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Book Review: Paul Sillitoe, Alan Bicker & Johan Pottier. *Participating in development: approaches to indigenous knowledge*. ASA Monographs No 39. London: Routledge, 2002.

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It has long been recognised that the top-down, science-centred approach of development has failed to deliver its promises. The bottom-up participatory approach, advocated a couple of decades ago, has also not yielded the desired results. Indigenous Knowledge (IK) research forms one of the latest development models, which aims to address local needs more effectively. This volume, a collection of papers presented at the ASA conference 2000, is an attempt by anthropologists to contribute to the debate and carve their own niche in the process. Two broad themes (and various other interrelated sub themes) provide the common thread to a richly diverse volume. Firstly, what is IK, and what forms does its relationship with science take? Secondly, what are the possible methodologies that can be used to foster meaningful dialogue between, and encourage the integration of, the different knowledge systems in the development process? The first chapter is introductory and Sillitoe analyses the main themes dealt with in the volume.

The term IK – also known as local knowledge, citizen knowledge, traditional knowledge, folk science, people's knowledge, each with subtle differences, formulated within their own contexts – has, in the 20th century, been 'muted, rejected and subsequently discovered and celebrated' (237). The term has nevertheless provoked criticism because IK is seen as static, unchanging, and bounded, whereas in practice it is ever changing and dynamic. Paul Sillitoe defines it as 'a unique formulation of knowledge coming from a range of sources rooted in local cultures, a dynamic and ever changing pastiche of past 'tradition' and present invention with a view to the future' (113). The contributors argue that development cannot be meaningful unless IK is integrated into the development process. However, historically, IK has been, and largely continues to be seen as inferior to science. The volume explores ways of addressing this power imbalance, integrating the two knowledge systems and what the anthropologist's role in this process might be. It also critically analyses the ethical issues, disciplinary demands and other dilemmas faced by anthropologists.

Key to this, is that anyone writing and engaging critically in action research has to deal with the crisis of representation. Who can write with authority about whom, and who owns the final product, (i.e. the ethnography) with respect to intellectual property rights? This is made more complex as participatory research is also informed by

power dynamics among and between different stakeholders such as, the local community, the political establishment, the funding bodies and the NGO(s). More importantly, the contributors have acknowledged that IK and its holders are not homogenous and the anthropologist, wittingly or unwittingly, gives prominence to some voices thereby privileging a few over others. Despite the best intentions of the anthropologist, s/he cannot remain neutral.

Anthropologists also have to balance the demands of academia and of action research (constraints of time and funding, and pressure for quick tangible results) as the two are not always compatible. Similarly, harmony between the needs and objectives of the local people, the researcher and the development agencies involved is often difficult to achieve, leading to complex ethical dilemmas for the anthropologist. Finally, development demands an interdisciplinary team effort, and a number of authors explore the constraints and challenges involved in working as part of interdisciplinary teams, especially when disciplinary boundaries continue to be firmly entrenched and well defended. Notwithstanding the challenges, this volume passionately argues for a central role for the anthropologist (with the exception of John Clammer in chapter three, who questions the ability of the anthropologist to undertake this responsibility) as the glue between the local community and the scientific community.

Indigenous people, their understanding of their knowledge and the ethical dilemmas of IK research form the focus of chapter two by Darrell Posey. While other contributors to the volume have grappled with the term IK, Posey has attempted to define indigenous people. 'Indigenous communities, people and nation are those which, having a *historical continuity* with pre-invasion and pre-colonial societies that have developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those territories, or parts of them. They form at present non-dominant sectors of society….' (26, cited from UN ECOSOC 1986). The definition chosen by Posey is limited to aborigines and tribals, whereas other authors define indigenous people more broadly. He discusses the various steps taken by international bodies to redress the grievances of the long suffering indigenous people in different parts of the globe. Protecting IK through intellectual property rights can, Posey suggests, be one way of preventing biopiracy and ensuring that indigenous people benefit from any commercialisation of their knowledge. However, the collective nature, among other factors, of IK makes the application of intellectual property rights as it exists difficult.

The ethical dilemmas of IK research raised in the previous chapter are explored further in chapters three and four. Conflict of interest, crisis of representation, interference, involvement in empowerment debates and politics and its moral validity, as well as power dynamics are some of the uncertainties plaguing anthropologists contemplating action research. According to Clammer (chapter three) and Aneesa Kassam (chapter four), the holistic knowledge of the locals cannot be fully comprehended and appreciated by foreigners, including anthropologists who continue to operate from a Cartesian philosophy and prioritise the cognitive over other aspects especially the emotional. While both these authors stop short of complete postmodern paralysis, the solutions they suggest are nevertheless paralysing for all except 'native' anthropologists and local leaders and knowledge holders. Clammer, writing about Japanese society, rejects the intervention of foreign anthropologists or knowledge holders in local development, and advocates the use of the native anthropologist. Kassam in her work on the Oromo of Ethiopia goes a step further and uses the native

anthropologist only as a tool to record people's own conception of development. All interventions by the native Oromo NGO 'Hundee' are made after consultations with the law-making assemblies of elders (these are comprised of selected males who are custodians of oral tradition). While interventions are only made after consultations with this special group a wider representation of society, including women, are consulted when problems are analysed. Here I would like to argue that if one agrees that development must benefit the marginalised and the weak, then leaving all the major decisions to the local leadership may not serve this purpose. The leadership may be hierarchical (based on age, gender, caste, religion or ethnicity) and power dynamics inherent in such social relations may prevent those who really need the development from benefiting. Kassam argues that ethnodevelopment does not reject modern forms, but is the indigenisation of modernity. She does not, however, expound the methodology to be used, the level of or nature of involvement of science or outside intervention.

In contrast to models of development proposed in chapters three and four, chapter five is an example of collaboration and dialogue between holders of IK and science and the integration of the two knowledge systems for the benefit of the First Nations of Canada. Peter Croal and West Darou discuss Canadian First Nations' experiences with international development. The First Nations have historically experienced some of the worst forms of exploitation and domination, yet in recent years the historical approach of assimilation and paternalism has given way to discourses of negotiation, collaboration and partnership. All development projects now have to follow certain principles formulated to protect the rights of the First Nations and to put their interests first. While assimilation or its other extreme, segregation and marginalisation, continue at some levels, integration or biculturation is now the dominant trend, the authors suggest. Despite many negative experiences with development in the past, leaving the First Nations sceptical of international development, there are instances of First Nation groups getting involved in international development by supporting others, such as groups in Venezuela and Panama, who have suffered like them and face similar challenges.

Chapter six stands out as the most theoretical chapter in the book. Sillitoe deconstructs the meaning of the terms IK and scientific knowledge and proposes new perspectives to explore the relationship between the two. He wants to ensure that hierarchies that have plagued the knowledge systems do not creep back into the new approaches proposed for understanding and integrating IK and science. Unlike some critics of development, Sillitoe argues that science, in spite of its negative connotations in much anthropology has its benefits, especially if we understand international development to be a 'scientifically researched technical solution to pressing problem' (100) (a definition not everyone may be comfortable with). He argues that if science and technology have nothing to offer, then on what basis are we interfering in people's lives? The solution is not in doing away with science but promoting methodologies that tackle the hierarchy and power imbalances in current development models. While acknowledging the divide between IK and science, he questions the cut and dried binary distinction between the two, where IK is seen as subordinate, oral, teaching through doing, intuitive, holistic, subjective and experiential, and science is seen as dominant, literate, didactic, analytical, reductionist, objective and positivist.

Rejecting this binary opposition, he proposes three models to explore the relationship between IK and science. The first model is a continuum. On one end is the poor

farmer with no education and exposure to scientific knowledge, and on the other end is the Western scientist and a wide variety of people with different levels of education, exposure to other knowledge systems and identity occupying the space in between. The second model is a circle on which he plots different stakeholders. This becomes a two-way learning process with no scope for hierarchical positioning and in which no one has a privileged position. Yet Sillitoe is not satisfied with either of these models as some form of hierarchy inadvertently creeps in, especially if we admit that development must, in part, promote the use of scientifically informed technology to improve lives. His third solution is a three-dimensional curved space and sphere, in which the global plotting of different knowledges with scope for movement reflects the dynamism of knowledges. This global model would, he suggests, help in the comparison and co-relation of different knowledges central to IK research and endeavours. The global model conveys to the development community that local knowledge is not monolithic, but individually variable as is scientific knowledge.

Chapter seven by Michael Schonhuth continues to argue for anthropologists to consolidate their position in development and play a central mediating role. It reiterates the alarmist rhetoric, which claims that without engagement the discipline will become irrelevant. At the same time he is aware of sceptics in anthropology who continue to shun active involvement in development. He categorises the sceptics in the following ways; the purist (applied anthropology is social work), the innocent (you don't change the subject you research), and the ethically correct (working for them makes you one of them). Schonhuth reiterates the ethical dilemmas facing anthropologists, as well as the problems of working with an interdisciplinary team, but he sees them as impediments to be overcome in a responsible manner. To do this, he critiques a specific methodology of participatory development, namely PRA (Participatory Rural Appraisal) and RRA (Rapid Rural Appraisal). He argues that the model has its strengths if done in a culturally sensitive manner. Nevertheless, the participatory model, in spite of its ability to identify problems, is not suitable for decision making. It is still managed, controlled and conducted by outsiders who have taken the step of learning about local cultures, but continue to take decisions in a hierarchical manner.

In chapter eight, Trevor Purcell and Elizabeth Akinyi Onjoro give central position to two crucial issues, power and parity, which are often ignored in IK research debates. They contend that we cannot say that IK is the new applied anthropology, if we do not come up with new methodologies for dialogue with IK holders. This dialogue cannot truly take place, they suggest, as people do not have political and economic parity with development forces. On the other hand, in order to achieve parity they will have to adopt unsustainable, individualistic, Western model of development. Their own traditional models tend more towards minimalist, sustainable adjustment with their environment. One option is to achieve political parity through autonomy. Parity is inherent in self-determination and consistent with cultural relativity. This means, they argue, tackling cultural exploitation and control of the material means of existence.

They assess a couple of existing models of integration of the two and then propose a model of integration of their own. The authors realise that the mere act of integration will not lead to parity, because within the existing development paradigm, science tends to see IK as belief and hence not legitimate knowledge. On the other hand, many IK bearers may see science as truth, the marker of modernity and civility as well as the means to material progress. Hence, they propose a methodology to achieve parity in integration of multiple, socially unequal knowledges in planned change. This

includes two strategies to achieve parity, namely creating contexts of discourse where all stakeholders may be interrogated, and open interrogation of all roles to make biases transparent. Local people should feel free to interrogate and question all aspects of projects. All goals and objectives should be identified, and the representatives' cultural knowledge relevant to the project, background, interests and biases (i.e. identity and possible stake in the project) should be systematically exposed. The funding and accounting process should also be transparent. Here one may argue that the salaries of anthropologists, and scientists, especially if they are foreigners, will be high in relative terms and may be difficult to explain in local terms (especially if the local community is very poor) as well as in terms of project costs whereas providing lower salaries may not attract good human resources. Echoing Sillitoe, the authors argue that science has something to offer and hence should not be rejected outright. The solution is not non-involvement, but responsible involvement. They do not agree with those who say that indigenous people should be left on their own. They need to be aware of the alternatives and then should be allowed the scope and opportunity to make the best decision suitable for them, which should be consistent with locally-defined, moral and ethical standards.

Both chapters nine and ten are detailed and technical ethnographic accounts of the relationship between IK and science in actual development contexts. They also serve as good illustrations of interdisciplinary research in action and the attendant tensions within this. In chapter nine, John Campbell discusses the use of an expensive, 'sophisticated, database management system designed to acquire, manage, manipulate, visualize and display spatially referenced (geographic) forms of data' called GIS (Geographic Information System) (190). The GIS project was operated by the Botswana government (along with international development agencies) in the context of Renewable Natural Resources (RNR) and poverty alleviation on the southern African rangelands. The project did not achieve the desired results for various reasons, including institutional politics (the funding body, the different institutions involved in the project, and the government bodies). This included 'the bureaucratic management of the GIS project, entrenched disciplinary thinking, and donor failure to insist that a project objective should be agreement on a research methodology' (190). While an interdisciplinary model was adopted in principle, in reality, there was little dialogue.

Campbell further suggests that the project also did not achieve its objective because, in spite of the rhetoric, IK was ignored. The scientists were not interested in talking to the local people and the government opposed any action that would bestow legitimacy or importance to the indigenous San/Basarwa hunter-gatherers. Furthermore, the scientific model of GIS operates from a western cultural perception of individualism and private property whereas the locals 'understand their rights as attaching to not fixed points on the ground but to elastic spaces on a "rubber map", defined in relation to the rights of other kin or neighbours' (191, cited from Shipton and Goheen 1992: 309). Social science, which could have provided qualitative socioeconomic data, was sidelined. GIS ultimately served as a tool to legitimise state authority. Botswana is not an isolated case, and Campbell cites other examples from East Africa and Bangladesh to illustrate the limitations of integrating different knowledge systems.

That advocates of collaboration and integration of the two knowledge systems may have little experience of the grass roots realities of this, is well illustrated in the next chapter. David Cleveland and Daniela Soleri provide a technical and specialised account of scientific maize breeders and small-scale maize farmers in Oxaco, Mexico

in chapter ten. Collaboration assumes that the two knowledge systems are compatible, however, little research has been done to assess the compatibility. In order to compare the two knowledge systems, a dialogue between social sciences and natural sciences needs to be established first, they argue. Currently the two are not integrated in research either theoretically or empirically, either one or the other gets prominence. Cleveland and Soleri contend that there are similarities between the knowledge of the maize breeders and farmers where they researched, but at the same time local farmers may also have knowledge of plant and soil, which may not be amenable to explanation in parallel scientific terms. When there are differences such as this, it cannot be assumed that the farmer is wrong, or that the scientific community has not made an effort to understand the farmer. To promote better dialogue it is essential to realise that neither IK nor science is monolithic, they argue. Both IK and scientific knowledge are constructed by epistemological processes that are influenced by historical and social process. Thus neither can be seen as neutral and objective. Their examples reveal differences between farmers and plant breeders as well as within groups of farmers and plant breeders. If we accept the layers, strands and dynamics within these knowledge systems, then anthropologists and the development community can avoid the pitfalls that arise out of essentialising the two knowledge systems, they suggest. Cleveland and Soleri rightly point out that farmers' knowledge can be theoretical and, scientific knowledge can be culturally relative and local.

The ethnographic accounts of chapters nine and ten reveal the continuing dominance of science at the level of implementation. I was struck on reading these authors by the continuing idealism (as expressed in the earlier chapters) of parity, whereas in reality local knowledge may not even be considered valid. It is far removed from the goal where local people decide their future and are equal partners in, or are in charge of all aspects of development policies that affect them.

Roy Ellen provides a neat conclusion to this rich volume by bringing together the various strands in the book. He elaborates further on certain topics such as 'nature'; the definition and historical development of IK within development; different types of knowledge which do not necessarily follow the IK and science divide (cognitive and non-cognitive, and symbolical and technical); and the anthropologist as an integral part of the development process. Ellen aptly articulates the experience a reader has while going through the volume, namely, that indigenous may be a common word binding all the chapters together, but there is immense diversity in the content, approach and views expressed in the chapters.

My one major criticism, is that the volume has not given due attention to the fact that development addresses a wide range of specific problems. Given this, the relationship between science and IK, and the nature of collaboration would always depend on the particular problems and the different stakeholders, including the local people involved. From the volume it is evident that indigenous people and their awareness of their rights, their perception of their knowledge, their position vis-à-vis the scientific community, the development community and the political establishment differs from one group to another. Certain groups such as the First Nations, the Native Americans, and certain aboriginal groups in Australia and New Zealand are highly conscious of the exploitation they have suffered in the past and are acutely aware of the impact of assimilation policies (in the guise of development) at the cost of their own culture and tradition. Their perception of development and approach to it is very different from some other groups in third world countries who may view science as a neutral objective outsider. Such groups may unwittingly give prominence to science as the

bearer of truth, modernity and civility. As Purcell and Onjoro point out, their desire for material progress (in the light of their privation) allows science to make inroads and gain an upper hand. Thus there are two trends, one where the local people devalue their knowledge and the other where they have been made so aware that they are taking their revenge and attacking science and its validity (254).

As a general epistemological point, I would suggest that we need to take the historical experience of the local community involved as well as the particularity of the issue being addressed to the foreground of accounts. For instance, the specific technical method for rural development (PRA and RRA) discussed by Schonhuth in chapter seven may not enjoy wider application in other contexts of development. Thus methodological approaches adopted for development projects on biodiversity, environment, or agriculture would need to be adjusted when applied to gender issues, education or health for example. Yet, without acknowledging it, the various contributors have offered varied theoretical and methodological solutions to the challenges of IK research based on their specific contexts.

One reason why the diversity of issues in development has not been acknowledged is that the volume itself is limited to the broad issues of biodiversity, land and environment. While reading the book I was struck by the conspicuous absence of feminist perspectives, rightly pointed out by Ellen in the concluding chapter. He also draws attention to the absence of other topics, such as IK in green arguments, intellectual property issues (although Posey does address the issue in chapter two), transportability of knowledge and participatory mapping.

Nevertheless, this is one of the most comprehensive and theoretically innovative and rich works in development anthropology, and will be a companion for all those interested in learning about the latest developments in the field. This volume has made significant methodological, theoretical and epistemological advances since the last major pioneering work on development anthropology by Grillo and Stirrat (1997). It is, as Purcell and Onjoro say, new applied anthropology, suggesting ‘methodological approaches that would make the relationship genuinely new’. The strength of the book lies in its search for innovative solutions to old, but not necessarily recognised, problems. The commitment of the contributors to action research (the book falls under the genre of development anthropology and not anthropology of development) prevents them from falling prey to the affliction of post-modern paralysis. While critical of aspects of development, they do not engage in deconstructive opposition but are, as Ellen advocates, constructively critical.

References

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