Grassroots Innovation Movements

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This book deserves a five-star rating for its success in presenting the latest issues related to the historical and social development of appropriate technology in the developing countries of Asia and Africa. In addition, this book reflects on the process of decolonising the growth of appropriate technology, which was originally developed with Western expertise, the process admittedly being spearheaded by Western scholars and experts. However, it only provides kudos to the technological elites that have economic capital and networks within the company. The role of large industries in the acquisition of appropriate technology is remarkable, as affirmed in Chapter 1 of this book. They have the power to dominate the technology market. It is due to the fact that such a large industry already has networks of corporations in different countries to promote the products. The assumptions of those who claim that appropriate technology can be utilised in all social contexts has been heavily opposed in this book, particularly in the first two chapters. The global grassroots technology dissemination projects — for instance, POC 21 (Proof of Concept 21) and Powwow — still prioritise appropriate technology built up by the global northern countries and have not yet widely showcased the innovation found in developing countries. The criticism echoes how 'POC21 and Powwow might give the impression that grassroots innovation for sustainable development is predominantly a Northern environmentalist concern' (p. 2).

The moral strength of this book is that it provides a picture of the reality of the implications of sustainable development. The message behind this book is implementable and rooted in the innovation movement of society, as explained strongly '[…] implications of specific sustainable development are made richer by attending to grassroots innovation movements working under different conditions and for various purposes in different places' (p. 5). For this reason, this book critically evaluates and reviews the movements in different locations with distinctive historical and cultural backgrounds.

The historical genealogy of the emergence of movements in spreading socially acceptable technological products has been covered in Chapter 3. In this chapter, the economic downturn in the United Kingdom is marked by scrutinising a decline in the number of manufacturing jobs. This situation encourages a coalition of engineers, workers, and activists to create alternative technologies to counteract the downturn. In the African hemisphere, appropriate technology, as a grassroots movement, came into force after 1970. Interestingly, this movement emerged in the midst of the social crisis exacerbated by political repression and benefitted from various types of new social activism and active participation by communities at that time.

Compared to the other countries discussed in this book, such as Brazil, South Africa, and the United Kingdom, India has taken a lead in appropriate technology, specifically since the 1960s, marked by the rise of the People Science Movement (PSM). This mass movement emphasises the elements of social inclusivity with the primary goal of optimising the appropriate innovative technology that can synergise knowledge, products,

and the community users. Until now, this movement has involved not only the knowledge producers such as engineers, technicians and technology scholars, but also farmers, social innovators and co-producers, who all avidly participate in the process. Because of such vibrant inclusiveness, this movement has flourished and spread across the villages of India. Chapter 4 explores the constructive effect of co-evolution from appropriate technology that successfully integrates the local communities into innovation systems. The authors comprehensively depict India as a pioneering innovator in Asia.

Chapter 5 argues that grassroots innovation is mapped through the 'utopian informatics' movement. This is a process developed in a physical space to maintain active interaction among people from all walks of life. The diverse IT actors support this project by transferring their specific knowledge to the engaged community members. A group of hackers in this innovation system, for example, use their technological skills to re-route information and communicate by interpreting networking difficulties found in face-to-face interaction. Castells (2011) mentions the role of hackerspace here as 'informatical utopia', because the social innovation produced opens up new space for users from various social backgrounds. In addition, this alternative also takes the form of technology resistance, thereby generating new social engagement without reducing the cultural uniqueness of each actor. This situation is in line with Jeffrey Juris' argument in his mind-boggling book *Networking Future* (2008), where he points out: 'emerging technological and organizational practices reflect a powerful dialectic between technology, norms and form, mediated by concrete activist practice' (p. 296).

The other dimension that can be reached through appropriate technology is politics. As considered in Chapter 7, Brazil focuses on the income generation of people by encouraging them to produce local knowledge-based products. By having an established economic capacity, the community members can achieve other capital. The innovations introduced through the staff of non-government organisations (NGOs), funding agencies, and government circles of the innovative actors have given new loopholes to the local farmers to actively voice their political aspirations. Through intense interactions with higher stakeholders, the farmers receive important lessons in decision making in the use of technology. In addition, the training conducted by the NGOs also encourages these farmers to be more open to the outside world, so that they can understand the competing economic interests. This kind of networking development is an important lesson for the transformation of the lives of frontline agricultural workers, particularly an openness to manifest new transformative farming.

Further in Chapter 8, India is portrayed as a country with significant international networking power. By citing a case study, the Honey Bee Network (HBN), India glorifies grassroots innovators by providing intellectual property rights protection incentives. The resulting product is not only facilitated by local development alone, but also connects the local innovators with international companies and clients outside India. HBN is a collective institution in India set up by civil society organisations, local technology actors, start-up company owners, government, and technology marketers, to work on creating sustainable technology use through fair marketing. The wheels of the innovation system also engage the Indian policy makers who facilitate the dissemination of products by obtaining recognition from the state. The principles that are rarely encountered in product innovation, such as value-added programs (by including local values on product labels), appreciation of social innovators, and the creation of innovative habits involving partner organisations and systemic dissemination, can only be encountered through the HBN model.

As I have explored, this book provides a critical discourse of appropriate technology outside the mainstream scholarly or expertise forums such as POC21 or Powwow. In other words, the grassroots innovation movement has given birth to new symbols or

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new codes (Melucci, 1989) in raising a more inclusive political and cultural participation space for the dominated and the dominating.

References

Castells, M. (2011). *The rise of the network society: The information age: Economy, society, and culture* (vol. 1). Chichester, UK: John Wiley & Sons.

Melucci, A. (1989). *Nomads of the present: Social movements and individual needs in contemporary society*. New York: NY: Vintage.

Juris, J.S. (2008). *Networking futures: The movements against corporate globalization*. Durham, NC: Duke University Press.

Reviewer Biography

Meredian Alam is a PhD student in sociology and anthropology at the School of Humanities and Social Science of the University of Newcastle, NSW, Australia. His thesis investigates the sociocultural trajectory of young activists involved in the urban forest movement in Bandung, Indonesia. He holds a MPhil in Culture, Environment, and Sustainability from the Centre for Development and the Environment (SUM) University of Oslo, Norway, and a MA and a BSocSci in Sociology from Universitas Gadjah Mada Indonesia. Employing the Socio Technical Studies (STS) approach, his MPhil and MA theses explored the social construction of community-based biogas technology in a rural setting, and the outcomes of this study were published in numerous international conference proceedings.

Nature and Human Nature — Two Perspectives

The Philosophical Foundations of Ecological Civilization: A Manifesto for the Future

Arran Gare, Abingdon, Oxon/New York, Routledge, 2017

Autonomous Nature: Problems of Prediction and Control From Ancient Times to the Scientific Revolution

Carolyn Merchant, New York, Routledge, 2016
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Human relationships with nature are increasingly under scrutiny, so it is not surprising that they are the focus of two recent books in environmental philosophy. Both books are concerned with the environmental destructiveness of the techno-scientific culture of the