

## **From ICT4D to Cognitive Justice: Designing Research for Open Development**

**Dr. Katherine Reilly**

Department of Political Science, University of Toronto

75 Harvard Ave

Toronto, ON M6R1C7 Canada

Correspondence: [katherine@reilly.net](mailto:katherine@reilly.net)

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## **Abstract**

This paper departs from the observation that empirical and conceptual frameworks describing the intersection of new technology and development studies have moved beyond the ICT4D paradigm popularized around the millennium to a newer Open Development paradigm. Unfortunately, however, research frameworks continue to reflect older notions of technology appropriation and empowerment. In order to start a dialogue about research design appropriate to Open Development, I provide an overview of key ontological, epistemological, methodological and operational considerations of significance to this field. I argue that ICT4D focused on closing the digital divide by empowering groups in developing societies, often through action research interventions. An Open Development approach, I argue, should focus on enhancing cognitive justice. This can best be carried out through the application of a constructivist and critical realist epistemology, positional methodology, and networked research processes.

## **Bio**

Katherine Reilly is a recent graduate of the PhD in Political Science at the University of Toronto. Before starting doctoral studies, she worked as a freelance researcher on issues of ICT4D in Latin America with various organizations including the Association for Progressive Communications (APC), the International Development Research Centre (IDRC), the Social Sciences Research Council (SSRC), the Bellanet Secretariat, the Access Foundation of Costa Rica, the Foundation for Networks and Development of the Dominican Republic (FUNREDES), among others. Her dissertation research on ‘Open Networking in Central America’ studies the case of the Mesoamerican People’s Forum, the Central American emanation of the World Social Forum.

## Introduction

During the era of the New World Information and Communications Order (NWICO), Tichenor et al. advanced the knowledge gap hypothesis, stating that, “As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease” (1970:159-160). With the emergence of modern ICTs, development researchers and practitioners became concerned these new technologies would further reinforce the knowledge gap. But they were also encouraged by the hypothesis that access to ICTs would allow developing countries to ‘leap’ over a stage in development and join a community of nations in the post-industrial information society. As a result, early research on “ICTs for Development” (ICT4D) was obsessed with the problem of closing the digital divide (James, 2005) by improving access, improving use, and facilitating appropriation of technologies.

More recently, researchers have begun to question the wisdom of focusing so heavily on facilitating access to information and knowledge. In particular, Cees Hamelink questions the notion of development underlying research and policy on the digital divide. Drawing on the work of Allan Kaplan, he argues that development should not be conceived of as a process of engineering which depends on the delivery of information and knowledge, but rather as a process which “enables people to participate in the governance of their own lives” (Kaplan, 1999:19 as cited in Hamelink, 2002: 8). With this in mind, Hamelink concludes that, “...the real core question is how to shape ‘communication societies.’ In fact for the resolution of the world’s most pressing problems we do not need more information processing but the capacity to communicate” (Hamelink, 2002: 8). Indeed, given that our understanding of sovereignty has changed radically with the end of the Cold War and the beginning of the ‘global’ era, and given that the practice of media power has been revolutionized by technologies that enable distributed networking (web 2.0 / open production) over broadcast distribution, we no longer talk about the NWICO era concept of the ‘Right to Communicate,’ but rather the idea of ‘Communications Rights’. In this view, “the way forward would have to be through the *democratization of media and communication*, rather than through state- or industry-led efforts to create new global orders” (Alegre & O’Siochru, 2006; emphasis mine).

While a shift may be taking place empirically and conceptually, *frameworks for research* often still reflect older notions of development in which empowerment of local actors happens through the delivery and appropriation of technology as a means to close the knowledge gap. With this paper, I hope to begin a discussion about how research frameworks can reflect the shift from ICT *for* Development to *Open* Development. With this in mind, I first identify the ontological priors underlying core research questions posed by informatics scholars working in the area of ICT4D. Departing from these positions, the paper then extends an alternative set of assumptions more appropriate to the field of Open Development. In doing so, it argues that *cognitive justice* rather than empowerment should form the guiding principle for research in the area of Open Development. Cognitive justice is the idea that no one form of knowledge should dominate at the expense of others, but rather that different forms of knowledge should exist in dialogue with each other (Visvanathan, 2002; van der Velden, 2005; Santos, 2007). By extension, the notion of cognitive justice implies that the structure of information resources, social networks and systems for knowledge production must also support diversity and dialogue. After having established an alternative set of ontological priors, the balance of the paper explores the implications of these assumptions for epistemological commitments, research design, methods and sources.

## **Ontological Priors**

In his work on social research, Grix (2002) argues that five key questions drive the research process (see Table 1). The first of these has to do with the ontological priors of researchers, which are reflected in their assumptions about the nature of the social and political reality to be studied. This section considers the ontology shaping research in the field of ICT4D. I argue that the assumptions of researchers working at the intersection of development and ICTs are often out of step with the vision of Open Development. I make this argument through an

**Table 1: Key Questions Driving the Research Process**

<b>Aspect of Research</b>	<b>Question</b>
Ontology	What is the nature of the social and political reality to be studied?
Epistemology	What can be known about this reality, and how can it be known?
Methodology	How can the knowledge be acquired?
Methods	What procedures can be used?
Sources	What data can be collected?

Source: Adapted from Grix 2002, p 180.

examination of ontological commitments within the fields of social informatics (SI) and community informatics (CI). I then suggest an alternative set of ontological priors that might usefully animate the field of development informatics (DI) with a view to promoting Open Development. Grix's remaining questions are considered in subsequent sections of this paper.

Social science research on ICTs has a long tradition, but this research has tended to fall under many different names—social analysis or social impact of computing and technology, information policy, and computer-mediated communication to name a few—making it difficult to identify the field (He 2003). The introduction of the term ‘social informatics’ was an effort by Kling to bring this work together under one conceptual umbrella (Lamb & Sawyer, 2005). In defining the field of SI, Kling observed a trend in ICT studies (Kling, 1999, 2000; Kling & Hert, 1998).<sup>1</sup> Namely, when a new technology is introduced, early research asks one of two questions: ‘what factors condition adoption of the technology?’ and ‘what are the impacts of adoption or non-adoption of the technology on a target population?’ Here the objective was to discover the key to successful technology adoption. But while recognizing the value in this work, Kling was critical of it. He argued that these questions treated the technology like a black box or tool, and that this limited the value of the research results. Instead, the process of technology adoption needed to be looked at in terms of human-computer relations - as processes that both reflect people's choices with regards to the technology as well as the social, political and economic conjuncture they find themselves in, which is itself changing as it interacts with the new technology. Kling defined SI as, “the interdisciplinary study of the design, uses and consequences of information technologies that takes into account their interaction with institutional and cultural contexts” (1999, 1). Following this logic, SI was specifically concerned with contextual questions such as: ‘How will the technology enable a particular target group?’ or ‘What will user groups seek from a given technology?’

As a conceptual umbrella, SI served to define a field of study, and also to identify key questions within that field. It certainly influenced early research on ICT4D. The introduction of the access, use, appropriation framework into ICT4D research the late 1990s, for example (Camacho, 2001; Gomez, Martinez & Reilly, 2001) reflected the recognition that research needed to consider more than just the introduction of technologies into developing countries, but

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<sup>1</sup> This same trend has also been observed in other literature reviews within the broader field. See for example Donner (2008) on mobile use in the developing world.

also how that interaction served to transform both the technology and the society. However, SI has been critiqued on two grounds. First, SI is primarily oriented toward analysis, focused on theorizing the processes involved in technology adoption. Secondly, *SI as it has been practiced* has tended to embody a Western and organizational bias (Raiti, 2007). So, for example, one of the major concerns of SI at the inception of the field was the puzzle of the productivity paradox. And also, much early research on ICTs in developing countries was complicit with the much criticized NGO-ism of the 1990s (Edelman 2005).

Taken together, these two features of SI mean that it has not tended to serve the interests of social empowerment, an issue which is very much of concern to students of development. Specifically, in focusing on theorizing processes of adoption, the work has stopped short of offering specific solutions to actors seeking to use new technologies to further their development goals. Additionally, since the work has focused on organizations (businesses, government offices, professionalized NGOs, etc.), SI research has often been situated in bounded locations (a well-defined organization) rather than in unbounded networks. And much SI research has taken place within Western contexts, so the findings have tended to assume both the importance or *inevitability* of adopting technologies, as well as the types of conditions available to enable adoption. Kling would likely have been the first to say that adoption must be studied vis-à-vis a specific context, but regardless, many Western biases have been carried into contexts where they do not pertain.

In contrast, the field of *Community Informatics* (CI) works specifically on the question of how ICTs can contribute to community development (see for example Pigg, 2001). As an emerging, action-oriented field, CI has tended to focus more on the practice of community development than analysis and theorization (Stoecker, 2005). As Pigg notes "...the number and scope of applications have proliferated. At the same time, efforts to document these applications have been difficult to mobilize—much less organize—for intensive and critical study. Consequently, we know a lot more about ‘how’ than ‘why’ and ‘with what effects?’” (2005:1). As a result, clear definitions of the field have been slow to emerge.

Recently Gurstein offered a remedy to this problem in his book *What is Community Informatics (and Why Does it Matter)?* (Italy: Polimetrica, 2007) the title of which pays tribute

to Kling's field defining article on Social Informatics.<sup>2</sup> In this work, CI is defined as "the application of ICT to enable and empower community processes," with the objective being:

...to enable the achievement of community objectives including overcoming 'digital divides' both within and between communities. But CI also goes beyond discussions of the 'Digital Divide' to examine how and under what conditions ICT access can be made usable and useful to the range of excluded populations and communities and particularly to support local economic development, social justice, and political empowerment using the Internet. (Gurstein, 2007:11).

For Gurstein, communities are a special construct within the wider networked world, that operate through a particular expression of both physical and mediated networks. He contrasts this notion of community to the work of Barry Wellman, which he interprets as individually reductionist. Instead, Gurstein sees communities as:

...a foundation element for the construction of an alternative reality. This alternative 'reality' is in practice a set of organizational, economic and social structures which operate independently of the centrally controlled networks and are capable of opposing and creating different processes, structures and 'realities' to those being produced (and forcefully reproduced and extended) through the centralized/individualized networks as discussed by Wellman and as realized by such corporate agents as Wal-Mart and ...Microsoft. (Gurstein, 2007:19).

Thus, for proponents of CI it is important to challenge the individualist model of corporate-led development which both determines the design of ICTs and undermines the foundations of community. These processes are exacerbated by the digital divide, which further marginalizes those communities that lack access to technologies, but which must also appropriate the technology in order to maintain their autonomy and the strength of local community networks in a knowledge society (see also Goodwin, 2007).

While Gurstein's work provides a strong normative direction for research, it embodies several assumptions about the role of ICTs in community development. In particular, communities are assumed to be inherently 'good.' There is little reflection here of the possibility that communities might embody serious internal prejudices, power struggles or divisions, and that ICTs may, in fact, exacerbate these conditions (Pitkin, 2001, especially section 3.2). Furthermore, there is little room for the possibility that solutions to development might depend

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<sup>2</sup> Note that Gurstein's work reflects contributions to this emerging vision from several other authors including Loader, Hague and Eagle 2000, Stolterman 2001, and Taylor 2004.

on or evolve through interactions between communities and other actors in society (although see Goodwin, 2007 for debate about this issue). Indeed, CI as defined by Gurstein embodies the assumption that society is divided between ‘Davids’ and ‘Goliaths,’ that the Davids are necessarily access-poor, and that their technology needs and uses are necessarily different from those of the Goliaths. But the biggest assumption invoked in this work is that development and change must necessarily take place through the confrontation of David and Goliath. Because of these underlying assumptions, the normative direction given by CI in Gurstein’s conception is one of *empowerment*. Research in this view needs to examine the ways and means to ensuring that technologies empower communities to regenerate themselves, become stronger, and defend their borders against negative incursions by capital or authority. The major questions facing CI, therefore, are “how communities can become the ‘subject’ of technology applications and how technology in turn can enable communities to become more active, effective and secure as ‘subjects?’” (Gurstein, 2007:36). As a result, work on CI revolves around issues of enabling technologies and technological enablement, re-engineering of community process, models for scaling and linking between and among communities, and sustainability.

According to Gurstein, the field of *Development Informatics* (DI) might usefully take up the ideas of CI given the many parallels between community development and international development (2007:63). While many will find Gurstein’s approach attractive, (and indeed for many developing country contexts and development projects it may well be appropriate), it is important to consider other potential foundations for DI in order to open up a debate. Here I will argue an alternative vision for DI that brings together the analytical impulse driving SI, with the normative impulse advocated by CI. But rather than the idea of empowerment put forward by Gurstein, I will argue that the idea of cognitive justice could serve as an alternate foundation for DI. This, as we shall see, emerges out of a different set of ontological assumptions and lead to a different set of research questions than those proposed by either Kling or Gurstein.

Cognitive justice is the idea that no one form of knowledge should dominate at the expense of others, but rather that different forms of knowledge should exist in dialogue with each other (Visvanathan, 2002; van der Velden, 2005; Santos, 2007). It can be understood as conceptually related to the notion of *cognitive politics* which includes, “...perception, social learning, and communication, which go beyond strategic bargaining based on fixed interest to encompass the consideration and sometimes the resolution of competing claims” within a

process of decision making (Chalmers et al 1997, 565). By extension, the notion of cognitive justice implies that the structure of social networks and systems for knowledge production must also support diversity and dialogue. In adopting cognitive justice as a foundation for DI, I am taking a post-structuralist approach (rejecting the search for structures such as ‘community,’ and focusing instead on process) as well as a critical, après or post-post development approach, such as that advocated by Bebbington:

If research engaged with questions of practice—both popular and bureaucratic—it might become apparent that the goals, meaning, and power relationships underlying development often differ from those imputed by much development theory. *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.* (2000:497; emphasis mine)

**Table 2: Comparing Social, Community and Development Informatics**

	<b>Social Informatics</b>	<b>Community Informatics</b>	<b>Development Informatics</b>
Key Questions	How will technology enable a group? What will users seek from the technology?	How can communities become subjects of tools? How can tools help communities become more effective as subjects?	How does networked negotiation condition cognitive justice? How do these processes affect change?
Normative Objective	Theoretical Understanding	Empowerment	Cognitive Justice
Location	Bounded Setting	Community	Process
Major Assumptions	Importance and inevitability of adopting technologies. Conditions surrounding adoption.	Community is inherently good. Change happens through confrontation. Power is situated in groups.	Change happens through negotiation. Power is situated in networks (which can form groups).

Taking together the idea of a network society, and the après-development thinking of Bebbington, the objective of DI would be to study the ways in which networks—both in their physical and parallel social/ideational sense—are negotiated, and how spaces for change are opened or closed within these processes of negotiation. With this in mind, DI should ask: how do processes of network and networked negotiation produce or limit cognitive justice for variously situated actors within, between and outside of networked spaces? How do these

processes affect possibilities for change wherever, on whatever scale, across whatever distances or cultures, and through whatever media, they might take place? To be clear, I have nothing against the idea of communities in the abstract, and much DI work might well coincide with the normative agenda of CI. But it may also contradict that agenda depending on the organization and mobilization of networks within a given setting.

Why is this? I would like to suggest that empowerment is a hallmark of ICT4D research while a communicative objective is more appropriate to the field of Open Development. Within the literature on international development, there is a well-accepted distinction drawn between the notion of training and that of empowerment as tools for shaping change. Training or capacity development is associated with a neoliberal agenda to provide basic skills without having recipients of assistance question the system into which they are being trained. What is more, individuals who receive training require constant re-training as technologies, techniques and circumstances change. The result is dependence on the system, and thus training is seen to be something that might lift people out of immediate difficulty, but which does not ultimately change the conditions that shape their lives.

In response to these critiques, theories of development have long suggested that empowerment is a better alternative. Here the idea is to give people the critical thinking skills they need, not only to be able to learn for themselves, but also to be able to question the system within which they learn so that they will be able to shape that system in ways that befit their goals (see for example Kabeer, 1994, ch. 9). By extension, Parpart, Rai and Staudt argue that “empowerment must be understood as including both individual concientization (*power within*) as well as the ability to work collectively, which can lead to politicized *power with* others, which provides the *power to* bring about change” (2002:4; see also Rowlands, 1997). This is a notion of empowerment that meshes well with the definition of CI provided by Gurstein or the field of ICT4D as it has often been conceived. But as Parpart mused in a recent talk at the University of Toronto, when empowerment is taken up as an agenda by development practitioners, it is frequently imbued with a dualistic ethos. Empowerment in practice is ego-centric in that it is carried out by creating individual self-worth and motivating people to mobilize themselves to act. People are without empowerment, and then as a result of a technical intervention, they ‘get’ empowered. What is more, said Parpart, there is little attention to the reality of resistance to change; once people are empowered it is assumed that they will be able to bring about change.

This means that being empowered becomes something to be measured, something that can be accumulated, an achievement, a goal, a standing (Parpart, 2009).

Building on this, I would argue that empowered individuals come to be pictured as people of achievement, with autonomy, a particular image, a level of legitimacy, or standing. As a result, empowerment can also often slip into a zero sum game, where it is perceived to be an effect of the relationship between an ‘us’ and a ‘them’. In this sense, empowerment becomes understood as something that enables individuals to make strategic changes in the ‘system,’ rather than as a quality *of* that system. Meanwhile, because empowerment is an achievement, it can also take on a particular quality—empowerment to bring about change in a particular field, such as gender equality—and thus *it becomes a tool of mobilization into a perspective*. When this takes place, empowerment is actually *disempowering* because it situates individuals within a particular network and limits their potential for cognitive justice! Empowerment is important for enabling change, but we must question its limits when it becomes part of a practice of power.<sup>3</sup>

The above quote from Parpart, Rai and Staudt raises a question about how to move towards a conception of empowerment that coincides with collective work. I would argue, however, that as long as the world is conceived of in us-them terms, and as long as empowerment is practiced so as to mobilize people into particular agendas, then the full import of this exercise cannot be achieved. As such, rather than trying to ‘fix’ the concept of empowerment, I prefer to make a clean break and take up a separate endeavor.<sup>4</sup> Beyond becoming *something by assimilating information*, and beyond being motivated to *do* something as a result of *concientization* within a particular political agenda, people must also *coexist*, and this requires *communication and negotiation*. In addition to dependence (training) and independence (empowerment), there is also interdependence (networking), and all three are elements of creating change within a society. The achievement of this last objective is what I see to be the goal of Open Development, and this in turn requires a shift from empowerment to cognitive justice as a foundation for ontological frameworks.

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<sup>3</sup> On this score, students of social networking will want to critically reflect on the book *Tribes: We Need You to Lead Us* by Seth Godin (Portfolio Hardcover 2008).

<sup>4</sup> Some might argue that *empowerment* needs to be maintained as a foundation concept precisely because it recognizes an unequal distribution of power in the system which must be overcome in order for change to take place. I would argue, however, that distributions of power are present within the philosophical foundations and real world practices of each concept: training, empowerment *and* networking. Power needs to be studied and questioned *in situ*.

What is at issue for Open Development, then, are the conditions under which communication can lead to exploration and innovation, and ultimately, the moments of change referred to by Bebbington. Rather than empowering people to mobilize within groups to create changes in ‘the wider world,’ this is about studying (and facilitating) the types of networking interactions that<sup>5</sup> offer small opportunities for innovation and change throughout society. In a world of complex interactions, these small changes may eventually lead to cascades of change that bring about larger shifts in our social organization. That is to say, rather than ICT4D research that seeks to make communities the subject of technologies, the objective should be Open Development research that seeks to enhance cognitive justice such that actors become the subjects of their own histories, and not the agents of political agendas. Specific questions facing DI, then, revolve around the conditions that induce dialogue (or limit the same), that enable people to better develop their own ideas as well as to understand those of others, to discover and recognize the potential for innovation in information, knowledge and cultural production, to be open to positive change, and to capitalize on the possibility. This includes also research on the role of ICTs in such processes. Through studying these things, DI can make a contribution to ensuring that ICTs, networks and networking contribute to (rather than undermine) cognitive justice, and that development is, indeed, an open process.

### **Epistemological Commitments**

The research agenda proposed here for DI and Open Development raises an immediate dilemma for researchers. How can we study processes of knowledge production without ourselves contributing to conceptual enclosure and thereby undermining cognitive justice? This question reflects the issue of epistemological commitments, or “how what is assumed to exist can be known” (Blaikie 2000, p. 8 in Grix 2002, p. 177).

Questions of research ethics are frequently dealt with under the heading of methods, and I suspect that, as a result, given the contemporary acceptance of methodological pluralism, there has been little consideration of epistemological commitments among scholars working at the intersection of ICTs and development. But, in order to frame Open Development around the pursuit of cognitive justice, it is necessary to shift the emancipatory impulse driving core

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<sup>5</sup> ...also?... There is an important question here about whether these views are summative or substitutive, but I will leave this question for future thinking and debate.

questions from the level of methods to the level of epistemology, a move which inherently reflects the informational nature of the research topic. Insofar as *information* or *network* technology becomes an entry point into questions about the social structuration of frameworks and categories for knowing the world, then as researchers, we must necessarily consider epistemological commitments in pursuing research in the field of Open Development.

This is heavy-going stuff, but to simplify matters, we can break these commitments into four heuristic categories. At the one extreme we find positivists who define knowledge as scientifically derived ‘truths.’ Positivists can be contrasted with relativists at the opposite end of the scale, who argue that knowledge is always contingent and local, and therefore there can be no absolute truth. Relativist works are often seen to have provided a corrective to positivism by demonstrating the political, contingent, complex and open nature of social systems, as opposed to the natural, material and physical systems for which positivist science was developed. However, relativist works have themselves been criticized for romanticizing local realities and overlooking the regularities and structures therein. Both of these frameworks, then, put important limitations on research in the field of Open Development insofar as it seeks to promote cognitive justice - the former because it limits cognition and the latter because it provides no grounds for justice.

Between these two ends of the scale we find different constructivist takes on how to create a compromise between absolute relativism and absolute truth. Constructivists argue that knowledge about the world is produced by people, hence there are no universal truths, and yet we can learn much by studying the production of discourses. There are many varieties of constructivism. Both radical, anti-foundationist constructivists (Kratochwil 2000) and conventionalist constructivists (Chernoff 2009) are concerned with how confidently we can know something, and both arrive at the conclusion that it is better to avoid *claiming* to know all together. Thus radical constructivists argue for an intersubjective criteria of validity. The solution is to behave ‘as if’ the values, ideas or identities of a particular group were true—that theories of the social world are best built based on “social facts,” which are the intersubjectively naturalized ideas constructed by social agents. These social facts provide a foil against which social science researchers can explain the emergence of socially held ‘truths.’ As constructivist scholar Pouliot argues, “Ultimately, to know whether a social fact is ‘really real’ makes no analytical difference; the whole point is to observe whether agents take it to be real and draw the

social and political implications that follow” (2007:364). Meanwhile, taking an instrumentalist approach, Chernoff (2009) argues that what is really important is the ‘cash value’ of our beliefs—whether they make action possible and successful in the real world.

Both foundations for theorizing are troubling to me. Wight worries that the avoidance embodied in these two perspectives lets us off the hook—that, “getting things right is a practical, a political, and an ethical imperative” (2007, 381) and even if we cannot achieve this goal, we should still try. To my mind, ‘getting things right’ is about *not* taking discourses at face value—*not* selecting categories just because they serve instrumental ends. The values, ideas or identities that people ‘take to be real’ are often not representative of the ‘social facts’ that actually shape their experience, nor their true desires. Given the role of popular intellectuals (Baud and Rutten 2005, 8) in shaping public perceptions within networked spaces, there is a risk that the ‘social facts’ encountered by researchers are actually discursive claims or rhetorical devices emerging from a particular theoretical perspective or political agenda. It has been argued that such a focus can lead researchers to overlook people’s desires and to reduce their subjectivity to that of official accounts (De Vries 2007; Escobar 2007). Thus I cannot simply behave ‘as if’ ideas were true. Kowtowing to the instrumentalism of others prevents us from uncovering the practices of power that may limit cognitive justice. In sum, both radical and conventionalist constructivism serve as poor bases for examining the processes that result in a particular distribution of cognitive justice. These frameworks leave us unable to assess whether, how, and to what extent a particular set of circumstances constrains or encourages openings for new thinking; they serve as a poor basis for examining the interacting material and social networks that produce a particular distribution of cognitive justice.

The alternative compromise is a critical (or scientific) realist take on constructivism, which argues that, “part of the rationale for science is the attempt to know whether or not things are really as described, and what it is that makes them appear as such” (Patomaki and Wight 2000: 218). According to Wight, critical realism, “...can accommodate many of the so-called ‘postpositivist’ criticisms of positivism without regressing into a debilitating, and potentially relativist, anti-science stance” (2006:14). This approach is based on three key assertions: 1) that “there is a reality independent of the mind(s) that would wish to come to know it,” (ontological realism); 2) that all beliefs are socially produced (epistemological relativism); and 3) that all the same, “it is still possible, in principle, to choose between competing theories,” (judgmental

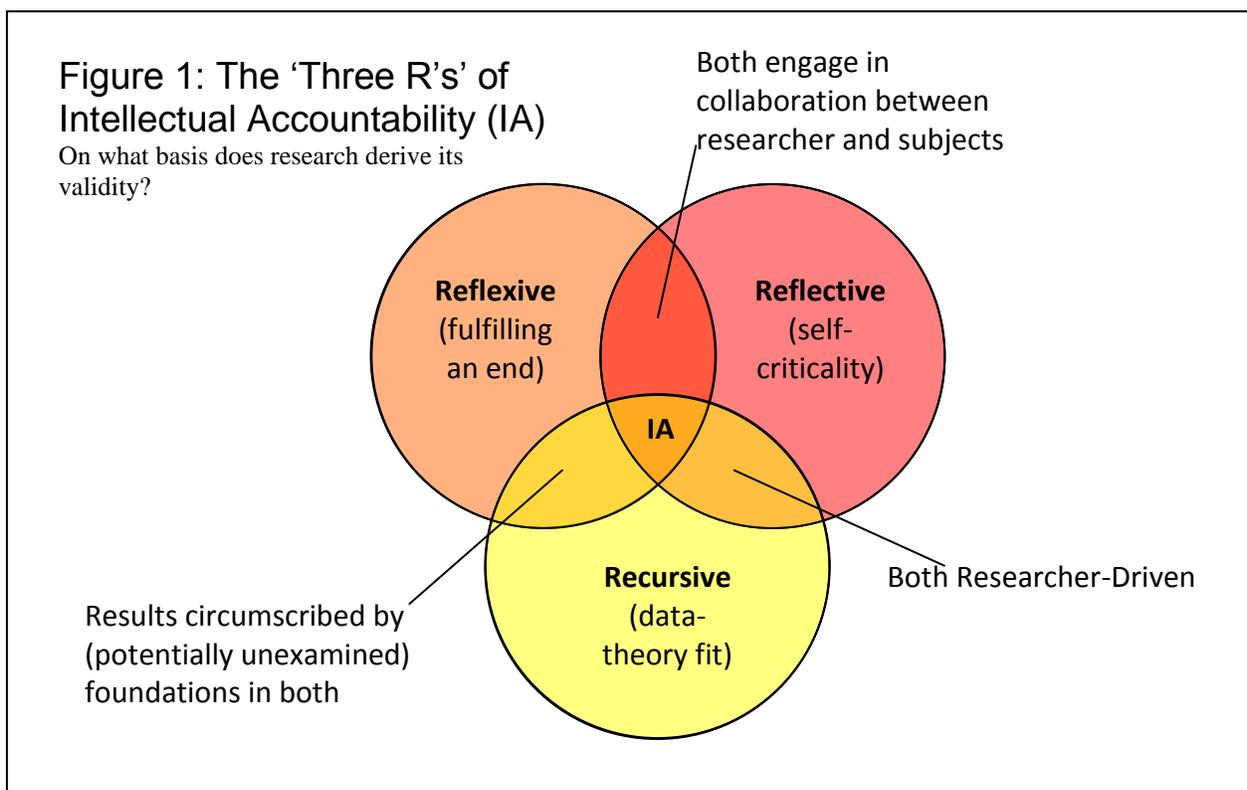
rationalism) (Ibid:26; see also Danermark et al., 2002). In practice, critical realist asks that researchers seek out reality while also recognizing their role in constructing it.

Is critical realism an appropriate framework through which to study cognitive justice and Open Development? I believe that as a philosophical foundation, critical realism is consistent with this agenda for two reasons. First, critical realism upholds epistemological relativism and is methodologically agnostic. This means that it is inherently accepting of multiple, unconsensuated or contested knowledges and the various processes through which they are generated. Secondly, critical realism's commitment to an ontological basis for reality provides a basis for *ensuring* cognitive justice. As Adler explains, "Critical constructivists ... share the view that striving for a better understanding of the mechanisms on which social and political orders are based is also a reflexive move aimed at the emancipation of society" (Adler 2002, 98). Unless we base research in an ontological understanding of reality, it will be difficult to identify and address the mechanisms and power relations underlying information, knowledge and cultural production. If we cannot do this, then it will be impossible to establish whether and when these systems unjustly limit particular ways of knowing or processes of knowledge production, and thereby limit processes of Open Development. Finally, while it is conceivable that certain criteria for validity might dominate within the tenant of judgmental rationalism, there is no reason why the campaign for cognitive justice cannot be carried out on this philosophical plane in debates over what counts as valid criteria.

Associating Open Development with a critical realist epistemology has important implications for the role of the researcher in studying social processes and their implications for cognitive justice. We can explore these implications in terms of the 'Three Rs' of intellectual accountability: Recursiveness, Reflectiveness and Reflexivity (Figure 1). Recursive research is that which moves back and forth between data and theory, adjusting the model until it accurately reflects the data. This term is used, for example, by economists in the building of mathematical models (in which, at the most sophisticated level, recursion is built into the model itself) (see for example Ljungqvist and Sargent 2004, 16-25). Here there is both a useful notion of theoretical adjustment, but also the problematic notion of foundationalism (Ulrich 2006, 2). Reflectiveness offers a solution to this problem. It is the notion that researchers should engage critically with the standards by which they (themselves) judge verity. Ulrich defines this practice as:

...*self-critical*: the effort of systematically examining one's own premises through self-reflection and dialogue, with a view to carefully qualifying the meaning and validity of one's claims; *emancipatory*: working actively to help others in emancipating themselves from one's claims, as well as from theirs; and *ethically alert*: making transparent to oneself and to others the value implications of one's claims, and limiting these claims accordingly. (2006, 15; See also Adler and Haas 1992 for early IR-related engagements with this theme; See also Wiesman et al. 2008)

Reflectiveness recognizes the contingent nature of theorizing, but ultimately the author of the research will produce an account true to her own biases, agendas and experiences. This means



that the research will likely reflect the ends of the researcher rather than those of the subjects (Nagar 2003). Working within a tradition of action research, the third 'R,' reflexivity, takes issue with this tendency and suggests that research should serve the objectives, needs or desires of the communities under study (Nicholls 2009). Here the researcher becomes a facilitator of the intellectual requirements of others, but then there is a risk that she will become complicit in perpetuating the foundationalisms of this group (Ibid; Nagar 2003).

Much ICT4D research has been of a reflexive nature, focused on helping communities achieve their goals through adoption of new technologies. I would argue, however, that the appropriate stance for critical realist research in the field of Open Development is one that is cognizant of the objectives, needs and desires of research subjects, searching of a good fit between data and theory, but ultimately committed to reflectiveness as per the definition offered by Ulrich. It is only in this way that knowledge can be produced that promotes cognitive justice. Such research would do a responsible, ethical job of holding up a mirror that accurately reflects claims and actions so as to emancipate spaces from themselves. Research in the field of Open Development should ideally increase awareness of how subjectivity (social or political, individual or collective) manifests and the implications of this for how it can be understood. Ideally this would enable people to better evaluate their participation in within social and political spaces, and as such enhance the potential for cognitive justice.

### **Methodology: Designing Research for Cognitive Justice**

The third issue facing researchers, according to Grix, is the methodological question of how knowledge can be acquired, given ontological priors and epistemological commitments. Thus, for example, researchers who follow a positivist epistemology are likely to also use quantitative research methodologies. In the case of Open Development, the major issue facing knowledge acquisition is not technique, but rather location. When you reflect back at the first section of this paper, you will note that both SI and CI include assumptions about primary sites for research, those being organizations and communities respectively. However, the definition of DI presented above offers no clear answer about where to situate research. Information, knowledge and cultural production, communication, and networking are happening everywhere, all the time, in complex and inter-related ways. Indeed, the very introduction of ICTs means that informational processes increasingly take place in ways that crisscross the real and ‘virtual’ worlds, shift between different geographical scales, can cross vast cultural, geographical, political and socio-economic divides, and put into question notions of positionality and subjectivity, both for the researcher and her subjects. Both these empirically observable impacts of ICTs (as well as broader, related processes of transnationalization), and the relativist challenge to positivism described above, have forced philosophers and practitioners of social science to confront the openness and complexity of social systems that are changing as local realities

accommodate the effects of virtual globality. The question then becomes how to operationalize critical realist, constructivist research in ways that both respect and provide insights into openness.

As an example of this, where ICTs are concerned we often hear the comment that it is difficult to draw clear borders around networks because they stretch on indefinitely in every direction, and that it is difficult to capture and/or analyze networked processes, because their causes and consequences are so complex. What does this say for how knowledge is produced in a networked age? And what does this mean practically for our efforts to study knowledge production? If you crack open an introductory text book on qualitative research you will find various suggestions on how to situate your research, but they are all premised on the assumption of a clearly delineated site for the research. Creswell, for example, explains that once you have selected your research question, “An important step in the process is to find people or places to study and to gain access and establish rapport so that participants will provide good data” (1998: 110). He goes on to explain that this ‘site’ might be an individual in the case of a biography, a phenomenon in the case of phenomenological or grounded theory work, or a location in the case of ethnographic or case study work. But if we acknowledge social networks as being unbounded and complex, it can actually be very difficult to identify a single individual, a clearly defined phenomenon, or a single location for research.

Ethnography has been grappling with the problem of knowing “the local” when it is no longer geographically situated. The solution put forth by ethnographers is to shift away from clearly defined research sites and pursue instead multi-sited research (Marcus, 1995; Hannerz, 2003). Marcus describes multi-site ethnography as a practice which “...moves out from the single sites and local situations of conventional ethnographic research designs to examine *the circulation of cultural meanings, objects, and identities in diffuse time-space*” (Marcus, 1995: 96; emphasis mine). In this type of work “research is designed around chains, paths, thread, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography” (Ibid:105). In research involving ICTs, the researcher might, for example, form these connections entirely in allegorical space (Lindlof & Shatzer, 1998), or alternatively trace the ways in which material constructs, computer code,

networks or epistemology impose directionality or pattern on allegorical flows (MacKenzie, 2006).

This approach provides a ‘work around’ for the problem of site selection in a networked world, but it introduces the problem of positionality. One of the drawbacks of multi-site ethnography, for example, is that it, “ethnographically constructs aspects of the system itself through the associations and connections it suggests among sites” (Marcus, 1995: 96). As Hannerz explains “...neither I nor my colleagues could claim to have an ethnographic grasp of the entire ‘fields’ which our chosen research topics may have seemed to suggest ... and this tends to be in the nature of multi-site ethnography. ...multi-site ethnography almost always entails a selection of sites from among those many which could potentially be included” (2003: 207). Accordingly, Molyneux worries that, “Since any ethnographic account of development and globalization is necessarily partial and selective, at best it can provide a focused illumination of a complex whole” (2001:273). Similar conclusions were researched by Schlecker and Hirsch (2001) who found ethnographic approaches produced a ‘crisis of context’ in ‘media and cultural studies’ and ‘science and technology studies.’

For Nagar, the problem with positionality is that researchers occupy a gap between the theoretical demands of academic institutions or programmatic demands of aid agencies and the priorities of research subjects (2003; see also Alexander & Warren, 2002). She finds a solution to this problem in exploring the production of local knowledge, in particular through studying life histories, especially those written in the words of local actors. In this way, research can give priority to local interpretations while also considering the means through which knowledge is produced in the chosen research context. This is not unlike the collection of stories by ICT4D scholars (see for example DFID, 2005: 31), however it is important to note the difference between collecting ‘success stories’ to *justify* ICT4D projects, or as a demonstration of ICT use, *versus* collecting locally produced accounts of locally relevant histories as a means to *understand* local knowledge production practices, however those might occur, while being open to the possibility that ICTs could, in fact, have zero or negative impacts on cognitive justice in some cases or for some actors.

Another approach is to focus on the processes that produce and reproduce a space, rather than to assume the quality of its parameters. In this way, the delimitation of a space is not done abstractly, but through observation of constituent processes. Borders are the result of internal

processes rather than arbitrary theoretical assertions and systems become “verbs not nouns, as they are sites of struggle and relational effects that reproduce themselves” (Henry et al., 2004: 850). Following Portugali, borders represent different forms of information compression that result from the social production of space and place (2006: 659-660). Both geography and history offer theoretical frameworks for thinking about such processes. For example, humanist geographers Henri Lefebvre (1991, 1996) and Edward Soja (1989, 1996) provide a useful set of spatial concepts for examining the constitution of spaces for networking. They distinguish between *spatial practice* (the perceived, empirical, visible organization of material space), *representation of space* (how space is conceptualized, abstracted, socially constructed and politically contested) and *spaces of representation* (how space is subjectively experienced by its ‘users’). By extension, using the work of historian Michel-Rolph Trouillot, history could be thought of as a ‘space’ that is ‘written’ by the confluence of *structurally situated agents* who experience events given the historically and geographically situated set of capacities afforded them as *actors*, and the vocality afforded them as *subjects* with a particular purpose (Trouillot, 1995: 23). Studying the establishment of borders through social processes, and the ways that these processes change when new technologies are introduced, provides an excellent means through which to study processes of network(ed) negotiation and the ways in which these change the allocation of cognitive justice.

Studies of the production of networked space can constitute a finding in themselves, and can go a long way towards uncovering the organization of knowledge and flows of information within a particular context, with implications for cognitive justice and Open Development. However, we need to go further if we are to understand the mechanisms that give rise to these findings. Multi-site ethnography, spatial, and life history techniques can provide a snapshot of *how* networks and flows are organized, but they will not provide a full answer as to *why* they are organized in that way. Further research will be required to uncover the factors that condition as well as cause networks to be accessible or beneficial to some people and not to others. Here we encounter a second challenge, which is that of untangling causal mechanisms in complex causal processes. Wight explains the difficulty of this: “Causality in [complex] systems is both networked and summative, making it very difficult, if not impossible, to untangle the contribution of individual causal mechanisms, or combinations of them, in explaining specific outcomes” (Wight, 2008: 21). He goes on to explain that human actors participate in many

systems simultaneously, making it difficult to identify the sources of influence on any given system. Furthermore, a typical social system will exhibit various ‘emergent levels’ and a variety of interacting feedback loops. Similarly Cohen argues:

Flows of information through networked space, and across the interfaces of networked / embodied space, are constructed substantially by choices expressed through technical standards and protocols. These processes are social and emergent, and have consequences both spatial and material. They operate in what Saskia Sassen terms ‘analytic borderlands’: between public and private, between technical and social, and between network and body. Mapping these borderlands requires descriptive and analytical tools that do not simply reduce them to borders.” (Cohen, 2007: 251)

One solution to this problem is the use of process tracing with retroductive reasoning and iterative abstraction to establish an account of the conditions and mechanisms that give rise to particular outcomes. Process tracing can be applied with varying levels of specificity ranging from a basic narrative to a fully specified theory (see George and Bennett, 2005: 210-213), but for the purposes of this discussion I will focus on that used for “generating and analyzing data on the causal mechanisms, or processes, events, actions, expectations, and other intervening variables, that link putative causes to observed effects” (ibid: 214, footnote 25). This is also known as retroduction, which is the practice of generating a causal account of known outcomes given associated conditions and events. In simpler terms, retroduction is what detectives do. They observe a dead body, ascertain that there has been a murder, and then work backwards to put together an explanation that includes ‘motive, means and opportunity,’ as well as the specific events that led to the crime. For example, if the observation is that men are much more likely than women to access the computers in a telecentre, then the underlying condition might be a particular practice of patriarchy. Patriarchy is not an explanation, however, nor can patriarchy be assumed equal in all societies or cultures. The research must explain how a specific practice of patriarchy is put into action through specific mechanisms that make it more likely for men than for women to access the computers at the telecentre. This work will produce an account of the conditions and social practices that give rise to higher male use of a telecentre. The account can then be refined through interactive abstraction until “the alleged generative mechanisms are robust and powerful enough to explain the concrete phenomenon” given specific circumstances (Yeung, 1997: 59). From a critical realist perspective, this account will likely include

complexities and contingencies, and will always be subject to scrutiny. There may exist several competing explanations for any given outcome, in which case it will become necessary to begin an open discussion about criteria for judging the veracity of an explanation.

## **Methods and Sources**

A final set of concerns expressed by Grix revolve around the specific methods and data sources used to illuminate research concerns. ICTs afford us many new innovations when it comes to research, but it is important to ensure that research techniques are appropriate to the contexts in which they are applied. Meanwhile, it is also important to stay focused on questions of knowledge production, networking and communication and avoid getting side tracked by the technologies themselves. This is not necessarily an easy balance to strike. Researchers must decide how to combine existing research traditions with the new opportunities provided by ICTs. These decisions should be guided by both strategic and ethical considerations. What are the possible uses of ICTs given the research project at hand? What are the ethical considerations raised by ICTs given the research project at hand? This section considers issues of technology use by researchers and research subjects as well as some potential innovations to research methodologies that reflect a commitment to Open Development.

Technology can facilitate every stage of the research process, and can greatly facilitate the work of identifying and contacting sources, data collection, data organization and analysis. A fieldwork toolkit might include a laptop, digital recorder, a battery charger and rechargeable batteries, a local cell phone with text capabilities for scheduling interviews, a digital camera with video capabilities, and a USB memory device. Digital support might include a secure website where interviews and other materials can be stored. Research assistants can then access to the secure website to begin the work of transcription, translation, or analysis. They can upload their work to the same site, greatly facilitating logistics. Certainly technology has greatly facilitated the research process.

This litany of technological marvels may seem incongruous with the central message of this paper, however. If communication, networks and cognitive justice are the central focus of Open Development, then they should also inform the ethics review process, and this may have implications for how we make use of technologies in the field. Many people express frustration with institutionally mandated ethics reviews, which I suspect reflects their procedural rather than

substantive focus. It can feel as if the ethics review board is more concerned with reducing liability than ensuring productive research, much less enhanced communication or understanding. I would argue, however, that ethics reviews provide an excellent opportunity for researchers in the field of Open Development to think through how the research process can contribute to cognitive justice.

Where procedural ethics requirements are concerned, there are many ways ICTs can enhance security and transparency. For example, consent forms often include contact information so that interviewees can follow up with the researchers, but they can also include the URL of a website or blog where participants can track study progress, consult the data where this is possible, or view study results in print, audio or video form. Participants can also be asked if they wish to receive email updates about the project. And the secure storage website described above is an excellent means to protect research data. However when it comes to substantive concerns, the researcher should focus more on communicative issues, and these may well contradict the use of modern technologies all together. From a substantive point of view, for example, the consent form is not a way of creating transparency, but rather a brief learning moment during which researchers can gain insights into how subjects understand the global knowledge sphere, and a teaching moment during which they can discuss conceptions of communicative rights. Furthermore, the consent process should invite participants to comment on research results once they are made available. Viewing the release process as the start of a conversation, rather than as the start of a data dump, not only makes the ethics review procedurally stronger, but also substantially more palatable.

It is often during this opening discussion about ethics that the researcher broaches the issue of technology use. “Would it be OK if I recorded this interview?” From a procedural point of view, this is a question about disclosure and permission. But from a substantive point of view, mere disclosure is not enough. “Have you seen a digital recorder before? Do you know how it works? Here is the stop button. I’ll put the recorder near you. Please hit stop at any time if you no longer want to be recorded.” This dialogue may not always be appropriate, depending on the context of the research, but the point of the example is to demonstrate a shift in the consent process from a legalistic and barrier-building search for permission into a social engagement that can build trust and open the way to a productive conversation. If the goal of the interview is to gain trust and open up a conversation, it is worth considering whether technology should be used

at all. A Sony digital recorder costs something like US\$200. If you are interviewing someone who makes US\$30 a month, what sort of message are you sending by flashing your hardware? If the technology becomes the elephant in the room, will it actually prevent you from starting a conversation or gaining insights into the social and political structures shaping cognitive justice within a particular space, and their implications for Open Development?

This raises a larger question. If the purpose of Open Development research is to understand local processes of network and networked negotiation, then is it permissible or reasonable to introduce outside technologies which are not themselves a part of that local system of communication and knowledge production? This may seem like a rather outdated question in a world awash in digital technologies, but even *if* digital networking platforms were widely available we could easily shift the question to the realm of social networking applications. The consideration is important given the emergent field of “social computing,” which like social informatics, assumes conditions more frequently found in developed country contexts (see Wang et al., 2007 for an overview of this new field). For example, even though it could provide a convenient platform for data gathering, we should reflect carefully on the introduction of a new technology such as Twitter ([www.twitter.com](http://www.twitter.com)) to record the texting activities of cell-phone carrying youths in a given context if it were not already in use locally. Similarly, projects like We Feel Fine ([www.wefeelfine.org](http://www.wefeelfine.org)) by Jonathan Harris, which sample English language blog postings to generate data and visual representations of human feelings, raise difficult questions about privacy and disclosure. These questions are further complicated when the research engages cross-cultural or socio-economic divides. If similar technologies were being introduced as part of an action research project, then adequate considerations would need to be in place to ensure that the project left all research participants better off than they were before the project started – not just in a material sense, but also in a social and cognitive sense.

With these ethical considerations taken care of, we can now consider specific methods that might be used to produce data that will help us construct critical realist accounts of cognitive justice in ways that reflect the ontological priors and objectives of Open Development. Some of these approaches have been suggested in earlier parts of the paper (for example in the discussion of Nagar’s work). In particular, I have already suggested that ICT4D has tended towards action research approaches that base intellectual accountability in reflexivity. Here I will offer examples of methods built around networked processes (rather than bounded spaces) that uphold

critical realism and cognitive justice, support a reflective approach to intellectual accountability, and can produce data that will give insights into Open Development.

Exercises in communication and debate can be a means to uncover patterns of cognitive justice. I think of this type of work as “constitutive research” in that all parties involved are asked to engage in reflection and production in the course of the study, and this in turn has impacts on their own thinking and engagement, both with each other and beyond. Constitutive research follows a logic not unlike that which drives open source software production. The effort revolves around a central question, the source code (or data in this case) is made available to everyone, but each person produces reflections and research results that mirror their personal interests and situated interpretations. This activity is enhanced by discussion, and differences in interpretation create opportunities for debate and can give rise to new central questions. This is different from typical notions of participatory action research in that there need not be a particular goal or set process of monitoring and evaluation, and participants need not arrive at consensuated results (compare for example to Stillman, 2005; Foth, 2006). Furthermore, action research typically assumes that the work of the researcher will contribute to the goals of the research subjects (Motta 2009). But in this case, given the emphasis on non-consensuated results, the researcher is released from the obligation to agree with others, and the group can instead reflect on the way knowledge is produced within a given context, the implications of this for cognitive justice, and whether and how this helps or hinders the ability of the group to achieve development objectives.

This approach to research is focused on processes of knowledge production, and as such might make use of digital platforms such as blogging to collect the interventions of participants. But the work might also take place in the absence of digital platforms. The emphasis here is on cognition and patterns of openness, not the location of these. Indeed, as was suggested above, the most revealing activity would actually be to have participants produce knowledge in the ways that most make sense to them, as this would reveal the most about patterns of cognitive justice and openness within a given community.

An example of this approach is what I am thinking of as ‘networked evaluation.’ Recently Canadian donors and social justice organizations have been calling for new evaluation

methodologies for use in social networking projects.<sup>6</sup> Much work is done to promote networks and networking (Kasper & Scarse, 2008), and it is thought to have beneficial impacts, but there are no clear methods for evaluating the creation of networks, the facilitation of *networking*, or the impacts of either activity. The tendency so far has been to map existing summative evaluation techniques onto networked organizations as a means to satisfy the accountability requirements of government and private donors (see for example O’Neil, 2002).<sup>7</sup> But summative evaluation adopts a ‘cause and effect’ logic, and is often realized from an outsider perspective. Even when participatory, it is done with the goal of producing a consensuated discourse, upon which important decisions often depend, such as financing or program objectives. I would argue that these approaches are unlikely to serve their purpose, given that the inherent tendencies of social networks are absorption (e.g. of external shocks or new ideas), dynamism, emergence and meta-production (of, for example, culture and identity). Any or all of these potentially beneficial outcomes may result from a networking project even if the project itself is a spectacular failure according to standard measures of summative evaluation. With this in mind, I have been musing about the idea of networked evaluation, which would reside between the notions of empowerment evaluation (Fetterman, 1994, 1995) and community technology research (Day, 2005). Networked evaluation would form part of the quotidian generative practices of a network. It would be oriented towards uncovering patterns or dynamics, and making sense of them in and of themselves, as well as from the differing perspectives of individual participants. Not only is this an approach oriented towards opening up communication rather than pinning down knowledge, but it is also recognizes that what may be of little benefit to one person, might be massively beneficial to others. All together, then, the approach would contribute to cognitive justice even as it worked to understand the nature of social and political relations shaping cognitive processes within a given space.

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<sup>6</sup> In particular, in 2007-8 Toronto’s Centre for Social Innovation (CSI) and the Millennium Scholarship Foundation hosted a series of discussions with practitioners about network evaluation. The notions of networked evaluation presented here are mine, but were nurtured by conversations that took place as a result of this initiative.

<sup>7</sup> See for example the “Philanthropy and Networks Exploration (PNE) Logic Model” by the Packard Foundation. Available online at [http://www.packard.org/assets/files/capacity%20building%20and%20phil/organizational%20effectiveness/phil%20networks%20exploration/PNE\\_logic\\_model.pdf](http://www.packard.org/assets/files/capacity%20building%20and%20phil/organizational%20effectiveness/phil%20networks%20exploration/PNE_logic_model.pdf).

## Conclusions

In this paper I have highlighted the difference between ICT4D research oriented towards the empowerment of bounded groups, and Open Development research oriented towards ensuring cognitive justice within unbounded flows. I have argued for an approach that focuses on processes of networking and their implications for cognitive justice regardless of whether technologies are involved or not, over an approach that assumes the parameters and benefits of networks and seeks to promote them through generating greater access to information and knowledge. These arguments are summed up in Table 3.

**Table 3: Comparing ICT4D and Open Development Research Frameworks**

	<b>ICT4D</b>	<b>Open Development</b>
Ontology	Development as Empowerment	Development as Cognitive Justice
Epistemology	Various / Often Undefined	Constructivist / Critical Realist
Intellectual Accountability	Reflexive	Reflective
Methodology	Bounded	Positional
Methods and Sources	Action Research	Networked Process

I hope I have convinced the reader of the need for an alternative approach, and if not, I hope to have at least opened grounds for greater debate about the foundations of this field. In particular, I feel that research at the intersection of ICTs and development would benefit greatly from additional reflection on the philosophical commitments and assumptions underlying the work. This is a field that often shrugs off serious engagements with theory or methodology, arguing that it is interdisciplinary in nature or oriented towards practice, rendering further reflection unnecessary. But if anything, the pressing and interdisciplinary nature of the work should make us even more determined to reflect on these deeper questions. It should be clear from this article that the ontological foundations of research are intimately linked to policy decisions in the field of international development, which in turn have implications for how the world is understood and acted upon. In a field so intimately engaged with questions of knowledge and communication, it is imperative for researchers to critically reflect on their own ontological priors and epistemological commitments. These need to be updated to reflect a world opened up by global processes, and in this sense, greater attention needs to be placed on justifying site selection, particularly where research focuses on networks and constitutive

processes. Finally, both the study of ICTs and their use in research open up a variety of methodological and ethical questions that should be explored not because the ethics board says so, but because this is central to the work of studying and enhancing cognitive justice.

Engaging in research that reflects the elements of research design discussed in this paper is one way of pursuing development that “enables people to participate in the governance of their own lives” (Kaplan, 1999:19 as cited in Hamelink, 2002: 8). In particular, producing better understandings of the distribution of cognitive justice in developing countries will help both researchers and knowledge producers to better understand the problem of generating communication societies in which there is respect for communications rights, democratized media, and open communication. In sum, enhancing cognitive justice is significant, if not the central concern for researcher in the field of Open Development.

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