15

Agricultural Development: Parsimonious Paradigms

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Introduction

Throughout my own career I have encountered Robert Chambers' influence as a force that has moved through the world, sometimes in strange ways. It was from a Jamaican agricultural officer that I learned how to win at 'tug-of-war', a skill passed on to him by Robert who had organized a match at a conference, and revealed the secret of tug-of-war success that Robert himself allegedly had picked up while posted as a youngster to the British Army of Occupation on the Rhine. I remember listening in the 1980s to the stories of a Kenyan farmer who had seen Robert demonstrate mountain rescue techniques at the Nairobi Agricultural Show in the early 1970s. I came across skilled and passionate rice researchers in eastern India whom Robert had inspired while he was working for the Ford Foundation, encouraging them to challenge the orthodoxies of the International Rice Research Institute (IRRI) and the conservative Indian breeding establishment in order to develop, together with small farmers, new rice hybrids that performed optimally in their own complex farming systems. Small farmers, many of them illiterate women, and non-governmental organization (NGO) workers in Andhra Pradesh, India, have shown me how they had put to good use what they had learned from and with Robert about ways to develop their own agriculture systems and communities. And who among the hundred or so participants does not remember the year his presentation 'stopped the show' at the International Course on Rural Extension (organized annually at the International Agriculture Centre, The Netherlands, for more than 30 years), when he demonstrated his advocacy of the 'reversal' of power

in favour of small farmers by standing on his head, whereupon one by one the coins in his pocket fell to the floor?

Why the title of this chapter: parsimonious paradigms? It is a phrase that Robert himself used, to emphasize that if agricultural research practice and its fruits are to benefit the millions of small farmers around the world, then professional practice must become sparing of scarce public and private resources (including the time of farmers themselves) and simple to execute in terms of process. Because the interactions between a farm and its social, economic and political context and a plant and its environment are in flux, agricultural research has to offer evolutionary pathways for development as unfolding experience, rather than as a controlled and wholly designed future. This chapter briefly sketches the paradigms that Robert challenged, and forged anew, in his search for how this ideal might be operationalized. Towards the end, I shall ask what impact this has had and whether the new challenges faced by agri-food systems require reinvigorated approaches that incoporate the principles and practices that Robert helped to define.

EARLY ENCOUNTERS

I first encountered Robert as a 'postal personality' when I was working at the Overseas Development Institute (ODI), London, as a junior researcher charged with filing the flood of grey literature and project documentation elicited by Guy Hunter's pioneering idea of creating a 'postal seminar' that could capture, synthesize and recirculate field experience.

Robert, then working as a District Officer in Kenya, drew attention to two important experiences that he was supporting: first, the work of Joe Ascroft, Fred wa Chege, Joe Kariuki and Niels Röling in developing rigorous market research data on small farmers' needs and circumstances, built on a rapid turnaround of focused sample survey information as an antidote to what Robert called government agencies' 'centrism' (Chambers, 1974; Hunter and Jiggins, 1976); and, second, the effectiveness of (and barriers to) district-wide programme implementation management (PIM), that sought to coordinate a mix of district-level government services in support of small farmer development (Chambers, 1974; see also Chapter 4). These two themes, of driving technology development in agriculture on the basis of feedback from the end-users and carefully specified market opportunities, and building capacity for administrative systems that serve small farmers' interests, have proved enduring passions in his subsequent work.

Robert subsequently is known for his long association with the Institute of Development Studies (IDS). As often as he could, he joined the ODI lunchtime seminars, where he continued to challenge the development community with three additional concerns: how government and commercial services could be made accountable to farmers; how information of what small farmers' wanted and needed could drive the mix of services provided; and how the various layers of government

as both enablers and direct suppliers of services could address the huge diversity and variability of circumstance encountered in the field. These have remained vital concerns that he has framed in three powerful questions: whose knowledge counts? (Chambers and Barker, 1987); whose reality counts? (Chambers, 1997b); and whose voice counts? (Chambers, 1998).

Asking the question 'whose knowledge counts?', he demonstrated how all too often it was outsiders' views of what mattered that formed the basis of technology design, service provision and policy. It was people living far from the context, and experts who naturally see the world through their own professional or disciplinary lens, who were defining 'the problem' and the nature of the 'development challenge'. It was their 'understanding of reality' that selected and shaped the technologies and services that were then offered to 'solve' the problem. For many millions of small farmers, but especially those living in the more remote, rainfall-dependent and risky environments, neither the outsiders' problem definition nor the solutions matched their circumstance well enough to be useful. Yet the evidence showed that small farmers' lives continued to change and in many cases improved under their own efforts and by means of their own skills and traditions of knowledge generation and information exchange. Their resources and skills could be put to much better use if their voice could become more decisive in development policy and practice.

Farmers' realities

The agenda was set for a rich period of experimentation that aimed to bring diverse kinds of knowledge and capacities to generate knowledge closer together in constructive partnerships. Robert's work on seasonality (Chambers and Longhurst, 1986), for example, drew attention to how the lives, employment opportunities, well-being, income, diets and farming activities of people living in rural areas dependent on a single rainfall season fluctuated markedly through the year, and between years (see Chapter 12). It was demonstrated that short one-time visits or surveys taken at any particular time could give a highly skewed picture.

Moreover, 'high-ups' and officials passing through only at the time that roads were motorable and people were well-fed and healthy simply did not see nor understand the depths of misery that could arise at other times of the year (Chambers, 1983). This area of work set the agenda for efforts to decentralize and organize information flows and service provision in ways that took account of this seasonal and inter-annual variability.

Increasingly, the innovations that worked under the hardships small farmers actually experience were shown to involve the negotiation of multi-actor partnerships, a greater role for community-based and farmers' organizations, and new forms of cost-sharing among civil society, private commercial and public actors. Much of the impact of these areas of work on the worldwide development community, as well as on academic researchers and policy-makers, can be directly

attributed to Robert's insistence that good ideas always had to be tested by field experience and that the only ethical goal of all our efforts was that small farmers and poor rural people's lives should improve as a result.

Methodological innovation

I took off in 1979 for a posting in Zambia, but our paths crossed again when we both became involved in an International Labour Organization's (ILO) Basic Needs study. The ILO mission, led by Richard Jolly, included Hans Singer, who made a profound impact on all who met him during this time, as a person deeply committed to matters of child health and nutrition, stimulating us all to think beyond agricultural production to the social, nutritional and welfare outcomes of any agricultural development measure. Robert was a core member of the mission, while I was hired in as a 'local researcher'. I had been designing and leading agricultural and rural surveys in parts of Zambia where most men had left to seek urban or mining work. I had discovered in the process what became recognized as the phenomena of 'female-headed households' and the 'feminization of agriculture'.

At the practical level, I had learned also the folly of trying to administer formal surveys in the daytime with the assistance of well set-up male enumerators who had spent their nights with the lonely women. I had heard about Paul Richards' work in West Africa (Richards, 1979), where he had developed simple gaming instruments to help farmers record and analyse locust build up. I had begun to experiment with a variety of tools and techniques to elicit timely information in more naturalistic encounters, yet of sufficient reliability to be statistically analysed. I had many questions and doubts regarding all of this, because there was scant recognition at the time that this could deliver a 'professional' output.

A three-week field study tour to northern Zambia and Luapula province with Robert during the ILO mission provided an opportunity to share my concerns and experiences, only to discover that Robert himself was actively networking worldwide with others travelling a similar pathway. This work subsequently was pulled together systematically from diverse domains of application and disciplinary traditions to form what became known as Rapid Rural Appraisal (RRA).

After sharing a tin of sardines with Robert for dinner by candlelight, in a run-down guesthouse somewhere in northern Zambia (transport and accommodation arrangements often failing to materialize as planned in those far-off days before mobile phones), after a wet and somewhat perilous early morning crossing of Lake Bangwelu, then in flood, by means of a dugout canoe, we found that onward progress would be delayed by a day. We put the time to good use by interviewing an old, widowed, female farmer, using some of the techniques we had been discussing.

This was an 'aha!' moment, as we learned together with the farmer an enormous amount, in a short space of time, about her goats, herd composition, goat husbandry practices, breeding management, the seasonal feeding regime, the milk output, disease

management and more, all neatly recorded in system diagrams and charts, notes and sketches, with numbers attached as appropriate. We bubbled with excitement.

A PARSIMONIOUS PARADIGM

This experience, and that of numerous others working on similar lines across the world, we later synthesized in two long articles published in (a now defunct journal) *Agricultural Administration and Extension* (Chambers and Jiggins, 1987a, b), identifying a 'parsimonious paradigm' for agricultural research and development.

The editor complained that he had never received such a large and mixed reaction. We lost count after the 100-mark came up. Many of the responses were encouraging, but what struck us both was the vehemence of some members of the academic and scientific establishment who felt threatened by our analysis of what was then standard extension and research practice. In their view, what we were proposing as a necessary complementary practice – subsequently known under the generic labels of Participatory Rural Appraisal (PRA) and Participatory Technology Development (PTD) – would undermine science, set aside the contribution of experts, introduce dangerous populism, reinforce the biases of anecdotal experience and thwart the best intentions of those trying to organize the development of the other from the high ground of international organizations and national capitals.

As time went on, Robert positioned himself more and more among those who put their faith in the power of civil society actors to drive their own development, given appropriate support for their own learning, organizational capacities and leadership in ways that were relevant to the context. His persistence and ability to convey to a wide readership with clarity and conviction the nature of such people-centred and grounded practices caught the attention of field-based practitioners, scientists, development administrators, policy-makers and farmers across the world.

But has any of it really changed the way the world works in the field of agricultural development?

A WORLDWIDE COMMUNITY OF PRACTICE

Robert was not the only researcher to point out that the 'green revolution', focused on new technologies, was passing by the millions of small-scale cultivators and labourers living in risky, remote, resource-poor environments, although he was certainly among the most articulate (see Chambers, 1983). Publicly funded international and national researchers often heard the message – indeed, accepted the force of the message – but still found it hard to restructure professional incentives and organizational priorities in order to 'put farmers first', or to develop as 'standard operating practice' the routines and skills for working in collaboration with farmers and their organizations in such environments.

The impact has been more enduring, and penetrated deeper into professional thinking and practice among NGO researchers and agronomists, and among district and local-level scientists, extension workers and educators. Certain parts of the donor community embraced both the underlying principles and the 'toolbox' of methods and skills of RRA, PRA and PTD, and made expertise in these areas an essential requirement in project assistance and in evaluation processes. This in turn helped drive requests for training and training materials, and thereafter also for platforms for sharing experiences in implementation, needs that were for many years supported by the International Institute of Environment and Development (IIED), London (see Chapter 22), and its partners around the world, and indeed by IDS itself.

As the word spread, there was a continuous struggle to maintain quality. The language and tools were all too easily picked up as 'tricks of the trade', divorced from understanding of or commitment to principle. When applied as recipes and without understanding of the disciplinary rigour of their origin, the practitioners fell into error, wasting people's time and leaving the results open to justified criticism. Exaggerated claims were made for the 'participatory process' associated with the tools, as a panacea for solving struggles for power and deep-seated structural asymmetries. And yet, in the longer view of history, those inspired by the work of Robert and of the many others joined in a worldwide 'community of practice'. The self-confident leadership that has emerged from the grassroots as a result of their efforts has changed the way that agricultural research for development is practised and the way that science is placed in society.

This, in turn, connects with other strands of work in other fields. Silvio Funtowicz and Jerry Ravetz (1990), for example, talk of a 'second order science', where science is reflective about its purpose and can deal with phenomena that are loaded with embedded values, as matters of poverty, hunger and inequality inevitably are. It also a science embedded in extended peer networks that together define the nature of problems and search for 'solutions that work' in a given context.

Future challenges

There have been some major changes made in the years since the debates regarding a new paradigm for agricultural research and development started. Agri-food systems are increasingly industrialized, focused on vertical commodity chains and highly efficient production and marketing relationships that span the world. Large multinational corporations dominate the agri-food system and private investments in agriculture far exceed anything the public sector is capable of in an increasing number of countries. The aid landscape has changed too, with flows of resources shifting radically, as new players – from China or Brazil, for example – enter the scene. The role of smallholder farmers in economic development remains hotly disputed, and radically different views exist on the technological ways forward

under increasing natural resource constraints and the surprises generated by climate change.

Yet, there is a broad consensus regarding the incremental and transformative changes that lie ahead. As the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) has shown, 'business as usual is not an option' (McIntyre et al, 2009). For example, reducing agricultural waste and pollution is a priority, as is the need to radically shift fossil fuel and water consumption patterns and greenhouse gas emissions. Conserving agro-biodiversity, improving productivity of soils and protecting ecosystem functioning also represent huge challenges if sustainable agricultures are to become a reality.

There is, however, no agreement at all regarding how to effect these transitions, what form they should take, who will or should regulate and govern food systems and agriculture, and who should participate in priority-setting and decision-making in research and technology development. Yet it is notable that Robert's contribution is not lost among the newly competing voices: one of the most recent of a series of authoritative scientific reports on agricultural research (NAS, 2010) recommends participatory research in which farmers and scientists collaborate in technology development, extension and outreach in order to balance competing demands and develop a more holistic perspective, beyond low costs and high production, on how farms provide benefits to society and the environment. To meet these challenges, a new 'parsimonious paradigm' for agricultural policy, research programmes and food markets is required, one that draws the lessons, and acknowledges the limitations, of earlier debates and experiences.