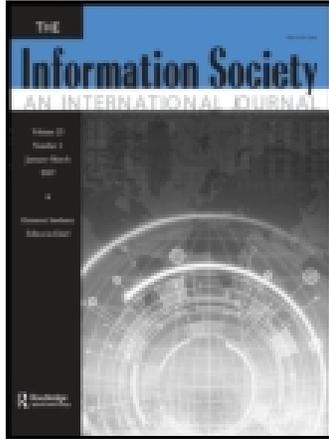


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BOOK REVIEW

***ICTs, Development, and the Capabilities Approach*, by Dorothea Kleine. Cambridge, MA: MIT Press, 2013. xi + 280 pp. \$34.00 hardcover. ISBN 9780262018203 (hardcover). \$24.00 ebook. ISBN 9780262306423 (ebook).**

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This thorough monograph is the result of a close ethnographic study of social–technical effects in the pseudonymous town of Algun (“Anywhere”) in one of Chile’s poorest regions. Deep theoretical and empirical findings are displayed on almost every page of this significant, complex, and demanding work, which deserves to be regarded as a landmark study to be placed on a pedestal in community and development informatics. Research was conducted through the lens of what is known as the capability approach (CA).

The CA is most famously known through the ideas of Nobel Prize-winning economist Amartya Sen and his colleague Martha Nussbaum, ideas that in turn have spawned an extraordinary number of policy and academic studies (Sen 1989; Sen 2001; Nussbaum 2003; Sen 2009). Sen’s work is of such academic and policy significance that it has influenced the United Nations (UN) Millennium Goals and Human Development Index (Robeyns 2005). Interpretations of the CA have included a number of more recent attempts by Kleine and others to apply it to research in information and communication technologies (ICTs) for development (Stillman and Denison 2014).

Kleine notes that “multifunctional technologies such as ICTs can create a variety of wider effects that do not fit easily in existing sectoral silos” (35), and this is where Sen’s groundbreaking work is so important but also rather perplexing. The great difficulty, as Sen admits and Kleine and others have made clear over the years, is that the CA “does not, on its own, propose any specific formula for policy decisions” (Sen 2009, 232), and, consequently, the easy application of the theoretical and

methodological insights of the porous CA is often masked by Sen’s own speculations and modifications, which are located in a unique multicultural approach to economic and social philosophy, rather than in practical application. Sen’s discussion goes back to the Greeks, Adam Smith, and classical Indian thought. It is easy to become lost in space between Sen’s high-level abstractions and more mundane, but equally important, speculations about the quality of human existence.

Thus, while the CA may be a profound approach to understanding well-being and poverty, its application as an analytical or practical research or policy tool is problematic. However, as Kleine (21) suggests, quoting Sen, his concern to identify factors that help people to bring about “the kinds of lives they [people in poverty] value—and have reason to value” is pivotal to using the theory.

From a practical point of view—as a problem-solving theory of the middle range (Merton 1968), as distinct from high-level analytical theory (Stillman and Denison 2014)—two dimensions are identified as significant. The first, using Kleine’s words, is to identify *functionings*, “the various things a person may value doing or being, such as being adequately nourished, healthy, and being able to take part in the life of a community” (23). Second, identifying *capability* “refers to the alternate combinations of functionings that are feasible for this person to achieve” (23). The choice of functionings that people make is reflected in their “degrees of empowerment” that can be related to development outcomes. Identifying the functionings that are meaningful—the things that provide agency to people—takes up an important part of Kleine’s

discussion. She has identified at least 11 dimensions of agency across educational, social, material, natural, psychological, and time/space dimensions, including those that intersect with social structure and material resources. This intersection results in the critical “degrees of empowerment,” and her study is thus an examination of this intersection and the degree of capacity provided for ICT development in different contexts. While Kleine does not observe this, this version of the CA is very reminiscent of Giddens’s model of the dimensions of structuration and its agency–structure duality, another body of concepts that has had great appeal in information systems research as a tool for understanding dynamics in social–technical environments (Jones and Karsten 2008).

Kleine deploys the CA to understand the impact of ICTs as filtered through the different dimensions of the CA through three very detailed empirical studies using her version of the CA in a problematized approach to development (Chapter 2). This is expressed through her “Choice Framework,” summarized as a diagram that first appears on page 44. This model is used as a template and point of reference for three points of interest around the presence of ICTs in Algon: first, a study of the impact of state-directed ICT policies, particularly in terms of telecenters; second, a very detailed ethnographic study of the effects of ICTs on people’s human development; and lastly, a study of e-procurement. Methodological issues are also taken up in an appendix.

Throughout the study, Kleine clearly establishes the structuring effects of geography, gender and social structure, and mores, in addition to more familiar signals of poverty that hinder or promote access to ICTs. These can include, for example, the gendered effects of ICT operations that favor young males, the actual physical layout of a telecenter, or the traditional sociospatial placement of resources in a community that favors the established haves as distinct from have-nots. She also draws attention to what she calls discourses, where a discourse is “a powerful element of the social structures that also co-constitute relationships with psychological, cultural and social resources,” and these sit within “particular historical trajectories, that are themselves located in particular ‘porous’ time–space relationships” (76). To the reader of Giddens, Harvey, Urry, or many others, this is familiar stuff in the critical sociological tradition, and the discussion could probably have been given stronger theoretical location by reference to these important writers and others of a similar bent, particularly since they have addressed in considerable theoretical detail the question of technology in modernity and its economic and social effects (Giddens 1984; Harvey 1989; Giddens 2000; Urry 2000). At the micro level this problem can also be taken up through other perspectives such as that of Goffman or Suchman (Suchman 1995; Goffman 1997). The

interpretive and application possibilities are probably endless.

Furthermore—and here the erstwhile scholarly *podesta* has a significant but not fatal crack—the dynamics of the “Choice Framework” as presented in the key diagram (44) and repeated throughout the book are poorly presented. The complexities of the many different dimensions already outlined in this review are easy to get lost in, and in the concluding chapter, the clumsy diagram appears to have been mistakenly reduced and grayed out (215). Effective rubrics and diagrams and simplified rather than unnecessarily complex models for explanatory theories are particularly important when dealing with supple and multidimensional effects in which the reader can at times get lost. The importance of effective visual representation of complex ideas cannot be underestimated, difficult as the challenge may be (Tufte 1997). Indeed, the use of “footprint” diagrams in Chapter 3 to present the use of different media shows that such solutions are possible. I thus urge the author to think about working on a practical toolkit if her very complex, but significant set of insights is to have meaning for a wide audience, as it should.

Kleine as much admits the practical difficulty at various points in the book (30, 205–6), knowing that her “Choice Framework” has three possible applications: as an evaluation tool, as a mapping tool, or as a policy tool. This is an enormous multidirectional agenda, taking one from core ontological and epistemological issues in social theory (such as defining well-being and poverty) to very practical middle-range theory that solves immediate problems (ICT uptake); in fact, at times, the level of detail in the book is overwhelming. Sometimes, less is better. In comparison, coming back to insights from structuration theory, the narrative and visual breakthroughs that Orlikowski and her colleagues were able to achieve in the interpretive modeling of the dynamics of the dimensions of structuration theory in social–technical social systems may well account for the popularity of her work as a kind of nascent analytical tool kit (Orlikowski 1992, 2000). A better cross matching with insights from Orlikowski and others could in fact assist in the practical application of Kleine’s work.

This then leads to a final reflection. Is this the kind of theory and research that is really only feasible for a few well-endowed researchers? How can the more isolated or less resourced academic or field worker carry out such a form of analysis or evaluation of the effects of ICTs in development? Other CA studies of ICT in development have reflected a similar need for a high level of intellectual and resource capacity to produce rich outcomes (Stillman and Denison 2014), and the challenge is now to develop parsimonious yet theoretically and practically rich models (visual and textual) for wider application.

With these questions in mind, this commendable work is to be highly recommended for those concerned with advancing the cause of theory and practice in high-quality, community-focused research.

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