Prosperity without Growth Economics for a Finite Planet.* London, Sterling, VA.
Klak, Thomas (2004). "Globalization, neoliberalism and economic change in Central America and the Caribbean." In *Latin America Transformed: Globalization and Modernity*, edited by Robert N. Gwynne and Cristóbal Kay. London: Arnold Publications.
Latour, Bruno. (2009) Spheres and Networks: Two Ways to Reinterpret Globalization. *Harvard Design Magazine* 30, no. Spring/Summer: 138-44.
Liew, Anthony (June 2007). Understanding Data, Information, Knowledge And Their Inter-Relationships. *Journal of Knowledge Management Practice* 8 (2).

Mack, Luis Fernando (2006). *Entre lo fáctico y lo teórico: midiendo la institucionalidad partidaria en Guatemala.* Cuadernos de información política No. 8. Área de estudios sociopolíticos. Guatemala: FLACSO.

Meadows, Donella, Jorgen Randers and Dennis Meadows (2004) *Limits to Growth: The 30-Year Update*. Chelsea Green.

Norris, Fran H. et al (2008) Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. *American Journal of Community Psychology* 41: 127-150.

Nygren, Anga (2004) Competing Claims on Disputed Lands: The Complexity of Resource Tenure in the Nicaraguan Interior. *Latin American Research Review* 39(1):123-152.

Pisani, Frances (2007) "La *Cuenca de los Huracanes* de la Américas: el *plexo* del continente." In *Redes transnacionales en la Cuenca de los Huracanes: Un aporte a los estudios interamericanos*, edited by Francis Pisani, Natalia Saltalamacchia, Arlene B. Tickner and Nielan Barnes. Mexico: Instituto Tecnológico Autónomo de México y Miguel Ángel Porrúa.

Reilly, Katherine (2010) *Open Networking in Central America: The Case of the Mesoamerican People's Forum*. University of Toronto Thesis.

Richardson, Glenn E. (2002) The Metatheory of Resilience and Resiliency. *Journal of Clinical Psychology* 58(3): 307-321.

Rihani, Samir. (2002) *Complex Systems Theory and Development Practice: Understanding Non-Linear Realities*: Zed Books.

Robinson, William I. (2003) *Transnational Conflicts: Central America, Social Change, and Globalization.* London: Verso.

Rosenberg, J. (1996) Isaac Deutscher and the Lost History of International Relations. *New Left Review* 1st Series, 215, January–February: 3–15.

Rosenberg, Justin (2005) Globalization Theory: A Post Mortem. *International Politics* 42:2-74.

Rosenberg, J. (2006) Why is there No International Historical Sociology? *European Journal of International Relations* 12: 3, 307-40.

Rosenberg, J. (2007) International Relations - the 'Higher Bullshit': a reply to the Globalisation Theory Debate. *International Politics*, 44.4, 450-482.

Rosenberg, J. and Alex Callinicos (2008) Uneven and combined development: the social-relational substratum of 'the international'?: an exchange of letters. *Cambridge Review of International Affairs*, 21:1, 77–112.

Rosenberg, J. (2009) Basic Problems in the Theory of Uneven and Combined Development: a reply to the CRIA forum, Part I. *Cambridge Review of International Affairs*, 22.1, 107-110.

Rosenberg, J. 2010. Basic problems in the Theory of Uneven and Combined Development. Part II: Unevenness and Political Multiplicity. *Cambridge Review of International Affairs*, 23: 1, 165-189.

Seballos, Fran and Sonke Kreft (2011) Towards an Understanding of the Political Economy of the PPCR. *IDS Bullletin* 42(3): 33-41.

Sparks, Colin (2007) Varieties of Participation. Globalization, Development and the Mass Media. Sage.

Stiglitz, Joseph, Amartya Sen and Jean-Paul Fitoussi (2009) *Report of the Commission on the Measurement of Economic Performance and Social Progress*. Paris: Commission on the Measurement of Economic Performance and Social Progress.
Taylor, Peter J. (2003) "Geographies of Connectivity." In *World City Network: A Global Urban Analysis*. New York, N.Y.: Routledge.
Thrift, Nigel. (2002) A Hyperactive World. In R.J. Johnston, Peter J. Taylor, and Michael J. Watts, eds, *Geographies of global change: remapping the world.* Malden, MA: Blackwell Publishers.
Trotsky, Leon. (1961) *The History of the Russian Revolution* (1932), New York: Pathfinder.
Trotsky, Leon. (1962) *Results and Prospects* (1906), London: New Park Publications.
UNDP (2010/11) *People-Centred Development: Empowered lives. Resilient nations*. United Nations Development Program UNDP inaction Annual Report 2010/2011.
Urry, John. (2003) *Global Complexity*. Polity Press.
Wallace, Danny P. (2007). Introduction. *Knowledge Management: Historical and Cross-Disciplinary Themes*. Libraries Unlimited. pp. 1–14.
Waller, Margaret A. (2001) Resilience in Ecosystemic Context: Evolution of the Concept. *American Journal of Orthopsychiatry* 71(3): 290-297.
World Bank (2010) *World Development Report 2010: Development and Climate Change*. Washington, DC: World Bank.