
Kentaro Toyama: *Geek Heresy - Rescuing Social Change from the Cult of Technology.*

New York, USA: Public Affairs, 2015.

Reviewed by

Tony Roberts

Institute for Development Studies, University of Sussex, United Kingdom

Kentaro Toyama's new book *Geek Heresy* should be considered required reading by anyone interested or involved in community informatics, ICT4D or digital development. It will be especially appreciated by those cynical about the kind of technocratic solutionism epitomized by projects like One Laptop Per Child and by those who favour a human-centred - rather than technocentric - approach to human development.

Toyama has addressed his message primarily at an audience of computer savvy geeks in the global North, and commits the heresy of suggesting that their cunning technology projects are no silver bullet for development. The heretical author insists on the need to keep our techno-utopianism and saviour-complexes firmly under wraps.

The book's central argument builds on his previous work (2010) to argue that technology cannot – in and of itself - be an effective substitute for human talent and organisation. Appropriating Philip Agre's (1998) amplification thesis the author argues persuasively that technology can only amplify existing human capacity and intent, and never be an effective substitute for the lack of it. No amount of computers – he argues - can compensate for a lack of well-trained and well-motivated teachers, health professionals or agricultural workers. In organisations blessed with strong staff teams progressing towards valuable goals then technology can usefully amplify their efforts in that direction. However in organizations with weak staff teams, which are heading in negative directions then technology, will also amplify that trajectory.

Toyama draws heavily on his wealth of personal experience as head of Microsoft Research India to illustrate his argument with compelling examples that debunk the idea that technology alone can

solve problems of social development. Instead the author advocates investing first and foremost in identifying and nurturing such human talent that is directed at addressing development goals.

The early chapters in Part One of the book are the strongest and most compelling. They provide rich case studies from the author's personal experience of over fifty research projects in India. In each case he graphically illustrates how the talents and endeavor of key individuals determined the success or otherwise of development initiatives. Technology is never able to be a substitute for the absence of these capacities but was able to amplify them where they did exist, or as Toyama puts it "technology amplifies people's capacities in the direct of their intent" (p29).

For me Part Two of the book is less strong. Toyama elaborates his amplification thesis from its focus on 'capacity and intent' to the more philosophical realms of 'heart, mind and will'. However the case is less clearly and less compellingly made and so, I feel, ultimately detracts from the clarity and force of his primary argument that development efforts should focus in the first instance on building human capacity and intent – because technology can only amplify existing human capacity and intent.

In making his argument Toyama distances himself both from technological determinists (Heilbroner 1967) and technology utopians (Sachs 2005) as well as from the technology skeptics (Ellul 1965; Morozov 2011). Toyama locates himself within the social construction of technology camp – albeit with a heavy emphasis of the human (rather than social) factors. This emphasis on and optimism about human agency is both a strength and weakness of Toyama's approach. His human-centric approach is derived from the logic that "it is people who act and make decisions - technologies do not". This logic will resonate with scholars and practitioners of community informatics. However Toyama's emphasis on human agency is at the expense of any sustained consideration of the structural power inequalities that constrain much community informatics work. *Geek Heresy* would have been stronger had it included a fuller account of how inequality is structured by intersections of power including race, gender and class and how communities have (un)successfully applied technology to combat it. Without addressing these issues any book which sets out to diagnose and to prescribe how people might effect social change using technology remains incomplete.

That having been said, the lessons of *Geek Heresy* are valuable and widely applicable in community informatics, in ICT4D and digital development. Toyama has distilled his extensive experience of applying ICTs to development into three clear theses: packaged technology solutions are insufficient to achieve human development; technology can only magnify existing human capacity and intent; the task of development is therefore primarily one of building existing human capacity which is intent on achieving development goals. Anyone wishing to understand how communities can make effective use (Gurstein 2003) of ICTs for development will benefit from the rich case studies and thoughtful analysis provided in *Geek Heresy*.

References

- Agre, Philip (1998) Yesterdays Tomorrow. *Times Literary Supplement*. July 3rd, pp. 3-4.
- Agre, Philip (2002) Real-Time Politics: The Internet and the Political Process. *The Information Society*, 18: 311-331.
- Ellul, Jacques (1965) *The Technological Society*, London, Vintage.

- Gurstein, Michael (2003) Effective use: A community informatics strategy beyond the Digital Divide. *First Monday* 8 (12).
- Heilbroner, Robert (1967) Do Machines Make History? *Technology and Culture*, 8: 33-345
- Morozov, E. (2015). The Taming of Tech Criticism. *The Baffler*, 27. Retrieved from <http://www.thebaffler.com/salvos/taming-tech-criticism>
- Sachs, Jeffrey (2005) *The End of Poverty*, London, Penguin.
- Toyama, Kentaro (2010) Can Technology End Poverty? *Boston Review*, Nov 2010.