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3 Cultivation: knowledge or performance?

Paul Richards

AGAINST LOCAL KNOWLEDGE

It is a characteristic feature of the oneness of the modern world that indigenous cultivation should have come to be thought of as grounded in local knowledge. To technologically-minded improvers this local knowledge is often or mainly outmoded, and something to be replaced. Anthropological romantics, by contrast, in establishing their credentials as priests of humanistic plurality, are apt to celebrate it. Both groups are thereby liable to credit local knowledge of agriculture with a spurious epistemic independence, as if it were the regular outcome of a process of 'peasant intellectualism' parallel in some way to the processes of intellectualism operating in North American or European academic life. Intellectualist movements arise from time to time within communities of small-scale cultivators (Feierman 1990, Richards 1992) but their achievements are dangerously undervalued by assuming that small-scale cultivators *necessarily* abound in agro-ecological wisdom. This assumption seems to me to run the risk of ethnocentrism. Stephen Marglin (1991) has drawn attention to the historically localized peculiarities that led to a rather strict segregation between *episteme* and *techné* as forms of knowledge in western society. Nineteenth-century Victorians, for example, had good reason to try to insulate the reflective privileges of intellectuals from the authority claims of builders, plumbers and other purveyors of practice in a world undergoing rapid material transformation (cf. Galton's statistical work on the absent-mindedness of professors, gaze averted from the contents of their breakfast tables, their attention devoted to higher matters). But I see no reason why anthropologists should continue to stigmatize cultivators with an intellectual dichotomy redolent of the class-based parochialism of later-Victorian imperialists.

What I try to suggest in this chapter is that much of the material that gets woven by the anthropologist (or other observer) into a satisfyingly complete, free-standing 'indigenous agricultural knowledge system' is often nothing of the sort, but rather the product of a set of improvisational capacities called forth by the needs of the moment. It is hard for observers to appreciate what is often obvious (and therefore hardly worth stating) to performers. This leads academic bystanders into a fallacy of misplaced abstraction: the making of intellectual mysteries out of situations and activities whose practical import is obvious to all but the observer.

Among a number of reasons for deploring the prevalence of misplaced abstraction in anthropological accounts of local knowledge two stand out. First, the resultant over-interpretation tends to obscure important, if probably quite rare, cases of genuine 'local knowledge' arising from real but place- or epoch-specific differences in the way the world works (Hacking 1982). There are a number of such particularisms in agro-ecology (Richards 1985) even if the historical examples are at times hard to interpret owing to an accelerated pace of recent environmental change (Richards 1991). Second, misplaced abstraction tends further to cramp our (already limited) understanding of human improvisational capacities. Why is it that some people can pick up an instrument and play where others struggle half a lifetime to coax from it a reasonable tune? How is it that some people seem to be good at finding their way through unfamiliar terrain or coping with unprecedented circumstances that would leave others hopelessly lost or panicked? Through the exercise of what talent or instinct is it possible for some people safely to negotiate political minefields or moments of great social awkwardness where others would achieve nothing more than embarrassment or acrimonious confrontation? Why can some people make frail plants flourish where others only have to raise a watering can for them to die? We tend to talk in vague terms about having a musical 'ear', a 'talent' for diplomacy, a 'sense' of the situation, a 'feel' for the problem, a 'golden touch' or 'green fingers', but without much apparent idea of how, if at all, the skills thus invoked are related to 'knowledge systems' more conventionally defined.

The purpose of this chapter is to direct attention to the need for more precise ethnography of these kinds of performance skills, as a necessary antidote to the fallacy of misplaced abstraction, if the anthropology of knowledge is to progress beyond the by now well-rehearsed limits set by the rationality debate on the one hand (Hollis and Lukes 1982) and an anti-scientific, post-modern, culture theory

on the other (Geertz 1983). I focus in particular on a number of agricultural examples from West Africa, and apologize in advance for a chapter that still bears the marks of its origins as a contribution to a conference specifically concerned with agricultural experimentation (a summary of the original paper appears in Chambers, Pacey and Thrupp 1989). My concern now, as then, is to understand how farmers cope with difficulty and *do well*, rather than with the more usual dualism – technical correctness versus social expressiveness – at issue in many debates concerning local knowledge.

I ought to add (though it will soon become clear) that in calling attention to the importance of performance skills as an element in the debate about local knowledge I see this as quite separate from 'performance studies' in anthropology as developed by Victor Turner and others (e.g. Turner 1974). There, the focus is placed upon the dramaturgy and interpretation of ritual – with (in effect) purpose, content and outcome of the specific genres of performance commanding the lion's share of attention. My primary concern is with improvisational capacities in the technological arena. More generally (in the larger project to which this chapter is a preamble) I am interested in the 'musical' skills and 'embodied' capacities that permit continuous flow in human performance of all kinds. With some surprising exceptions (Needham 1967), anthropologists interested in ritual performance have tended to shy away from the issue of bodily capacities, perhaps fearing the influence of the cruder forms of biological reductionism. There are recent welcome signs, however, that the strict anthropological Cartesianism that has so far rendered embodied skills intellectually suspect (Geertz 1983, Rouget 1985) is beginning to come under effective critical scrutiny (Ingold 1991).

PERFORMANCE IN WEST AFRICAN RICE FARMING

In the rice-growing zone of West Africa agricultural research effort since the 1930s has concentrated upon varietal selection. Encouragement to farmers to grow improved varieties has been a key component in a number of rural development initiatives. But in upland farming conditions, and with uncertain supplies of fertilizer, the yield of improved varieties rarely outstrips local cultivars by more than 10 to 20 per cent.

In the Mende village of Mogbuama in central Sierra Leone, where I first carried out field-work in 1982–3, no farmer used any improved varieties (apart from in a few small plots for which I had supplied

seed). In that year, and leaving out of account total failures, rice yields on the best five upland farms in Mogbuama exceeded yields on the poorest five by about 50 to 60 per cent (Richards 1986). The sample (thirty household farms) was not greatly differentiated by size or social status. The major constraint determining success or failure was timely access to labour (and most especially access to the skills of co-operative labour groups during the planting season). Each farm would be ready for planting in its own time, depending on soil type and when the farmer had opted to set fire to the felled vegetation. But the window of opportunity for planting is restricted. A cleared farm left too long before planting is choked by weeds, or seed is lost before it germinates on account of the heavy rains. Hence the need for a large labour group to ensure the bulk of the farm is planted in one go at an auspicious moment.

To secure the timely services of a labour group it is necessary both to command a range of social skills (to know how to talk to convenors) and to be in a position to offer the right kind of food and other perquisites. Labour groups will down tools if the food is considered inadequate. The rules are explicit. The group must be offered rice, and the sauce must contain fish or meat and sufficient salt. Some groups have a 'company doctor' who tests the food on offer to decide whether the work should proceed. Alcohol, cigarettes and cola are additional inducements to timely and careful work.

It is often tricky for the farmer to raise the necessary resources. The assistance of a labour group in making a household upland rice farm is needed when stocks from the previous harvest are running low and food and cash are in short supply. One way to cope with this difficulty is to convert 'spare' labour time during the dry season into an asset encashable during the period of pre-harvest hunger. One such asset is *omole*, a local liquor distilled from palm wine. This stores well, commands a ready market for cash, and can be used as an additional inducement in recruiting labour groups. A Mogbuama woman who distilled large quantities of the stuff frequently had a largish informal work group of (somewhat hung-over) young men helping on her farm, to clear off their previous evening's drinking debts. The process of putting together an agricultural work party, therefore, is not totally unlike the throwing of another kind of party that regularly enlivens Mende village life: informal dancing on moonlit evenings after the harvest. The parallel is especially striking in the case of those labour groups that work to musical accompaniment (Richards 1986). In this case the drummers map

out in beats the steps of the young men hoeing in the rice after it is broadcast, and a singer praises the swift and chides the tardy, much as the musicians for a dance cue, and comment upon, the perfectly-timed changes of step that so delight the lively snake of participants in the moon-lit conga around the village square.

Agricultural researchers spend much time measuring rice yields, and perhaps (like anthropologists – cf. Little 1967) not a little time enjoying music or dance under the harvest moon. But I have come across few measurements relating to the significance of music in agricultural production. What, for example, is the impact of drumming on the efficiency of agricultural labour? I made some measurements of this while taking part in rice planting in Mogbuama. This resulted in several sets of figures relating to areas planted and hoed by a labour company working separate stints with and without music. Per hour, 20 per cent more ground was covered by the same group of people (on the same soil type, a crucial factor in determining the efficiency of planting work) when accompanied by drumming than without it.

This figure is intriguing, since it suggests that the difference between getting *performance factors* right and wrong in African hoe agriculture may have the same order of magnitude of impact on productivity as might the adoption of new varieties, or other research station inputs, in typical small-farmer circumstances. By and large, however, agricultural research seems to have ignored performance as an area for systematic enquiry – but surely not for want of basic evidence. The ethnographic literature is rich in relevant instances, including accounts of the part played by music in agricultural production or of the connection between brewing and labour organization (Ames 1959, Bassett 1988, O'Laughlin 1973, Saul 1983, Sharpe 1982). It is the significance, not the existence, of this material that seems to have eluded agriculturalists working on tropical small-farmer cultivation systems. I was once asked to participate in a conference on the contribution of anthropology to farming systems research, organized by one of the international centres for tropical agricultural research. But the paper a colleague and I submitted on agricultural labour groups in Nigeria and Sierra Leone was rejected on the grounds that it was 'too anthropological' and of insufficient practical interest to agricultural researchers. Why? Why should the performance of agricultural work seem irrelevant to applied scientists interested in improving small-holder farming systems?

Some of the fault, surely, must lie on the social science side of

the fence. Anthropologists, and others interested in social agency, tend to set up their arguments and analyses as if they are offering an alternative (contemplative, interpretive) way of looking at the world, a vision opposed to that vouchsafed by science with its commitment to intervention as a test of understanding (Geertz 1983). But an adequate theory of performance must be based on an understanding of the way in which theory and practice (including theory and practice in science) intertwine. Bourdieu (1978) points the way, but even he seems unconcerned with the implication that an adequate theory of practice may have important practical implications, that it should facilitate *better* performance. This seems perverse. Is it not a contradiction in terms to posit a contemplative theory of practice – to posit silent music? Unless the anthropologist aspires to the role of the talentless music critic, unable to play a note, an interest in the ethnography of performance carries with it an implicit commitment to a valid ‘applied’ anthropology, capable (in the present case) of influencing policy and practice in agricultural science. (Perhaps a better guide in this regard than Bourdieu is Jacques Attali’s remarkable book *Noise: a Political Economy of Music* (1979), an intriguing cultural manifesto by the economist now in charge of the international bank for the economic reconstruction of eastern Europe!) My purpose, then, is to suggest that the search for an adequate theory of agricultural performance is an essential complement to applied agricultural research. In particular, I want to press the point that ‘local knowledge’, when it seems incomprehensible from a technical point of view, is sometimes ‘performance knowledge’ rather than (so-called) ‘indigenous technical knowledge’ (Howes and Chambers 1979), and to point to the confusion liable to stem from their conflation.

INTERCROPPING: PLAN OR PERFORMANCE?

Let me try further to clarify what I mean by ‘performance knowledge’ with an example that will at the same time illustrate how distant normal agricultural research sometimes is from performance thinking. The example draws on Michael Watts’ discussion (in his book *Silent Violence*, 1983) of the way in which farmers in a village in Katsina, northern Nigeria compensate for the effects of poor rainfall. Hausa farmers make a series of rolling adjustments to drought. If the rains are late or stop unexpectedly the first planting of sorghum may fail. The farm is replanted as many times as is necessary to secure germination, or until the farmer no longer has

any seed left. At each replanting a different seed mix may be tried, better to fit available resources to changing circumstances. As need arises or resources permit the farmer may then hedge or criss-cross the main plot with various back-up and insurance crops.

Farming-systems researchers might imagine themselves to be on familiar ground at this point (cf. Norman 1967). They would tend (so Watts argues) to treat each of these resulting cropping patterns as a predetermined design, as if in effect each farmer had said, ‘This year, to minimize the risks from drought, I will plant so much sorghum, so much millet, so much cassava’. But this is to confuse intention and result, to misunderstand what has happened. The crop mix – the layout of different crops in the field – is not a design, but a result. It is a completed performance. What transpired in this performance, and why, can only be interpreted by reconstructing the sequence of events in time. Each mixture is a historical record of what happened to a specific farmer on a specific piece of land in a specific year. It is not the outcome of a prior body of ‘indigenous technical knowledge’ in which farmers are figuring out variations on a local theory of inter-species ecological complementarity.

In the circumstances of the case described by Watts, researchers interested in intercropping are looking at the wrong problem. They are looking for the combinatorial logic in intercropping where what matters to the Hausa farmer is sequential adjustment to unpredictable conditions. To understand the register within which the farmer works it is important, in this instance, to distinguish between spatial and temporal logic. It is necessary, in thinking about intercropping, to separate plan and performance. But here we come up against a major difficulty. If conventional agricultural research is not good at coping with performance issues this is for (understandable) methodological reasons. Trials are carried out under experimental controls in which the realities of time and place are ‘frozen’ to allow for replication and comparison. This is the logic behind setting up and endowing research stations as ‘protected’ environments. To this extent, they can be described (quite properly) as ‘out of time’ and ‘out of place’. By contrast the issues at stake in performance only become apparent in time and in place – when, in fact, cultivation is a performance not a rehearsal.

To be fair, plant breeders are fully aware of the need to test for genotype-environment interactions (GE), but generally only screen for biological not cultural factors, and certainly not for sociogenic contingencies as components in that cultural environment, since it will be assumed – perhaps wrongly – that these will be randomly

distributed across the population. Even so, GE effects are difficult to pinpoint without sophisticated and complex biometric analysis: the work is sometimes skimmed to the detriment of the released innovation (Simmonds 1979). I suspect anyone proposing the addition of a further order of complexity derived from cultural factors to the experimental design for GE would receive a fairly dusty response, not to mention a searching and sceptical scrutiny of her or his statistical competence.

THINKING ABOUT AGRICULTURAL PERFORMANCE

Musical analogies

If agricultural research has so far failed to take on performance issues, where might we look for models and inspiration? Musical performance is potentially a helpful starting point, not only because of the integral role in agricultural performance in many societies, but because it provokes some useful questions about the link between analyst and performer. A parallel can be drawn between musical analysts (critics and scholars) in western concert music and agricultural scientists. Both are high-status intellectuals concerned to understand how their subject-matter works. This analogy breaks down (in a useful and thought-provoking way) when we take account of the performer. Concert artists are at least the equal of musical analysts in power and social standing. The connection between 'research' and 'performance' is open to negotiation between equals: some performers find analysis helpful and interesting, others are openly sceptical about what musicology contributes to their success as performers (Kofi Agawu, personal communication). The sceptics are liable to stress that it is not necessary to understand the physics of the violin (for example) to play the instrument well.

Agricultural research for impoverished small-scale farmers is different. Here the performers are all of low status and little influence. They too may be sceptical about whether research helps, but they have little scope for voicing this scepticism: agricultural researchers are powerful individuals whose confidence that performers would perform better if they hearkened to analytical advice is hard to query. Musicologists approaching concert artists would tend to be more circumspect, and less confident that their insights are in any way relevant to the solution of performance problems.

Robert Chambers (1983) has addressed this crucial issue of the asymmetry between analysts and performers in rural development

in poor countries, and has suggested ways of dealing with it by a series of conscious inversions and role reversals directed at trying to get researchers to assume the farmer's standpoint, including a much greater emphasis on on-farm trials and with-farmer research programmes (Chambers, Pacey and Thrupp 1989). Trying to run a farm with the resources available to the typical peasant farmer is doubtless a salutary experience. I would argue, however, that role reversals and running experiments in 'real time', useful though they may prove, will not by themselves be enough. A sustained programme is needed to capture a sense of the way in which farming operations are embedded in a social context with its own cultural logic and imperatives (reasons of the 'last week we had to sell the cow to pay for granny's funeral' kind).

This is a problem with which musical performers are familiar. They study the notes, and practise hard, in order not to make mistakes. They plan ahead how to phrase a melody, co-ordinate entrances, pace the various sections of a piece. But much of this planning may go awry on the night. Faced with the realities of an audience, and the contingencies of a temperamental instrument, or hall with uncertain acoustic, it suddenly seems different. A good musician needs additional skills, therefore: how to overcome nerves, how to avoid panic, how to recover from mistakes. No one, however talented, plays perfectly all the time. The capacity to keep going, and to avoid complete breakdown, is always an important musical skill, however hard to define or teach.

It may be of interest, therefore, to agricultural researchers to pay some attention to the coping skills of musical performers as a prelude to thinking about the coping skills of agricultural performers. An initial survey suggests the range of strategies is unusually wide (Grindea 1978). Some techniques are based on common sense and experience. Others depend on medication or advice from psychologists. A most interesting category comprises 'indigenous' theories developed by performers themselves (Havas 1978). Much of the material in the last category is likely to appear to outsiders to verge on pseudo-scientific mumbo-jumbo. It might seem to serve the same kind of psycho-therapeutic, confidence-boosting, ends as the charm against thieves made by the Azande householder locking up his isolated compound prior to dry-season hunting expeditions (de Schlippe 1956). To the performer grappling with anxiety, stage-fright or nervous tension, scientific respectability is of little significance compared with whether the nostrum works or not.

This helps, I think, put much of what is counted as 'indigenous

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technical knowledge' in the agricultural field (especially the local knowledge that at times seems closer to magic than science) into a new and useful light. Much of it should be judged and valued not by the standards of scientific analysis, but as self-help therapy through which farmers put their mistakes and disasters behind them without the performance grinding to a halt. Gell (1988) suggests that Trobriand 'garden magic' (as interpreted by Malinowski) takes on a renewed significance if viewed from a performance perspective. Gell's notion is that Trobriand garden magic is a way of conceptualizing and rehearsing ideal outcomes. In effect we are being invited to view magic as pro-active performance therapy (the ritual equivalent of a Beta Blocker!), not a botched theory of natural causes, or a displaced moral philosophy, as some anthropologists would insist. But to treat indigenous technical knowledge (including magic) as a patch-and-mend philosophy in this way is not to diminish its importance. Outsiders tend to undervalue the capacity to keep going under difficulties, and to treat the coping strategies as 'muddling through', not skilled achievements. But in truth – in the appalling, and rapidly deteriorating, environmental and economic conditions faced by many small-scale farmers in the African tropics – even to reproduce the status quo is oftentimes a brilliantly innovative achievement.

Perhaps the gap between farmers and researchers could be closed if those on the formal side of the fence reflected upon one further lesson from the musical field. Technical perfection is no guarantee that the performance will succeed in stirring the imagination of an audience. Conversely, technically imperfect performances are sometimes great performances. The composer Gustav Holst (reflecting upon musical performances by amateurs) was fond of quoting Chesterton's aphorism that 'if a thing is worth doing at all it is worth doing badly'. This comes close to pinning down the essence of what it is about performance that is otherwise so elusive to those whose perspectives are based entirely on an overconfident reading of the claims of 'normal science'.

Social theory: actors and agency

Performance has until recently also eluded social theorists. The field is polarized. Perhaps in response to the overemphasis given by historians to the role of the individual actor or agent in shaping events, economists and sociologists long tended towards an opposite overemphasis on macroscopic structures, in which time and agency

were neglected, excluded, or rendered irrelevant by the guiding actions of the 'hidden hand'. An important exception is to be found in the work of the economist and statistician G. L. S. Shackle. Shackle's book *Decision, Order and Time* (1969) queries decision-making orthodoxy as the reduction of possibilities to probabilities, and explores an alternative conceptual framework in which performance concepts (e.g. a notion of surprise in keeping with the Bayesian tradition of statistical reasoning) substitute for approaches to the future based on 'timeless' distributions of statistical orthodoxy.

Other social theorists have made similar journeys. Performance – a focus on the social agent, and how agents achieve results – is a central focus in ethnomethodology, for example. Historically inclined sociologists are in the process of recovering time from the grip of the nineteenth-century epochal Grand Theorists. In this new historical sociology (cf. Peel 1983) social change is a performance enacted upon a stage with carefully delimited socio-economic characteristics, but it is a real performance for all that. The Ijeshas in Peel's account were not simply absorbed into the new colonial order of southern Nigeria. They did more than discover and react to a system imposed by the march of global capitalism. Peel shows how the agents of Ilesha history held their corner in an improvised dialogue that helped make the system to which we now recognize they belong (for a comparable Liberian example, see Breitborde 1991).

The theoretical tendencies behind this kind of account are most thoroughly developed in the work of Anthony Giddens. Giddens (1979) provides a sophisticated analysis of the links between performance (agency), structure (invariant or slowly varying features of institutions) and power (control of resources, capacity to act). Giddens's achievement is to bring the 'power' orientation of Marxian social science, the concern with pattern and meaning in structural-functional and structuralist sociology and anthropology, and the performance concerns of ethnomethodology into common focus. Although power and structure have a great influence on what can be achieved, the stage is dead without the actors. There is overriding significance therefore in the fact that social life is 'the skilled performance of lay actors'. A central point modern social theory requires us to grasp is that social life is simply not corrigible by outside observers. Outsiders may be able to rebuild the set (or to mix a metaphor, move the goalposts) but they do not make the action.

Giddens, like Shackle, moves the debate away from planning (the

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world of social engineering) to the much more subtle (and perhaps nebulous) world of performance, and how to enhance the capacity of given agents and groups to perform under difficult circumstances (how, for example, to cope with the challenges of a harsh or deteriorating environment). But in this case is there a role for outsiders in assisting at such events? To what extent can and ought outsiders try to influence the directions taken when poor people improvise in the face of drought and famine, for example? Can social agents be intensively coached and trained to perform better under such circumstances? Or, alternatively, if local creativity is decisive in social action, are outside interventions best restricted to psychological and promotional assistance? What (in short) are the prescriptions for agricultural research policy under an agency-oriented theory of social action?

HOW ETHNOGRAPHY OF PERFORMANCE MIGHT HELP

This change of emphasis in social theory has large implications for the way policy-makers conceive of interventions in agriculture and the purpose of agricultural research. Agriculture as a performance is part of the wider performance of social life. It is an obvious characteristic of small-scale resource-poor farmers that there is little scope (however orthodox economics might wish otherwise) to insulate the farm from other aspects of existence. This embeddedness is a feature of all people-intensive small-scale farming systems, irrespective of whether output is for market or household subsistence. Members of the farm household in these circumstances judge the success of their on-farm actions by whether they further their social projects more generally. This in turn means treating seriously the argument that agriculture, as a component within the broader field of social action, is an expert performance of lay actors, and that as social action it is not corrigible by outsiders.

How might agriculturalists begin to understand agriculture as social action, and so determine new (though inevitably more modest) targets for assistance to agricultural activities inextricably bound up in larger social processes? One interesting possibility that I wish to explore in conclusion is the case for giving much greater prominence than hitherto to so-called ethnographic methods in agricultural research. Ethnographic methods (notably participant observation) allow some access to and understanding of performance issues in agriculture. The approach was pioneered in the 1940s by the Belgian agronomist de Schlippe, working among the Azande in

southern Sudan. De Schlippe was an agronomist who re-trained as an anthropologist, and wrote what is still one of the best books on performance in African agriculture. One of the great achievements of de Schlippe's *Shifting Cultivation in Africa: the Zande System of Agriculture* (1956) was to show that aspects of life totally alien to the outside viewpoint (e.g. Azande ideas about witchcraft and magic) became much more understandable in the context of the kind of risks engendered by agricultural performance. In this respect his book is an essential complement to the much more famous account by Evans-Pritchard of Azande witchcraft, oracles and magic. He was also one of the first observers to describe explicit agricultural experiments undertaken by African farmers (women in particular) and to present these as coping strategies in the aftermath of system failures.

The attention paid to participants' own theories of performance is a central feature of the ethnography of performance. Ruth Stone's book on the organization of the music event among the Kpelle of Liberia (*Let the Inside be Sweet*, 1982) is a fine example of the genre. In it she pays attention to the way in which sponsors of musical events, and the musicians and audiences, first negotiate a performance, and then to how they understand the business of performing well. This introduces the reader to a range of performance skills, as understood by the Kpelle: timing, turn-taking, how to begin and end, how to cue entrances and exits, how to cope with mistakes, and broader notions of harmony, togetherness and the social and spiritual auspices under which music takes place.

Stone's study is especially interesting when read alongside the work of Bellman (1984) on the social uses of secrecy in Kpelle society. Working within the ethnomethodological tradition, Bellman is concerned with the way the Kpelle use ideas about ritual secrecy to segregate and demarcate distinct discourses. The ability to speak in Kpelle is far from simply a question of possessing relevant knowledge. 'Speaking' is having a licence to perform. Such licences are gained through membership of appropriate closed associations (secret societies). The Bellman study is an immediate corrective to any naïve belief in the power of 'dialogue' to facilitate communication between farmers and agricultural scientists, or in the capacity of such dialogue to achieve generally beneficial results. Researchers would first have to examine the auspices under which any participatory debate took place, and how those auspices were interpreted both by participants and bystanders. Since it is not obvious without careful prior empirical investigation that Kpelle notions on these

points would in any way coincide with those of agricultural researchers, the possibilities for cultural mis-communication must be considerable.

So accounts of agricultural performance informed by critical insights of the kind deployed by Stone and Bellman are badly needed in agricultural research. As my material at the outset suggests, one place to start would be the process of labour negotiation. Another is how 'household' farming units are put together. Farm households are not given in social structure. To a large extent they are the result of specific social negotiations (e.g. marriage transactions). In some cases, they are negotiated and renegotiated on an annual basis (Richards 1986). This brings into question the tendency among agricultural economists and farming systems researchers to treat the farm household as a unit of analysis for sampling purposes. Another obvious area for further work is performance under duress. Coping skills in agriculture are often especially difficult to pin down systematically and describe, but there are good accounts in, for example, the work of Michael Watts (1983) on coping with drought and Barbara Harrell-Bond (1986) on refugee resettlement. This latter study is especially noteworthy for having demonstrated the extent to which refugee survival is a skilled social achievement. By describing the contrast in fortunes of self-settled refugees and those in camps run by agencies, Harrell-Bond demonstrates the need above all to sustain that sense of vision and purpose through which social groups retain their capacity to act in a creative and cohesive manner.

CONCLUSION

It is the grounding of this creativity, then, that is, or should be, a central concern in any anthropology of local knowledge. How, in specific ethnographic contexts, are curiosity and inventiveness first kindled in children? What factors are conducive to their maintenance in later life, especially under duress? Are there systematic differences between rich and poor, young and old, men and women, in these areas? What, if anything, can outsiders do to help? The Mende in Sierra Leone are fond of a proverb, 'Say half, leave half unspoken', which says a good deal about their theory of knowledge. It is only too easy, through loose or excessive talk, to paint yourself into a corner. Life and folk are unpredictable. It is generally wise, and almost certainly better tactics, to underspecify a problem, or to reserve some aspects of your case against the day when circum-

stances change. Flexible performance requires options to be kept open. Life is bogged down by elaborate rules. In difficult circumstances the intellectualization of peasant thought as a fully specified 'local knowledge system' may be more hindrance than help. A celebration of the virtues of dancing might be more to the point. It is here that we are more likely to find appropriate training for those skills of balance, rhythm and articulation necessary to cross life's tightrope in good order, and, with luck, to add a twirl or two as we go.

POSTSCRIPT

This chapter originated in a short (intentionally polemical) essay written for presentation at a conference on complementary methods of agricultural research organized by Robert Chambers and held at the University of Sussex in 1987 (Richards 1989). It was intended to make the case for an ethnographic (even ethnomethodological) approach to agricultural research in a forum largely sympathetic to participatory and dialogical work with farmers, but inclined (as is evident in the published proceedings, Chambers, Pacey and Thrupp 1989) to treat 'local knowledge' in rather straightforward, even naively positivistic, terms. Mark Hobart was kind enough to suggest that the paper might be equally relevant to the discussion in his workshop on anthropological approaches to 'local knowledge'. Having struggled to revise it to fit these new requirements I am conscious that I have failed to eliminate the signs of its original purpose, and that (for an anthropological audience) I will surely be judged guilty of re-stating the obvious in a number of respects. I ought also to add that in 1987, whereas I knew something about the impact of agricultural research on farmers, it was only subsequently that I studied an agricultural research community at first hand. I now know it is a mistake to take the propaganda of biotechnology at face value. Some plant breeders are quite sceptical about the extent to which their discipline will be transformed by these new procedures. Simmonds (1979), in his well-known and highly regarded textbook on plant breeding, treats the methods of bio-technology as useful additions to the breeder's armoury of technique, but evolution is likely to have the last word on those who imagine they have unlimited powers to design and redesign successful plants at will. Simmonds is explicit that only part of plant breeding is an exact science based on the manipulation of major genes according to Mendelian principles. Important attributes such

as durable resistance to pathogens often turns out to be under the control of polygenes 'captured' by breeders only through a combination of sophisticated biometrical analysis and what Simmonds refers to as 'general experience, instinct and "eye"'. One of the purposes of my argument above is to suggest that there may be benefit in allowing the breeder's 'eye' to be schooled by a thorough knowledge of local performing traditions.

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