

BOOK REVIEWS

Spatial data infrastructures in context: north and south, edited by Zorica Nedovic-Budic, Joep Crompvoets and Yola Georgiadou, London, New York: CRC Press, 2011, 288 pp., \$99.95, €79.99, £63.99, ISBN 9781439828021

This interesting book collects essays by established academics and early career scientists in the field of spatial data infrastructures (SDIs) and geographic information systems (GISs). The main declared objectives of the book are to overcome i) the north-centric view of SDI research and practice, ii) the emphasis on national-level SDIs that neglect the local and iii) a tendency in the literature to focus on technical aspects without a solid theoretical grounding. With this in mind, the book sets out to explore SDI (and GIS) developments in multiple contexts with as much evidence as could be mustered from experiences in the South, including Guatemala, Uganda, India, Brazil and Zanzibar. The 12 chapters of the book are organised into four sections focusing on Institutions and Organisations, Data and Technology, People and Practices, with the fourth section wrapping up. Three of the chapters are reprints of previous work, which is a pity as it reduces the enjoyment of the read with the occasional sense of *deja vu*.

The book starts off with a European focus, analysing the legal framework for SDIs in Europe (INSPIRE) and the reuse of Public Sector Information (PSI). Katleen Janssen and colleagues argue that the distinction between the concept of reuse in the PSI Directive and information sharing in the INSPIRE Directive is down to the definition of the public task. If the task is to support policies related to the environment, then it is necessary to follow the INSPIRE Directive; if the purpose is other than the initial purpose within the public task, then the PSI Directive applies. This may seem a bit arcane to most readers not intimately involved with these European Directives, but the important take away message is that the role of government and the tasks it carries out are very much down to the institutional context, and the policy debate in each country, making it very difficult to generalise.

Chapter 2 by Leiser Silva takes a critical theory approach to explore inter-institutional cooperation with a case study of land administration in Guatemala. Key themes identified by the author are cultural differences between international consultants and local staff, user awareness of technology and institutional barriers to data sharing. Actor Network Theory is used as a framework to understand these issues and helps underline the importance of an approach to implementation more sensitive to cultural, and organisational, issues.

Chapter 3 by Ezra Desser and colleagues addresses the relationship between organisational function and structures and the integration of spatial information. The chapter is very well referenced to the organisational and IT literature but it is a shame that the two case studies in the Netherlands are not developed further to support the conclusions.

Chapter 4 by Zorica Nedovic-Budic focuses on data exchanges in local and regional governments in the late 1990s. The results of the large-scale survey show that sharing data was motivated by legal mandates, or saving resources. Data were shared with a limited degree of technical infrastructure, based on personal relationships, and the standards were

very local. This is a good piece of research, but it would have been very interesting to explore the extent to which changes have taken place during the last 10 years in the light of political and technological development.

Chapter 5 by Walter de Vries and Kate Lance makes the very perceptive observation that SDIs are caught between establishing efficient and non-redundant spatial data processes, and the inherent inefficient and possibly redundant public sector needs. This reminds me of a plea by a senior official in a government department who told me once: 'Please don't say that with these systems there are going to be savings, or they will cut my budget!' Using Resource Dependency Theory as a framework to make sense of a case study in Uganda, the authors find that duplication in data collection may be important to reduce dependency from other organisations, and have a bargaining chip for data exchanges. Moreover, they point to the crucial importance of personal relationships in supporting data sharing. This is one of my favourite chapters in the book and I found the theoretical framework really helpful to explain behaviours present all over the world. From this perspective, we are all Ugandans!

I also enjoyed Chapter 6 by Glenn Vancauwenberche and colleagues who analyse the social networks of over 500 public sector organisations in the Flanders to identify the density of ties and the centrality of actors and assess their importance. The chapter really demonstrates the value of this approach to understand the social milieu in which innovations take place and should be used much more because it is really very powerful.

Henk Koerten and Marcel Veenswijk use a narrative analytical approach in Chapter 7 to explore development of the geoportals in the Netherlands. The authors highlight the constant reframing of the project and shifting of goal posts and explain them in terms of tensions between the inherent stability required by an infrastructural development and the dynamics of technological change. The story and the analysis resonate well with many I have also witnessed suggesting that these patterns and tensions are widespread.

Chapter 8 by Christine Richter and colleagues is definitively another highlight of this book. Based on 7 months of ethnographic field work in slums to be rehabilitated in India, this fascinating chapter sheds light on the real-world practice of information making, and the tension between the order imposing listing of bureaucrats and technologists, and the messy, politically driven information shaping of local people. The implication for SDI development from these observations is that there are two approaches: one favoured by technologists sees differences in classifications and 'data models' as something to be eliminated through standardisation and harmonisation (the SDI is constructed); the second instead would recognise the legitimacy of different voices, interpretations and demands, and would allow the infrastructure to be designed and redesigned during its use (the SDI is cultivated). The chapter highlights the importance of understanding the way information is created and the meaning attached to it by different actors with different rationalities. If we do so, SDIs may turn to be less an order imposing mechanism by the few and more of a place of dialogue among the many.

Chapter 9 by Clodoveu Davis and Frederico Fonseca analyses the development of the GIS in Belo Horizonte, a world-renowned story of success. The authors argue that this success is due primarily to the setting of clear goals, the focus on applications and the cross-disciplinary partnerships developed over the years. The recommendations are very sensible but having seen many similar projects fail due to organisational and political changes, I suspect that the authors underestimate the stability of political and organisational support the project has obviously enjoyed over its many years of development.

Chapter 10 by Yola Georgiadou and colleagues is more exploratory than explanatory and reviews the institutional, economic and human capital difficulties of developing SDIs

in Africa. The general problem of having localised and up-to-date information to support the development goals of this continent can, however, be potentially overcome by the empowerment of individuals providing information through mobile phones or social networks. Two examples are used to illustrate this potential, the development of Open Street Maps in Africa and the use of mobile phones to monitor water availability and quality in Zanzibar. From these vignettes, the authors identify a number of useful research directions to follow.

The last two chapters of the book bring the strands together and come to conclusions. In Chapter 11, Miscione and Vandenbroucke analyse the material provided under four perspectives: North and South, National and Local, Social and Technical, and Exploratory and Prescriptive. In Chapter 12, Zorica Nedovic-Budic, Joep Crompvoets and Yola Georgiadou summarise the contributions made by each chapter and the extent to which the objectives of the book have been achieved. They argue, rightly in my view, that by exploring developments in different countries and continents with different methodological and theoretical lenses, the book has been able to highlight the crucial role of context to the understanding of SDIs. Moreover, the focus on applied settings and local developments has served well to remove the traditional slicing of SDI development into local, national and global, with the pyramidal metaphor, and demonstrate the much greater complexity of relations at all levels. The non-hierarchical perspective aligns much better to the diffusion of innovations model and the social network analysis evidence presented in the book.

The editors make a strong case for devoting more energy to understand the local, and the multiple, rationalities in a socio-technical framework rather than using the architectural blueprint approach to develop an SDI. In my view, the real value of this book is to demonstrate how much we all learn from trying to understand other contexts. Developing countries can teach us all a great deal because they expose better the relational nature of information making and sharing, and its contextual and political dimensions. The same issues are played and replayed in the North as well, but they are more carefully hidden behind a thick façade of procedures, rules and practices layered over centuries. The reason why I thought the highlights of the book were the chapters focusing on Guatemala, India and Uganda is that I felt very much at home in respect to many of the issues we face in developing SDIs in Europe! Maybe if we reversed the flow of consultants and get more from the South to advise the North we would all be doing ourselves a favour. A good book, worth buying.

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Code/space: software and everyday life, by Rob Kitchen and Martin Dodge, MIT Press, Cambridge, MA, 2011, 320 pp., \$35.00, £24.95, €28.99 (hardcover), ISBN 0-262-04248-7

Should you open up *Code/space: software and everyday life* because you hope it covers software applications from a theoretical perspective and you want a book-length introduction to NP-Completeness and other computational complexities, you may end up

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