

BOOK REVIEWS

PAUL SILLITOE (ed.). *Local Science vs. Global Science: Approaches to Indigenous Knowledge in International Development*. Studies in Environmental Anthropology and Ethnobiology vol. 4. New York: Berghahn Books, 2007. Pp. 300. ISBN 978-1-84545-014-4 (hardback).

'Local Science vs. Global Science' is a collection of twelve essays and an introduction that focuses on the role different forms of knowledge play in international development programmes. The contributors have varying disciplinary backgrounds including anthropology, medical science, forestry and intellectual property rights, holding in common an ability to examine complex processes through a combination of anthropological insights and the environmental sciences.

"What holds the book together?" became the principal question while reading the chapters, for an apparent tension exists between some of them. The articles' focal point is environmental knowledge, particularly the domain that commences when institutionalised, canonised and universalistic science fades into the background of local understandings. However, the chapters contain greatly divergent notions of what both 'local' and 'science' mean. This is manifested in the multitude of utilized terms: 'local' alternates with 'traditional', 'indigenous' or even 'farmer', whereas 'science' is substituted by 'knowledge' and 'understanding'. None of these expressions are, however, selected randomly but instead reflect distinct epistemological and ontological stances. This encourages an eagerness in the reader to discover how such shifting of approaches contribute toward a common perspective.

The papers are based on research conducted in similar settings, most of them focussing on development programmes that address social, economic and environmental fragility (e.g. Benjamin R. Smith writes about a project in central Cape York Peninsula, Australia, in Chapter 4). These programmes featured global experts whose scientific opinions repeatedly opposed or contradicted the experiences and notions of local participants. Although reconciliation between these different perspectives was sought, the outcomes often failed to match the expectations of parties from all sides. This is evidenced by the difficulties faced by Sri Lanka's farmers, examined by Mariella Marzano (Chapter 8), as they attempted to participate in the agricultural development projects directed by their politically and economically unstable state. Trudy Sable and her colleagues describe a more successful project in Labrador, Canada, (Chapter 6) linking Innu environmental knowledge with 'Western' science. The qualitative Innu knowledge was found to correlate with the quantitative ecological measurements utilized by environmental scientists. Thus Innu elders were invited to collaborate with the latter group, resulting in hybrid knowledge that could be passed on to younger Innu members through formal academic training. This yielded educated "Environmental Guardians" who were able to conduct environmental assessments on their ancestral land both in accordance with formal scientific requirements and indigenous knowledge.

The hybrid character of knowledge appears to form one of the book's principal foci. As Paul Sillitoe points out (Chapter 1), forms of knowledge multiply as connections between global and local 'science' are drawn. These links question the hegemonic position of 'Western and modern science' and reveal its local quality. This is illustrated by Arce and Fisher who

describe (Chapter 9) how in agricultural research hybridity is produced through the interaction of culture, politics and economic stakes. Further contributions to hybridity are made by the divergence in underlying values and partial goals held by the different participants in environmental projects. This is exemplified by David A. Cleveland and Daniela Soleri (Chapter 11) who discuss how the values behind definitions of 'sustainability' utilized in development projects differ from each other, yet are rarely explicated. They further argue that the setting of achievable development goals requires an open discussion of these assumptions.

These processes of hybridity also have theoretical importance, addressed by Michael R. Dove and his colleagues in Chapter 7. Through links to more general anthropological debates on development, they pose challenging questions on the double-edged manner in which locality and indigeneity are constructed. They also present compelling arguments against the radical separation of Western and non-Western knowledge by showing how such division usually supports particular interests.

Despite such innovative scholarship, the purpose of the volume remains somewhat confusing as hybridity fails to form its bedrock and some chapters ignore the theme. For example Paul Sillitoe's contribution on counting systems and "circular perspectives" in cultures of New Guinea (Chapter 13) sidesteps the issue, dwelling instead on ideas of sustainability and development. He argues that a Euro-American linear conception of sustainability, building upon such mathematical abstractions as zero and infinity, is less able to cope with reality than conceptions embedded in finite and circular counting systems he assigns to some non-Euro-American peoples.

With such a range of issues, what is the fundamental question of interest raised by the book? For me it became the description of interaction between different actors of development projects, the manner in which the environment is defined and its agency is carried out in these processes, and the way global and local perspectives are bound together. The book illustrates how in all of these processes, knowledge and understanding are key issues. Simultaneously it acknowledges the complexity of translating one form of knowledge into another: translation includes issues of languages, values, cosmologies, epistemologies and ontologies. This raises doubts, as is addressed by 'Local Science vs. Global Science', about commensurability. This is also where the volume is most successful: it demonstrates the importance of mediating between knowledge systems without masking the presence of the mediator itself.

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