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Participatory Rural Appraisal (PRA): Challenges, Potentials and Paradigm*

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Summary. — Much of the spread of participatory rural appraisal (PRA) as an emerging family of approaches and methods has been lateral, South–South, through experiential learning and changes in behavior, with different local applications. Rapid spread has made quality assurance a concern, with dangers from “instant fashion”, rushing, formalism and ruts. Promising potentials include farmers’ own farming systems research, alternatives to questionnaire surveys, monitoring, evaluation and lateral spread by local people, empowerment of the poorer and weaker, and policy review. Changes in personal behavior and attitudes, and in organizational cultures, are implied. PRA parallels and resonates with paradigm shifts in the social and natural sciences, business management, and development thinking, supporting decentralization, local diversity, and personal responsibility.

1. INTRODUCTION

The term Participatory Rural Appraisal (PRA) (Mascarenhas *et al.*, 1991) is being used to describe a growing family of approaches and methods to enable local people to share, enhance and analyze their knowledge of life and conditions, to plan and to act. PRA flows from and owes much to the traditions and methods of participatory research (e.g., Freire, 1968), applied anthropology, and field research on farming systems (Gilbert, Norman and Winch, 1980; Shaner, Philipp and Schmehl, 1982), and has evolved most directly from a synthesis of agroecosystem analysis (Gypmantisiri *et al.*, 1980; Conway, 1985, 1986, 1987) and rapid rural appraisal (RRA) (Agricultural Administration, 1981; Longhurst, 1981; KKU, 1987).

PRA shares some of its principles with RRA: direct learning from local people, offsetting biases, optimizing tradeoffs, triangulating, and seeking diversity. To these it adds its own principles which concern the behavior of outsiders: facilitating analysis by local people; practicing critical self-awareness and responsibility; and sharing. RRA and PRA are compared in Table 1. A major contrast is that in RRA information is more elicited and extracted by outsiders, while in PRA it is more owned and shared by local people.

Some of the more developed and tested methods of PRA are participatory mapping and modeling, transect walks, matrix scoring, well-being grouping and ranking, institutional diagramming, seasonal calendars, trend and change analysis, and analytical diagramming, all undertaken by local people. Modes of

investigation, sharing and analysis are open-ended, and often visual, by groups of people, and through comparisons. Among many applications (*RRA Notes passim*) PRA has been used in natural resources management (soil and water conservation, forestry, fisheries, wildlife, community planning, etc.), programs for women and the poor, agriculture, health and food security.

PRA has evolved and spread from beginnings in Ethiopia, India, Kenya, Sudan and elsewhere, and in early 1994 is known to be being quite widely practiced in parts of Bangladesh, Botswana, Ethiopia, francophone West Africa, India, Indonesia, Kenya, Nepal, Nigeria, Pakistan, the Philippines, Sri Lanka, Sudan, Uganda, Vietnam, and Zimbabwe, while starts have been made in at least a score of other countries in Latin America, Africa and Asia. Hundreds of nongovernment organizations (NGOs) have adopted PRA and developed applications, as have a number of government departments. The use of PRA methods is being increasingly explored by students and faculty in universities for research, and by training institutes for fieldwork. Spread appears to be accelerating.

This article reviews practical and theoretical questions raised as this spread occurs both internationally, within countries and within organizations. While this

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Table 1. RRA and PRA compared

	RRA	PRA
Period of major development	Late 1970s, 1980s	Late 1980s, 1990s
Major innovators based in	Universities	NGOs
Main users	Aid agencies Universities	NGOs Government field organizations
Key resource earlier overlooked	Local people's knowledge	Local people's capabilities
Main innovation	Methods	Behavior
Predominant mode	Extractive-elicitive	Facilitating-participatory
Ideal objectives	Learning by outsiders	Empowerment of local people
Outcomes sought	Useful information, reports, plans, projects	Sustainable local action and institutions

may be timely, it has also to be tentative and to rely on the writer's personal experience and judgement. PRA approaches and methods will be examined in terms of how they have spread, quality assurance, dangers, potentials and strategies, and finally paradigmatic significance.¹

2. HOW PRA HAS SPREAD

The way PRA has spread can be analyzed in terms of three basic components and in terms of modes and media.

(a) Spread stressing basic components of PRA

The three basic components of PRA (Mascarenhas *et al.*, 1991, p. 35a) have been identified as methods, behavior and attitudes, and sharing. Their significance has been recognized and stressed in that sequence.

The first basic to be recognized was *participatory methods* to facilitate analysis by rural people. Some methods were adaptations of those already widely used in RRA, such as semi-structured interviewing and focus groups. Others such as participatory mapping and matrix scoring were new: local people now did what before outsiders had done, and had often believed that only they could do.

In RRA and initially in PRA, training stressed the correct performance of the methods. Manuals, guides and sourcebooks (e.g., McCracken, Pretty and Conway, 1988; PID and NES, 1989; Gueye and Freudenberger, 1990, 1991; Theis and Grady, 1991; Campbell and Gill, 1991) covered approaches from a more extractive-elicitive RRA style to a more participatory-empowering PRA style. They also varied in the degree of formality or flexibility implied, from a set stepwise sequence specialized for the preparation of a Village Resource Management Plan (PID and NES, 1991) to the open-ended listing of a menu with commentary (Campbell and Gill, 1991).

Methods have provided a professionally acceptable point of entry for the spread of PRA. PRA meth-

ods which generate figures, matrices and tables can be immediately attractive. Mearns *et al.* (1992) found in Mongolia that wealth ranking was useful in this context as part of a "hidden agenda" by giving "every appearance of being the kind of 'hard' statistical method that Mongolian researchers and bureaucrats, like their counterparts in many parts of the world, have been professionally socialised to use and expect" (p. 37). Similarly, matrix scoring for varieties of a crop provides not only fascinating and useful information and insights (see e.g., The Women of Sangams, Pastapur and Pimbert, 1991; Drinkwater, 1993) but also good-looking tables with figures. Scientists and others, can be so impressed by farmers' criteria, judgements and abilities as demonstrated in matrix scoring that they go on from this method to others, and progressively become more participatory in their approach.

Increasingly in PRA, a second basic came to be seen as the *behavior and attitudes* of outsiders. For local people confidently and capably to express their own knowledge, to conduct their own analysis, and to assert their own priorities, outsiders had to step off their pedestals, sit down, "hand over the stick," and listen and learn. Such behavior conflicts with much normal professional conditioning and self-esteem. In the field, most outsiders find it difficult to keep quiet, to avoid interrupting, to abstain from criticism, to refrain from putting forward their own ideas. In line with this recognition, field experience training came to stress changes in how outsiders behave. Kumar (1991), a leading trainer in the Indian Government service, placed his main emphasis on behavior and attitudes. He made the counterintuitive discovery that outsiders with less briefing about the methods were more successful as facilitators than those who were more fully briefed. To tackle the problem of behavior in the field, Anil Shah, of the Aga Khan Rural Support Programme (India) invented "shoulder tapping" (Shah, 1991) as a corrective. This is a contract between outsiders to tap the shoulder of any colleague who criticizes, asks a leading question, or puts forward his or her own ideas.

The most powerful and immediate change in

behavior and attitudes has been through DIY (do-it-yourself). This entails requesting local people to be teachers, while the outsiders are students who are taught to do a local task such as winnowing grain, mudding a wall, thatching, spreading manure, weeding, transplanting, washing clothes, cooking, or fetching wood or water. In a refinement developed by Kamal Kar in India, the outsiders are videoed with subsequent viewing and discussion of a playback both to them and to villagers. The impact can be strong, both personally for outsiders, and in establishing rapport between outsiders and villagers.

These shifts of emphasis have found expression in the content and style of training (Table 2). Didactic training has taken longer, and has been mainly in the classroom; experiential learning has taken less time, and has been mainly in the field, and especially staying or camping in villages. As behavior and attitudes have come to be recognized as crucial, so field experiential learning has become more prominent.

The third basic in the philosophy and practice of PRA came to be recognized as *sharing*. For practitioners and trainers this has become increasingly a conscious strategy and mode of spread. It has two dimensions: sharing knowledge and sharing experience.

Sharing knowledge takes three main forms:

— Local people share knowledge among themselves, especially through analysis in groups and visual presentations.

— Local people share that knowledge with outsiders. As a condition for facilitating this process, outsiders restrain themselves from putting forward their own ideas, at least at first, or imposing their own reality.

— Outsiders themselves share what they learn with each other and with local people.

In this spirit, the emerging philosophy of PRA has stressed open access to information and avoiding professional possessiveness. *RRA Notes*, which disseminates recent experience in PRA, has been free on request, and has invited readers to photocopy and dis-

tribute photocopies. Outsiders have been encouraged not to own ideas or methods but to make them open access common property. Putting local people first has been stressed: local mappers and analysts have been given professional recognition through recording their names on their maps and diagrams, and through their contributions to professional work (see e.g., *The Women of Sangams*, Pastrapur and Michel Pimbert, 1991; Chidhari *et al.*, 1992).

The sharing of PRA experience has been between individuals, organizations, countries and continents. Some of this has flowed from NGOs in India such as ActionAid, AKRSP, MYRADA, OUTREACH, Seva Bharati, and SPEECH which have established, maintained and disseminated this culture of sharing. Village camps have been made open to people from other organizations. Quite often, a training camp organized by an NGO has included not just its own staff but also people from other NGOs, from government and from other local communities. Sharing of experience has then been part of the rationale and culture of the camp: beyond the sharing of information by villagers, presenting it to each other and to outsiders, the aim has been sharing among outsiders and between them and villagers of daily experience, food, and sometimes celebration, and sharing among outsiders of learning through self-critical appraisal of process.

Some international sharing South-South has been in the same spirit. In early 1992, three Indian NGOs — ActionAid, AKRSP and MYRADA — hosted the first international PRA field workshop to which participants came from 11 other countries of the South. Starting in 1990, trainer/facilitators from the South have traveled to other countries and conducted field learning workshops. By early 1994 trainer/facilitators had gone from at least five countries in the South — India, Kenya, Senegal, Sri Lanka and Zimbabwe — to conduct PRA workshops in other countries both in the South including Bangladesh, Botswana, Ethiopia, Ghana, Indonesia, Lesotho, Malaysia, the Philippines, South Africa, Tanzania, Uganda, Vietnam, Zambia

Table 2. *RRA and PRA: Contrasts in training*

	Didactic (more RRA)	Experiential (more PRA)
Aim	Learn methods	Change behavior and attitudes
Duration	Longer (weeks)	Shorter (days)
Style	Classroom then practice	Practice then reflection
Source of learning	Manuals, lectures	Trials, experiences
Location	More in the classroom	More in the field
Learning experience	Intermittent Intellectual	Continuous Experiential
Good performance seen to be through	Stepwise and correct application of rules	Flexible choice, adaptation and improvisation of methods

Source: Chambers (1993a), p. 99.

and Zimbabwe, and also in the North, including Bulgaria, Canada, Denmark, Finland, Norway, Sweden, Switzerland and the United Kingdom.

(b) *Modes of spread*

Most programs in government, and many in large NGOs, are spread vertically, from the top-down, through central decision-making, official instructions, and formal training. In government, obvious examples include programs in health, water, irrigation, forestry, soil and water conservation, credit, and integrated rural development. In agriculture an example is the Training and Visit system for agricultural extension.

The spread of PRA, in contrast, has been lateral more than vertical, personal more than official, and experiential more than didactic. Unlike Farming Systems Research, it has not required substantial special funding for special units or departments. It appears to have been adopted, adapted and developed because it has been seen to fulfill a need. High-level support in large organizations has been a predisposing condition for adoption, but not in itself enough: where staff have been instructed from above to use PRA, performance has been patchy. Classroom teaching has also not worked well. PRA has been internalized much more through personal choice and field experience than through official requirement or formal teaching.

Empirically, the manner in which PRA has spread can be described under four headings:

— *Through field learning experience*: Field learning experiences, camping or staying in villages, or very close by, have proved powerful and popular. The Sustainable Agriculture Programme of the International Institute for Environment and Development (IIED), London, has facilitated over 30 such workshops in at least 15 countries. The World Resources Institute has been active in Latin America. In India at least a dozen NGOs had by early 1994 provided such experience. Not uncommonly, after three to 10 days of a field learning experience with villagers, a participant has left and started to train and spread PRA in her or his own organization and area.

— *Through a light touch*: A short workshop, from as brief as an hour or two to as long as a day or two, has familiarized participants with some basics. A few people have then started using PRA methods, learning as they went. In one instance, two senior staff of Samakhya, a large NGO in Andhra Pradesh in India, saw slides of participatory mapping and of "handing over the stick" (symbolically passing authority and initiative to others), and immediately adopted these in their procedure for forming new cooperatives. In other cases, after a brief work-

shop, senior officials have decided to permit, encourage and support PRA in their organizations, enabling members of their staff who were so inclined to adopt PRA approaches and methods.

— *By villagers — lateral and bottom-up*: In the lateral mode, villagers who have gained experience with PRA have themselves become trainer/facilitators. Such lateral transfer to other villages and villagers is documented for AKRSP in Gujarat (Shah *et al.*, 1991a). Village volunteers familiar with PRA approaches and methods have become consultants to facilitate PRA in other villages.

In the bottom-up mode, villagers train outsiders or present their analysis to them. With the AKRSP in India, villagers have become trainers for NGO staff (Parmesh Shah, personal communication). With MYRADA in India, farmers presented slides of their technology to a high-ranking committee in Bangalore and to a workshop in ICRISAT (the International Crops Research Institute for the Semi-Arid Tropics). In other countries, such reverse transfer of PRA experience and analyses has been from village to capital city. In Sri Lanka in January 1992, in Botswana in June 1992, and in Bangladesh in January 1993, villagers first conducted and presented their own analyses in their villages. They were then invited as consultants to present their maps, models, matrices, institutional diagrams, well-being rankings, seasonal calendars and other analyses to senior people in, respectively, Colombo, Gaborone and Dhaka. In Colombo and Dhaka, a video of the village process contributed to the impact on capital city skeptics. In Dhaka, the villagers, women and men, formed a panel and answered searching questions with confidence and conviction.

— *Through dissemination materials*: Dissemination materials have played a big part, especially *RRA Notes* (1–18 continuing) distributed free by IIED, and a handful of videos, among which MYRADA's *Garuda-Kempanahalli: A Participant's Diary of a PRA Exercise* (1990), Michel Pimbert's *Participatory Research with Women Farmers* (1991), and the Sri Lanka Self-Help Support Programme's *We Could Do What We Never Thought We Could* have been influential. The multiplication and distribution of slides has also been significant. The visual nature of much PRA analysis has lent itself to visual forms of dissemination.

There remains the question why PRA, despite the changes in behavior and attitudes entailed, has developed and spread so fast. Among many factors, some stand out. As communications have improved in much of the world, new ways of doing things have been learned about more quickly. The sort of open institutional culture in which PRA has evolved and thrived has become commoner among NGOs. Open-ended-

ness has encouraged rapid innovation. The practicality of applications has contributed to the momentum. PRA, has, moreover, usually proved enjoyable and generated rapport. The information and insights which flow from it have often been diverse, detailed, complex, accurate, interesting and useful, and shared in a short time. Again and again, PRA has proved both powerful and popular. With all these factors operating, it is less surprising that its spread has been rapid.

3. DEALING WITH DANGERS

Rapid spread has brought dangers. Like any other newly labeled approach to development, PRA faces dangers and is vulnerable.

In an earlier draft of this article, the first danger was listed as rejection, especially by academics. But professional attitudes are changing rapidly. Social anthropologists, for example, have been increasingly open to adopting and adapting PRA methods. Perhaps some academics who are firmly wedded to conventional questionnaire surveys will not wish to change horses in the midstream of their teaching and research careers, but, to mix the metaphors, the student tail may wag the teacher dog, as students demand to use RRA and PRA methods for their research.

Four dangers remain as concerns expressed by practitioners and trainers.² They stem not from rejection but from rapid or rigid adoption.

The first is "instant fashion." As happened at one stage with farming systems research, RRA and PRA are vulnerable to discrediting by overrapid promotion and adoption, followed by misuse, and by sticking on labels without substance. The hardened development professional who knows how to vary vocabulary to fit fashion will replace questionnaires or "RRA" in project documents with "PRA," but may not know or care about what it entails. "PRA" may be used to legitimate the very approaches and methods PRA practitioners have sought to replace. The PRA label has been stuck on questionnaires: a recent publication on rapid urban environmental assessment (Leitman, 1993) opens its section on methodology with the words: "In the same spirit as rapid and participatory rural appraisal . . . an urban environmental indicators questionnaire was designed . . ." Yet conventional questionnaires are one of the methods which RRA and PRA have sought to avoid and improve on. In early 1994, the warning signs of instant fashion are evident: demand for training which exceeds the small cadre of competent trainers; requirements that consultants who were once to "use RRA" now "use PRA"; consultants who say they will do so, when they lack the experience and orientation; the belief that good RRA or PRA are simple and easy, quick fixes, which they are not; and a failure to recognize that most of the experienced and skilled practitioners are from the South and in the South, not

from the North or in the North. The practical implication is a caveat to donors and policy makers to proceed in a measured manner, not to request or require PRA immediately and everywhere, and to recruit expertise in the South.

A second danger is rushing. The word "rapid" was needed in the late 1970s and early 1980s to offset the long drawn-out learning of traditional social anthropology and counter that of large-scale questionnaire surveys. But by the late 1980s "rapid" had become a liability. It has been used to legitimize brash and biased rural development tourism (the brief rural visit by the urban-based professional). Hurried rural visits, insensitivity to social context, and lack of commitment compound errors, and can mean that the poorest are, once again, neither seen, listened to, nor learnt from. Misleading findings then follow. Pottier's critique (1992) of hurried farmer interviews conducted in Northern Zambia warns of such error. Van Steijn's review (1991) of RRAs conducted by NGOs in the Philippines similarly points to quite widespread practices of low quality. Rapid often means wrong.

To offset this danger has been found to require care, patience and planning to have plenty of time. Much of the rationale for RRA/PRA has been to make time to find the poorest, to learn from them, and to empower them. Sensitive behavior and treating time as plentiful have proved to be crucial. It has been suggested that the first R of RRA and the middle R of PRA would better be "relaxed" than "rapid."

A third danger is formalism. In the long term, this may prove the most difficult problem. With any innovation, there is an urge to standardize and codify, often in the name of quality. Manuals are called for and composed. They can indeed be useful as compilations of ideas and experience, as handbooks that widen choice of methods and applications, and as sources of tips and techniques, both for field practitioners and for trainers. But manuals also inhibit and intimidate. With any new approach or method, they are short to start with but grow fast. Paragraphs proliferate as intelligent authors seek to cater for every condition and contingency. Some farming systems research gave rise to manuals the weights and volume of which was itself a problem. The four volumes of Farming Systems Support Project Manuals (FSSP, 1987) weigh approximately 3.6 kg. The dangers are evident. As the text lengthens, training is prolonged. More time is spent in the classroom teaching the theory and less in the field learning the practice. Spontaneity is lost and spread slowed, stopped or reversed.

The lesson has been for practitioners to learn in the field, through experience, feeling free to start taking responsibility for what they do, making mistakes, and learning on the run. It has been not books of instructions, but personal commitment, critical awareness, and informed improvisation, which have best assured quality and creativity.

A final danger is routinisation and ruts. With scaling up and spread, repetition leads practitioners and trainers into regular habits. There are many different ways of doing participatory mapping and modeling, transects, walks, seasonal analysis, group interviews, ranking and scoring, identifying special groups of people, and the like. But practitioners in any organization, or even region, have shown signs of slipping into unvarying standard practices, overlooking other options.

Some routinization and repetition are inevitable, even desirable. For example, there is a logic in certain sequences of methods for specific purposes. But experimenting, inventing, testing, adapting and constantly trying to improve have been part of the strength of PRA. That spirit has been nurtured through exchanges of trainers and practitioners between organizations, countries and continents, and through open sharing of methods, experiences, and ideas, especially in the field.

Together, these four dangers threaten the quality of PRA as it spreads. As PRA becomes more widespread, so it may degenerate. In strategic discussions about PRA the question has been raised whether quality can be assured by stressing changes in behavior, "handing over the stick" (passing the initiative to villagers), "they can do it" (having confidence that villagers can map, model, rank, score and so on), "embracing error" (welcoming and sharing mistakes as opportunities for learning), and "using your own best judgement at all times" (stressing personal responsibility). The working hypothesis has been that if these are part of the "genes" of PRA as it spreads, then where it is adopted, practice should improve. Good performance would come then not from external quality control but from internal quality assurance, and through personal critical awareness, trying to do better.

4. POTENTIALS AND CHALLENGES

Potentials and challenges presented by PRA can be considered under seven heads.

(a) *Beyond farming systems research (FSR)*

Farming systems research faces problems because of the diversity, complexity and uncontrollability of many farming systems, especially rainfed farming in the South. Participatory approaches known variously as farmer-back-to-farmer (Rhoades and Booth, 1982), farmer participatory research (Farrington, 1988; Farrington and Martin, 1988), participatory technology development (ILEIA, 1991) and farmer first (Chambers, Pacey and Thrupp, 1989) have moved toward involving farmers to undertake their own analysis. This is potentially parsimonious in the use of

scientists' time (Chambers and Jiggins, 1986) but its methods are still in an early stage of development.

Pioneering work by many of those working in India (see e.g., Mascarenhas *et al.*, 1991), and by Jacqueline Ashby of CIAT, Clive Lightfoot of ICLARM, the Sustainable Agriculture Programme Team at IIED, and others has shown that farmers have greater capabilities for diagramming and analysis than has been normal professional belief (see e.g., Ashby, Quiros and Rivers, 1989; Lightfoot *et al.*, 1989; Mascarenhas *et al.*, 1991; Guijt and Pretty, 1992; Palaniswamy *et al.*, 1992; Vijayraghavan *et al.*, 1992; Cornwall, Guijt and Welbourn, 1993). In Bangladesh, Ghana, India, Malawi, and Pakistan farmers have presented and analyzed nutrient flows and other linkages in their farming systems by diagramming on the ground and on paper (Lightfoot and Minnick, 1991; Guijt and Pretty, 1992; Lightfoot and Noble, 1993; Ofori *et al.*, 1993). In Zambia in 1991, matrix scoring for varieties of millet was the core of a process in which "by the end of the session, all present, farmers and researchers, had learned a great deal more about finger millet than they knew at the beginning" (Drinkwater, 1993, p. 24). In Pakistan in early 1992 in a PRA field training exercise, women and men, non-literate as well as literate, drew flow and linkage diagrams for their farms and livelihoods (Guijt and Pretty, 1992). In Tamil Nadu, India, in 1992 PRA methods, including matrix scoring, led scientists to learn farmers' preference for red over white rice, and to change their research priorities (Manoharan, Velayudham and Shunmugavalli, 1993). In India and Botswana in 1992, matrix scoring for varieties of a crop was developed by asking analysts to add a "wish" variety in which farmers specified the characteristics they would like extension and scientists to provide for them (Chambers, 1993b, p. 95). Participatory mapping and modeling, seasonal calendars, and trend and change diagramming have also been facilitated to enable farmers to conduct their own analysis. The rate of innovation has been rapid, and much that has taken place has probably remained unreported.

The challenge now is to further develop and disseminate such approaches and methods to help farmers do their own analysis and make their own needs and priorities known to scientists. If such efforts continue to be successful, the implications for activities, procedures, training, rewards and institutional cultures in agricultural education, research and extension will be little short of revolutionary (Pretty and Chambers, 1993).

(b) *Participatory alternatives to questionnaire surveys*

Despite repeated exposure and criticism of their often high costs, errors, delays and other defects (see

e.g., Moris, 1970; Campbell, Shrestha and Stone, 1979; Hill, 1986; Bleek, 1987; Daane, 1987; Inglis, 1991, 1992; Gill, 1993), large-scale questionnaire surveys, whether for one-off *ad hoc* investigations or for longitudinal studies, remain one of the most widespread and sustainable of rural industries. Among the largest customers have been donor agencies requiring baseline surveys for projects, in the hope that later progress can be monitored and evaluated. Evidence is scarce that such baseline surveys have been useful or worth the cost. The reasons include the difficulties, often unforeseen or underestimated at the time of the baseline, of quality control, of ensuring comparability in subsequent surveys, of assessing the counterfactual (what would have happened without the project), of finding comparable control areas, and of disentangling and weighing multiple causality (Chambers, 1978). Nevertheless, such surveys persist. Moreover, for some professionals still, rural research is questionnaire surveys.

The sustainability of large questionnaire surveys as mode of investigation is not difficult to explain. Academics, officials, researchers, consultants and donors find in them a common language and understanding. They reliably feed commensurable numbers to central computers. They protect those senior staff for whom too intimate exposure to the field would be less than congenial. They provide continuing work and salaries for the field investigators who have been employed for years on temporary terms by research institutes. Above all, until recently, they have lacked serious competition.

The evidence is accumulating that participatory methods now present alternatives in two dimensions.

The first dimension is in depth, richness and realism of information and analysis. Questionnaires are only a single, peculiarly fallible, method; in their application, both local people and enumerators tend to be poorly motivated; and complex causality can be but dimly discerned, if at all. PRA approaches and methods, in contrast, present a plurality of methods, with triangulation and crosschecking; and local analysts are usually committed to getting detail complete and accurate, and can from their personal experience interpret change and causality.

The second dimension has been the generation of numbers. From India, Nepal, Bangladesh, Pakistan and Nigeria come evidence and examples of censuses and surveys based upon PRA methods such as participatory mapping and well-being ranking.

In India, a leading PRA practitioner and trainer, Sam Joseph of ActionAid, Bangalore, was able when challenged to specify an alternative PRA method for obtaining all the items of data in a standard baseline survey. In practice, participatory maps made on the ground have been used to present demographic data, using different seeds, colours, stones, vegetables or other symbols to present different sorts of people and

conditions.³ Local people, nonliterate as well as literate, have used cards to record household information, including assets. The National Council of Applied Economic Research, probably the largest survey organization in India apart from the National Sample Survey, has undertaken a research project to test RRA/PRA methods as an alternative or complement to a conventional sample survey using questionnaires (Chaudhari, 1993; NCAER, 1993). NCAER staff were trained by Joseph in RRA/PRA methods. These were then found to generate valid and reliable quantitative as well as qualitative data at the village level, and also some fairly good ratio estimates for the state (Maharashtra) level for some, but not all, variables. The sample survey with questionnaires covered 120 villages as against only 10 with the RRA/PRA methods. The report concluded (NCAER, 1993, p. 92):

... It is perhaps conceivable that an appreciable increase in the number of RRA/PRA villages can provide a data set for generation of regional/state level parameters with relatively smaller sample than normally required in the the (sample survey) approach.

Participatory methods have been used increasingly instead of questionnaires to identify target groups: well-being ranking has been used for this purpose by MYRADA and ActionAid in India to identify the poorer with whom they seek to work; in Pakistan, ActionAid staff have facilitated well-being ranking of 38,000 people for this purpose (Humera Malik, personal communication). In Bangladesh, BRAC has tested participatory mapping as an alternative way to identify target groups for a nonformal education program (Khan, 1993). In India again, IFPRI and ICRISAT have been developing and testing procedures, schedules and routines for facilitating and recording visual analyses by villagers, using mapping, charts for food and women's activities (time use, and energy use), and seasonal calendars, as part of a project on alternative approaches to locating the food and nutrition insecure (Haddad, Chung and Devi, 1993).

Participatory methods have also been used as alternatives to questionnaires in monitoring and evaluation. In some AKRSP villages in Gujarat, village volunteers have retained the maps made by villagers and used them for monitoring soil and water conservation measures and yields (Shah, Bhardwaj and Ambastha, 1991b; Shah, 1993a). In Nepal, in September 1991, ActionAid staff (ActionAid, 1992) facilitated participatory mapping as a basic method for a utilization survey for services. Problems were encountered but maps were reported made in about 130 villages, giving information covering the whole population of each village. This presented a differentiated census, and information including utilization of services for education and health, the use of pit latrines, adoption of various agricultural practices, and participation in group activities. The information was collated by the

ActionAid teams and presented in conventional tables. In Bangladesh, participatory mapping has been facilitated similarly by CARE to enable women to present and assess changes resulting from a Women's Development Project (Vigoda, 1993). Also in Bangladesh, trials were conducted in 1993 as part of a joint project of BRAC and the International Centre for Diarrhoeal Disease Research to test and develop participatory methods to assess change in health and women's lives in Matlab Thana (Adams, Roy and Mahbub, 1993).

In Nigeria, the late Selina Adjebeng-Asem of Obafemi Awolowo University, Ife-Ife, reported (personal communication, July 1992) on the application of PRA methods in monitoring a soyabean project:

I trained the . . . Soyabean project group in the use of PRA for monitoring of the project impact in five states of the Federation i.e. Kaduna, Niger, Enugu, Anambra and Oyo States of Nigeria. The group of 16 researchers were amazed about how much easier it is to obtain indepth information through participatory mapping in addition to other RRA techniques they have already known. We were able through mapping to obtain all relevant socio-demographic information we required for the project; for example, the number of households in a village, households involved in soyabean production, gender issues in soyabean production, utilization of soyabean, and preference rankings of various soyabean diets . . . We gathered an incredible amount of information within an hour and a half visit to the village . . . The researchers have been begging me to give more training in PRA . . .

In cases such as this, PRA methods, used well, have proved not only more cost-effective than questionnaire surveys; they have also proved more popular with all concerned, researchers and local people alike; and repeatedly villagers have said that they had not realized they could make such maps, that they have learned from the process, and that they now see things differently.

There remains the problem of comparability. The central need for commensurability can conflict with local diversity: this was faced by the ActionAid teams in Nepal, who had to invest time and effort in "gap filling" after central analysis had taken place, concluding that analysis itself would be better decentralized. Comparability of information shared in different contexts may become a big question in the 1990s. Decentralized and democratic processes tend to generate disparate data which central planners cannot then easily add up or compare. More remains to be learned about how and how well PRA methods can generate commensurable data (for example demographic, health and agricultural information) from different places; and to what extent central planners and officials can tolerate and manage incommensurability, and variability in the form of locally shared information and locally generated plans.

Conventional questionnaire surveys are then not

the only means of generating quantified social data. In many contexts, for the data-gathering purposes of outsiders, participatory methods now provide substitutes or complements to them, using various protocols or schedules for recording and standardization. Participatory mapping, seasonal calendars, trend and change analysis, well-being ranking, matrix scoring, impact diagramming, and innovations such as visual interactive questionnaires (Shah, 1993b) present alternatives to questionnaires. On the evidence available by early 1994, such participatory methods have shown advantages. When well facilitated, they have so far proved cheaper and quicker: in their comparison of a questionnaire survey approach to identifying economic status in a community of 412 households with a participatory wealth ranking approach, a team in South India found the questionnaire cost seven times as much (7,111 rupees against 1,011 rupees) and took eight times as much staff time (776 hours to 96 hours), besides giving less valid results (Rajaratnam *et al.*, 1993, pp. 20, 36). Participatory mapping can also eliminate laborious household and respondent sampling and sampling errors by covering the whole population of a community. Participatory methods have improved accuracy through cumulative presentation, crosschecking and analysis. They have entailed sharing rather than straight extraction of data, and to varying degrees fun, interest, learning and empowerment. Given the precondition of trained and suitable facilitators, PRA methods have proved so far to be generally cheaper, quicker, more accurate and more insightful.

To what extent PRA methods can and should replace questionnaire surveys requires further investigation. Issues include the feasibility and cost of training fieldworkers in PRA methods and the validity of data for generalization at higher levels. It is also practical now for local people to use PRA methods to generate and use their own numbers, conducting their own censuses, appraisal, baseline surveys, monitoring and evaluation.

(c) *Empowerment and equity*

In practice, much PRA has been found to empower. Those who, through a PRA process express and share what they already know, also learn through that expression and sharing. Those who investigate and observe add to their knowledge. Those who analyze become yet more aware and reach new understanding. Those who plan and then implement what they have planned take command, and further learn through the experience of action.

Whether empowerment is equitable depends on who is empowered. There is a danger (stressed by Scoones and Thompson, 1993) of a naive populism in which participation is regarded as good regardless of who participates or who gains. If those who partici-

pate and gain are only a local male elite, the poor and disadvantaged may end up worse off. The "natural" tendency is for those who are empowered to be men rather than women, the better off rather than the worse off, and those of higher status groups rather than those of lower status. The challenge is then so to introduce and use PRA that the weaker are identified and empowered and equity is served.

Fortunately, the tools available suit this task. Sequences, such as participatory mapping leading to household listing to well-being ranking and then to livelihood analysis, can identify groups distinguished according to local values. Focus group discussions can then be convened to enable different categories of people, including and especially the disadvantaged, to identify their priorities and interests. The contrasts can be sharp. Drawing on applications of PRA techniques in Sierra Leone, Ghana, Malawi and Bangladesh, Welbourn (1991) has shown significant differences by ethnic group, age, gender and economic status, and combinations of these. With pastoralists in Kenya, Swift and Umar (1991, p. 56) found marked and striking differences in the identification of priority problems: out of a possible maximum of 100, livestock management was scored 87 by focus groups of the rich, but only seven by those of the poor, and lack of livestock zero by the rich but 49 by the poor.

Differentiating by groups, interests and gender can empower the poorer and women in several ways. It can give them collective awareness and confidence to confront others and argue their case: Youth for Action, an NGO based in South India, worked at first in some villages only with Harijans (Untouchables) so that they gain in confidence and capability first, before later extending their work to the rest of the village. AKRSP (India) convenes separate groups of women and of men to choose the numbers of trees of different sorts they want in their nursery, and then helps them negotiate a consensus. Differentiation through wealth or well-being ranking can help an outside organization select and deselect those with whom it will work: ActionAid and MYRADA, both in South India, and ActionAid in Pakistan, have used PRA methods to identify the poorer people with whom they then work.

PRA methods such as diagramming can also be brought into play to clarify and resolve conflicts. Agroecosystem diagramming was used in the Philippines to make explicit the differences of interests between groups after the construction of a small dam at Lake Buhi and to achieve consensus about priorities (Conway, Sajise and Knowland, 1989; Conway, 1989). In the approach of the Neighbourhood Initiatives Foundation in the United Kingdom, a large model of a neighborhood allows people to address conflicts by putting down suggestions, and using markers to agree or disagree without needing to identify themselves. This "depersonalises

conflicts and introduces informality where consensus is more easily reached" (Gibson, 1991).

The identification, expression and resolution of conflicts of interest remain a frontier for participatory methods. Diagrams are promising as a means to defuse tension by making agreed fact visible and differences explicit, focusing public debate on physical things rather than on individual people. There remain both potential and need for new and better participatory methods for negotiation and equitable conflict resolution.

(d) *Local people as facilitators and trainers*

A commonplace of PRA experience is that rural people can do much that outsiders have thought they could not do, and often that they themselves have not known they could do. One by one the dominoes have fallen as they have shown that they can map, model, rank, score, estimate, diagram and analyze more and better than expected. Often, too, they have done these better than outsiders. The working rule has become to assume that local people are capable of something until it is proved otherwise.

One challenge then becomes the development and spread of participatory approaches and methods by local people themselves. Farmers' own extension has a long history. Deliberate training of farmers as extensionists may be more recent. As one example, in the 1980s in Central America, World Neighbours trained volunteer extensionists and gradually handed over responsibilities for experiments and extension to them (Bunch, 1985). In India, both MYRADA and SPEECH have invited villagers who had already gained experience of PRA to take part in PRA activities in other villages.

The Aga Khan Rural Support Programme (AKRSP) (India) has taken this further, through the training of village volunteers as PRA facilitators (Shah and Shah, 1994). In the late 1980s, it developed village extension volunteers as an approach in which villagers were trained in PRA both for their own and for other villages. These village volunteers were not just extensionists, but facilitators of the PRA approach and methods (Shah, Bharadwaj and Ambastha, 1991a). They formed teams to conduct PRA exercises in other villages "... involving mapping, transect diagramming, interviewing, group discussions, prioritisation and preparation of a village natural resources management plan. It is observed that they enjoy the process ..." (pp. 87-88). In February 1992, a team of village volunteers from other villagers demonstrated their skills as facilitators to an international group of visitors in Kabripathar village, Bharuch District, Gujarat. In one day, the village volunteers enabled villages to map their degraded forest, count and measure

rootstock in five quadrats on the ground, and assess numbers of nursery plants needed.

One question is whether spread through village volunteers can become self-sustaining and self-improving. Villagers experienced in PRA may facilitate appraisal and analysis in neighboring villages on a voluntary basis. AKRSP has incentive systems for volunteers with payment by results, rewarding good performance. Some new villages have also been prepared to pay for the services of village volunteers as consultants. Were this to become common, with market incentives for good performance, what began as a program initiated from outside, might become self-spreading, self-sustaining and self-improving. Organizations such as AKRSP could then foster spread with a light touch by training volunteers and encouraging them to form teams that provide services, whether voluntarily or for a fee.

Finally, AKRSP has trained and enabled village volunteers to be trainers for NGO staff. The latest domino to fall then, is the reversal of villagers becoming PRA trainers for outsider professionals, with the potential that they will develop and invent their own training approaches and methods. The challenge is to accept that through such reversals there are new relative competences and roles, and that outsiders become not just facilitators but learners and trainees.

(e) *Policy research and change*

Policy insights have been gained through RRA and PRA as specific examples from Zimbabwe, Tanzania, Chad and Nepal illustrate.

In Zimbabwe in November 1991, RRA and PRA methods were used to investigate the effects on agriculture of structural adjustment policies. RRAs were conducted by a team of researchers over two weeks in two Communal Areas. Their findings and recommendations, in a report (FSRU, 1991) completed immediately after the fieldwork, provided immediate feedback from the field concerning marketing, transport, input supply, prices, food security, and farmers' attitudes toward agricultural structural adjustment policies, and provided policy makers with insight into the farmers' viewpoint and their intentions.

In 1991 a survey was undertaken in Chad on a national scale using RRA techniques to try and understand how people perceived their food security problems, and what solutions they proposed (Buchanan-Smith *et al.*, 1993). Thirteen survey enumerators worked in 55 representative villages, spending about a day in each village. A group interview with a checklist as guide was followed by household interviews, particularly oriented toward women (who were rarely represented in the group interview). Three years of different weather conditions were used as reference points. Organizing and analyzing the mass of data was

achieved despite difficulties, and lessons were learnt for improving this sort of survey. Three categories of administrative areas were found, each with a distinctive household food security strategy. The results challenged the conventional thinking in N'djamena which held that the key to raising production was promoting free market systems for agricultural produce. The survey showed that more was needed than marketing alone; local people knew methods and technologies to increase production but were constrained by lack of credit for ploughs, oxen, improved seeds, and more efficient irrigation.

Another example is provided by land policy in Tanzania (Idris Kikula, personal communication; Johansson and Hoben, 1992). As a contribution to a government reassessment of land policies, the Institute of Resource Assessment at the University of Dar es Salaam organized four RRAs for mid-level policy makers. Four villages were chosen to represent a range of conditions. Four teams were formed, and each spent five days in one of the villages. Through the direct learning of the RRAs they concluded that the government's top-down approach was wrong, that communities and people were already doing land use planning, that imposing a land use map was misguided, and that new participatory approaches were needed. They presented their findings to a seminar with high-level policy makers. The resulting recommendations from the seminar implied major changes of policy, and seemed "to indicate just how great an impression such a short visit to a rural area can have and how effective an RRA can be in providing relevant insights for policy makers and planners" (Johansson and Hoben, 1992, p. 30).

These three examples were one-off efforts. A prototype for a more permanent facility has been being tested in Nepal. There, eight small Rapid Deployment Teams have been trained in basic PRA methods and are in place at different locations in the *terai* (lowland). They have simultaneously used PRA methods to investigate and report on aspects of policy and conditions, providing comparative insight for policy makers (Gerard Gill, personal communication), demonstrating a model which might be applied in other countries. The evidence to date suggests that policy makers could now, through improved RRA and PRA approaches and methods, receive information and insights which were more up-to-date, reliable and credible, than those through official channels (Chambers, 1992).

A more general application of PRA methods for policy purposes is in the Country Poverty Assessments sponsored by the World Bank. Most of these have been conducted in a conventional manner, using poverty line and similar criteria. In 1993 Participatory Poverty Assessments using PRA methods were pilot tested in Ghana, Guatemala and Zambia. National teams of facilitators were first trained in PRA. They

then facilitated local people's own appraisal and analysis of their life, conditions, and livelihood strategies, eliciting their concepts of well-being and wealth, their needs, their distinctions between types and degrees of deprivation, and their differences of perception by gender. The resulting insights into poor people's conditions, values and priorities were already in early 1994 being used in policy analysis.

(f) *Personal behavior, attitudes and learning*

Senior officials, scientists and academics who pronounce and prescribe on rural development often lack recent direct knowledge, and base their analysis and action on ignorance or on personal experience from earlier decades. Top-down, center-outward prescription follows.

It is not a new idea that rural development would gain if senior officials and policy makers were able to spend time unofficially living and learning in rural conditions, but little appears to have been done. An exception is the Exposure and Dialogue Programme of the German Commission of Justice and Peace which for some years has been enabling senior outsiders to learn the life stories of village people (Kochendörfer-Lucius and Osner, 1991; Osner *et al.*, 1992). In a less structured manner, senior officials in India have appreciated the opportunities to spend time incognito in villages, with their interactions unconstrained by official protocol. At a personal level, the methods of PRA offer new scope, and make minisabbaticals easier to envisage. PRA approaches and methods have provided ways in which officials, scientists and academics have come face-to-face with local people in an informal and nonthreatening mode which both sides have found rewarding, providing experience and learning which have been intellectually exciting, practically relevant, and often enjoyable.

Much needs to be learned about how, in the local and especially rural context, to facilitate changes in outsiders' behavior and attitudes. Some methods have already been devised, such as Anil Shah's "shoulder tapping." He has written that, taking District Officers in Gujarat on a transect walk to see the problems of soil erosion:

I told them in advance that a transect in Participatory Rural Appraisal (PRA) is for observation and to understand the knowledge and perception of the farmers. We do not advise, but ask — ask open-ended questions without implied advice. I told them that this was very difficult for educated people, more so for those in authority. Therefore, when I heard anyone giving advice or asking questions with implicit advice, I would tap his shoulder and if necessary offer my services to rephrase the advice or query into an open-ended question.

By the end of half a day, and several taps, a lot had been learned that would otherwise have been missed

(Shah, 1991). Scope and need remain for more such methods.

The policy and personal potentials of RRA/PRA interlock. Their scope has scarcely begun to be tapped. The frontier here is to see how to scale up, how to enable many more policy makers, as well as others at the local level, personally to gain direct learning experience in the field from and with rural people, enabling them to fit policy and action more to local conditions and priorities and to the needs of the poor.

(g) *PRA in organizations*

Perhaps the biggest challenge is the establishment of PRA as a way of operating, affecting the culture of organizations. Normal bureaucratic tendencies to standardize, centralize, and impose top-down targets impede or prevent the open-endedness, flexibility, creativity and diversity of good PRA. To establish PRA as the norm in an organization usually therefore requires reversals and a change of culture. More resistance to its adoption and spread has been found in organizations with strong top-down authority and hierarchy, evaluative and punitive styles, and repetitive routines and actions. Conversely, the most rapid and effective adoption and development of PRA has been in organizations with democratic management, lateral communication, and flexible and adaptive modes of operation. This is shown by the experience with the three main types of organization which have been involved with PRA: NGOs, government field organizations and universities and training institutes.

Initially, PRA has been evolved and spread largely by NGOs. This is not surprising, since their organizational cultures are quite often more participatory than most. Some have simply adopted PRA without attempting to disseminate it. Others have defined or redefined their roles to include training for others in PRA. These include the Sustainable Agriculture Programme of IIED in the United Kingdom; Action Aid, AKRSP, MYRADA, OUTREACH, Seva Bharati, and SPEECH in India; the Self-Help Support Programme in Sri Lanka; and Support Participatory Organisations in Pakistan. Those international NGOs and foundations which have taken up PRA support and training on a wider scale in several countries include ActionAid, CARE, the Ford Foundation, Inter-cooperation, the Near East Foundation and OXFAM.

Adoption and use in government field organizations has been more difficult. Given the scale of government operations, it is also potentially more important. In India, several state forestry departments have adopted PRA, and the movement for Joint Forest Management is designed to be implemented in a PRA mode (SPWD, 1992). MYRADA has undertaken PRA training on a large scale for government organizations and staff. Behavior and attitudes have proved

a key problem, and attempts to achieve change have included mandatory overnights in villages, with senior officials expected to set an example by refusing special comforts (Fernandez and Mascarenhas, 1993). The introduction of PRA into the work of the State Watershed Development Cell of the Government of Karnataka, facilitated by MYRADA, raised problems of conflict between community-level PRA and professional norms and government procedures (Bhat and Satish, 1993). In Kenya, the Soil and Water Conservation Branch of the Ministry of Agriculture, following training workshops conducted with IIED (Pretty, 1990) adopted PRA as policy in over 40 districts, and some initial successes have been revealed through participatory monitoring and evaluation (Pretty and Thompson, 1993). The problems and opportunities for PRA in government field organizations require sensitive research to add to understanding of reasons for resistance and distortion, and to provide the basis for a realistic assessment of potentials.

Universities and training institutes were at first slow to notice or adopt PRA. Given that PRA is concerned with learning rather than teaching, and with the field rather than the classroom, this is perhaps not surprising. From modest beginnings in the early 1990s, however, interest in PRA approaches and applications on the part of individuals and groups in universities and training institutes has grown quickly, and by early 1994 included at least 25 countries. The Indian experience is instructive. In some cases PRA was adopted quickly for the fieldwork of students, as with probationers at the Lal Bahadur Shastri National Academy of Administration. In other cases, sequences of workshops, field experiences, and training have been part of a patient process facilitated by an NGO or NGOs which have led to gradual incorporation of PRA approaches and methods into curricula, fieldwork and research, as with the Gujarat Agricultural University (Shah and Mane, 1993), the Tamil Nadu Agricultural University (Paliniswamy *et al.*, 1992; Vijayraghavan *et al.*, 1992; Manoharan *et al.*, 1993), and several other agricultural universities. In other universities, the culture of learning (as opposed to the more usual teaching) resonates with PRA, as in Australia (Bawden *et al.*, 1984; Ampt and Ison, 1988, 1989; Dunn, 1991; Dunn and McMillan, 1991; PRA Team, 1991) especially but not only Hawkesbury Agricultural College (now the University of Western Sydney). The challenge presented by PRA modes to traditional university teaching remains largely unrecognized.

To summarize experience to early 1994, those organizations which have embraced and developed PRA have shared four characteristics. The leadership has been stable and committed to participatory approaches; a substantial proportion of staff have personally wished to use PRA; there has been little rent-seeking activity by staff; and there has been recurrent reinforcement. Commitment of a director or principal

of an institution has not on its own proved enough; nor, on its own, has repeated training. Training at lower field levels without higher level understanding and commitment has proved ineffective. It appears critical for adoption that the middle-level managerial staff in any organization genuinely, and not just verbally, wishes to use or support PRA. If the staff does not, there are many ways in which its lack of support can undermine and finally eliminate the participatory spirit and practices of PRA.

The bottom line in organizations has been, however, individual choice and freedom. Much has depended on facilitators who were both committed and free of line responsibilities. The organizational challenge and opportunity for PRA can then be seen as enabling such people to be identified and then protected from line duties, freeing them to devote time to the spread of participatory approaches and methods, and contribute to cultural change in their own and other organizations.

5. THE PARADIGMATIC SIGNIFICANCE OF PRA

One contribution to be sought from universities is a better understanding of underlying theory. In Australia, RRA has been linked with soft systems theory (Checkland, 1981) and contextual science (Russell and Ison, 1991). In making these links, Australian researchers have begun to explore further the paradigmatic significance of RRA and PRA. The word "paradigm" is used here to mean a coherent and mutually supporting pattern of concepts, values, methods and action, amenable to wide application.

In his paper (Jamieson, 1987) "The paradigmatic significance of RRA," delivered at the International Conference on Rapid Rural Appraisal at Khon Kaen in 1985, Neil Jamieson argued that RRA, with its rapid learning, fitted and supported a new and emerging paradigm of development. Despite ideological conflicts, Marxists, socialists and capitalists had shared evolutionary, unilineal, universalistic, positivistic and utilitarian assumptions, and a fervent belief in progress. Another view of development, he wrote, was of human evolution as problem solving under pressure, as adaptive change. This fitted better with a cybernetic systems approach, which included the concepts of feedback, of lead time (the time between receipt of information and when it is too late to use it), and of lag time (the time between receipt of information and the completion of action based on it) (see also Joseph, 1991). Jamieson presented the case that change had accelerated and unpredictability had increased, making accurate and timely feedback more than ever vital for effective adaptive change.

Much that Jamieson wrote applies with even more force in 1994 than it did in 1985. At a theoretical level,

chaos theory has led to a clearer understanding that patterns and directions of change can be sensitive to small differences in starting conditions (Gleick, 1987), stressing the importance of quick, accurate learning and action. At the empirical level, changes in global and local conditions — ecological, social and political — appear to be accelerating. In conditions of faster change and of increasing unpredictability, it is even more important than before to have timely feedback, prompt learning, and rapid adaptive responses which will differ to fit local contexts. This learning and need is encapsulated in the title — “More diversity for more certainty” — of the last chapter of *Development in Practice* (Porter, Allen and Thompson, 1991, pp. 197–213), which analyses and describes a development project in Kenya. PRA approaches and methods, through local analysis, improvisation and action, appear suited to the understanding and expression of local diversity, and to enabling local people to assess, analyze, cope with, adapt to, and exploit accelerating change.

Beyond these aspects, PRA as it is emerging is experiential, not metaphysical. Theory has been induced from practice, from what is found to work, not deduced from propositions. Good performance has been sought through empiricism, diversity, improvisation and personal responsibility.

It is striking that parallel shifts of paradigm can be noted in four other major domains of human experience: in the social sciences; in the natural sciences; in business management; and in developing thinking itself.

In the social sciences, postmodernism (e.g. Harvey, 1990; Rosenau, 1992) asserts philosophical relativism and multiple realities. Interpreting the view of affirmative postmodernists, Rosenau writes,

The absence of truth . . . yields intellectual humility and tolerance. They see truth as personal and community-specific: although it may be relative, it is not arbitrary. . . . Some of them substitute a substantive focus on the local, on daily life, and on traditional narrative for the hegemonic theory of mainstream social science (Rosenau 1992, p. 22).

Uphoff's (1992) study of participation in Sri Lanka and his “post-Newtonian social science” combine to challenge reductionism and mechanistic models, to recognize and rehabilitate altruism and cooperation, and to stress positive sums and the potentials of “social energy” which is manifest when individuals and groups work for some common purpose. Postmodernism, Uphoff's analysis, and PRA have different starting points: postmodernism tends to start with a certain theoretical pluralism; Uphoff starts with empirical experience which then informs and interlinks with theory; and PRA is found to stick largely with the action, with dispersed practitioners subject to the discipline of what works, reflecting more on how to do bet-

ter than on the theoretical implications of their experience. But postmodern theory, post-Newtonian social science, and the experience of PRA are mutually reinforcing on common ground: for all affirm and celebrate multiple realities and local diversity.

In the natural sciences, conventional approaches, using hard systems and reductionist assumptions and methods, are in crisis when faced with many of our important problems (Mearns, 1991; Appleyard, 1992). Scientific method is not competent to predict or prescribe for the complex open systems which matter most. Global environmental issues involve huge uncertainties and demand what Funtowicz and Ravetz (1990) call a “second order science” in which judgement plays a more recognized part. Precise understanding, prediction and prescription for local agro-social systems can be similarly elusive. This is not a new discovery. Jeremy Swift wrote in 1981:

. . . a major World Bank livestock development project in Mali is based, for crucial calculations of sustainable grazing pressure, on the report of a highly competent ecologist in 1972; the calculations were redone in 1977/78 by a different, equally well-qualified ecologist, who halved the earlier carrying capacity. Nobody is to blame: the science is inexact. But the consequences could be disastrous for the project, and more so for the pastoralists involved (Swift, 1981, p. 487).

Perhaps no one was to blame then. But now we know more about what is not knowable using the standard methods of professional disciplines. When so much is so unknowable and so unpredictable, it seems right to seek solutions through methodological pluralism, through flexible and continuous learning and adaptation, and through the exercise of judgement, again all elements in the practice of PRA.

In business management, the parallel shift has been from the values and strategies of mass production to those of flexible specialization (see e.g., Harvey, 1990, pp. 125–188; Kaplinsky, 1991, p. 7). Standardization has been replaced by variety and rapid response, hierarchical supervision by trust, and punitive quality control by personal quality assurance at source. A highly successful Brazilian manager, when he took over a company, abolished norms, manuals, rules and regulations, and put the company's employees “in the demanding position of using their own judgement” (Semler, 1989, p. 79). Much in Tom Peters's book of advice to US business managers, *Thriving on Chaos: Handbook for a Management Revolution* (1987), is found equally in PRA. He advocates, for example, achieving flexibility by empowering people, learning to love change, becoming obsessed with listening, and deferring to the front line. The theme of local knowledge and action is also strong. In *The Fifth Discipline: The Art and Practice of the Learning Organization* (1990, p. 228). Senge writes

Localness is especially vital in times of rapid change. Local actors often have more current information on customer preferences, competitor actions, and market trends; they are in a better position to manage the continuous adaptation that change demands (Senge, 1992, p. 228).

Strikingly, writers on management stress paradox, reversals, and what to a linear reductionist thinker must appear irrationality. Charles Handy writes of *The Age of Unreason* (1990) with the "Un" emphasized in the original, and "An Upside-down Society." In *Thriving on Chaos*, Peters wrote about "building systems for a world turned upside down." His best-seller *Liberation Management* (1993) is subtitled *Necessary Disorganization for the Nanosecond Nineties* (my emphasis).

It has been the discipline of the market and opportunities from new technology which have driven and drawn business management to decentralized flexibility, to diversification, and to finding and exploiting transient niche markets. For PRA and related approaches, it has been the discipline of what works with people and communities, and the opportunities opened up by the new approaches and methods, which have driven and drawn. In both business management and PRA, value has been placed on decentralization, open communications and sharing knowledge, empowerment, diversity, and rapid change. So it is that the philosophy and approaches of PRA can be seen as one expression of a wider paradigm for effective action in the contemporary world.

In development thinking, normative theories of universal economic growth as the main means to a better life are no longer tenable (see e.g., Ekins, 1992; Sachs, 1992). As economic growth ceases to be a simple, universal objective, as it is recognized as environmentally harmful among the richer, and as economic resources are recognized as finite, so there is a search for alternative normative paradigms, for more sustainable ways to enhance the quality of life. For the rich, the question is how to be better off with less; for the poor, it is how to gain more and be better off without repeating the errors of the rich. One way to serve these objectives is to enable local people to identify, express and achieve more of their own priorities. In line with this, the emergent paradigm for living on and with the Earth brings together decentralization, democracy and diversity. What is local, and what is different, is valued. The trends toward centralization, authoritarianism, and homogenization are opposed. Reductionism, linear thinking, and standard solutions give way to an

inclusive holism, open systems thinking, and diverse options and actions.

RRA and more so PRA can, then, be recognized as part of a more general paradigm shift in the social and natural sciences, in business management, and in development thinking, and as part of a new professionalism (Pretty and Chambers, 1993). PRA, as articulated by its practitioners, has an emerging normative theory-and-practice. This includes practical engagement with local communities and people, openness to complexity and diversity, a principle of decentralization and empowerment — "handing over the stick," and sharing and lateral learning and spread. It manifests and supports methodological pluralism, rapid adaptive change, the analysis and expression of local people's priorities, and democratic local diversity. Much of its distinctive, if modest, contribution to this shift of paradigm lies in evolving ways to change professionals' behavior and to enhance and support analysis and action by local people, empowering those who are peripheral and weak.

The most striking insight from the experience of PRA is the primacy of the personal. This is easy to overlook. Responsibility rests not in written rules, regulations and procedures but in individual judgement. The one-sentence manual for PRA "Use your own best judgement at all times" (KGVK, 1991) originates in North American business management (Peters, 1987, p. 378). In this mode, every PRA experience can be seen to be different, the outcome of local conditions and improvised personal performance by local people and facilitators. Authority and responsibility reside then not in a bible or manual, nor in a sequence of observances or procedures, but in personal interactions, judgement and choice.

The future of the philosophy, approaches and methods known as PRA cannot be foreseen. Dangers and promise coexist. What happens depends on decisions and actions by individuals, especially professionals in NGOs, government services, training and research institutes, universities, and donor agencies. To describe these decisions and actions as polarized between closed and open, conservative and radical, reductionist and pluralist, and timid and bold, as in an earlier version of this article, is to load the antitheses as if of bad against good. Pluralism itself demands a balance. A more securely empirical conclusion is that PRA approaches and methods have opened up a new range of practical choices for local research and action which seem increasingly to fit the priorities of the 1990s.

NOTES

1. For comments on earlier versions of this paper I am grateful to many people, including Tony Dunn, James Mascarenhas, Jules Pretty and two anonymous referees.

Responsibility for errors, omissions and opinions is mine alone.

2. These points were stressed in the South-South PRA Exchange Workshop hosted in India in September 1993, in which participants were trainer/practitioners from 12 countries in the South.
3. In an all-women's PRA in South India, yellow circles were placed around households where husbands were drunkards, and chillies were used to represent two marriages (Sheelu Francis, personal communication).

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