Resonances and Dissonances in Development

Actors, networks and cultural reportoires

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Preface

This *festschrift* honours our friend, colleague, and teacher, Norman Long. It is fed by the intellectual and professional journeys of fellow professors at Wageningen University, staff members of the Sociology of Rural Development Group, and by a selection of professor Long's former PhD students now turned practitioners. This assortment of contributors has combined solid academic analysis and commentary, and sympathising critique with expressions of gratitude and affection in this tribute to an extraordinary scholar. In their own, idiosyncratic way, these colleagues add to the legacy of Norman Long's work, and engage explicitly with the cornerstones of his actor-oriented approach: actors, networks, and cultural repertoires.

When Norman Long arrived in Wageningen in 1981, he brought with him British academic culture. With erudition and scholarship, he engaged in debates on the paradigmatic dimensions of development theory and practice which, at that time, were dominated by modernisation perspectives and neo-Marxist approaches. Continuing along the path set out in his well-known *Introduction to the Sociology of Rural Development* (1977), Long enthusiastically developed his biting critique of the inadequate theoretical assumptions and methodological choices of modernists and neo-Marxists. As one of the last *Mohicans* of the famous Manchester School established during the 1940s, Norman Long introduced to The Netherlands a rigorous ethnographic method to the study of development processes, thus providing himself with a context to elaborate his own ideas and perspectives. Academics and practitioners from all over the world were invited to Wageningen as guest lecturers to participate with staff and students in advanced research seminars and to sharpen the intricacies of theoretical perspectives.

As with all good science, the impact of professor Long's Wageningen years took a while to leave its imprint, but after the publication of two seminal books - *Encounters at the Interface* (1989) and *Battlefields of Knowledge* (1992, edited with Ann Long) - the potential of his actor-oriented approach became evident, and a record number of PhD students flocked to his department. Long's fame, supported by the publication of 12 books and nearly 80 academic articles (some of them published in other languages), has paved the way for the construction of what is internationally known as the 'Wageningen School of Development Sociology' - one of the blue chips of Wageningen University.

Hand in hand with the success of Norman Long's intellectual output was the internationalisation of the Sociology of Rural Development Group. The establishment of long lasting co-operative programmes in different countries (Mexico, Zimbabwe, Peru, China) fitted well with Wageningen University's strategy of to spread its wings beyond The Netherlands and Europe.

The enthusiasm, vigour and engagement so distinctive of Long's personality demanded their toll in late 1999 when he fell seriously ill. But Long would not

be Long if he would have lost that battle. He recovered well and managed, just before his formal retirement, to add a new landmark to the field of Development Studies through the publication of *Development Sociology. Actor perspectives* (2001).

The editors wish to extend their thanks to the people who co-operated in making this festschrift possible. We are grateful for their timeliness and see it as an honour that they trusted us to see this lively book to its completion. We also wish to extend our gratitude to Dan Tuffy for correcting the English in what was surely a race against the clock, and to Lothar Smith for revising the chapter by Fajardo.

Wageningen, November 11, 2001
Paul Hebinck and Gerard Verschoor

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Past, present and future: Long's actor-oriented approach at the interface

Paul Hebinck, Jan den Ouden and Gerard Verschoor

Introduction

In the early 1980s development theory found itself at the crossroads of modernisation perspectives and more radical approaches. This created a theoretical imbroglio to which David Booth once referred to as the 'impasse' of development theory (Booth, 1985, 1994; Schuurman, 1993). The impasse applied to development sociology and anthropology, and this was as much the case in Wageningen as in many other sociology/anthropology departments in the world where this field is taught.

In his valedictory address in 1980, Norman Long's predecessor, Rudi van Lier, summed up what had 'gone *wrong*' but he was unable to show how to go beyond the impasse and to develop an alternative approach to understanding development processes. Van Lier spoke of '*praxeology*' (van Lier, 1979) and '*of a synthesising science of reality, which indicates the structural framework within which economic activities are possible*' (van Lier, 1980: 18). He maintained in a way that development sociology was not in an impasse and had to be an applied sociology (*ibid.*: 19-20). Illustrative for this is the use of the notion of '*stuurmanskunst*' ('*the art of steering*') in the title of his farewell address. The options debated were either concentrating on providing service to disciplines and groups like tropical agriculture, agronomy, tropical animal husbandry, mechanics in agriculture and what at that time was called 'extension studies', or analysing the social-economic and political contexts of development projects. In line with this, the activities of the staff of the former Department of Agrarian Sociology of the non-western Areas in the Tropics and Sub-Tropics focused at the time on the implementation of research projects that concerned the role of sociologists and anthropologists in agricultural research centres (Box and van Dusseldorp, 1992). Staff members also participated in inter-university exchange projects for the strengthening of education and research in a number of Third World universities. This period also marked the start of a project on local participation in planned development, with special attention to the role of NGOs (Frerks, 1991).[1]

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[1] For a summary of the research projects in the last days of van Lier's professorship and the start of Norman Long, see den Ouden (1997: 29-30).

Upon his appointment in 1981, Norman Long found a department that was heavily inclined towards the praxeology of development. Throughout the years he set out to progressively change the nature and direction of the scientific field of development sociology and anthropology and to reformulate this to fit his research agenda. This signalled the beginning of a revival of the 'Wageningen School of Development Sociology'. Although in the early years he had to accomplish this virtually on his own (due to a lack of resources to appoint staff to assist his ' project'), Long found in Wageningen a productive breeding ground for his dynamic perspective on social change as presented in his first major book on development, *Introduction to Rural Development Sociology* (1977).

Long's early Wageningen years were characterised by sharp debates on paradigmatic issues. These were held with rural sociologists, such as Hofstee (1937) and Benvenuti (1975) at the former Department of Sociology of the Western Areas, who were working on differential patterns of agricultural change in the Netherlands from modernisation and structuralist points of view. Debates also ensued with the members of the Extension Department (Röling c.s.) who favoured a hard-systems approach to the study of agricultural interventions. These paradigmatic issues played a role as 'contra points' (cf. Wertheim, 1971). This period was, however, also marked by close collaboration with Franz von Benda-Beckmann of the Department of Non-Western Agrarian Law and his notion of legal pluralism, and with Luc Horst - later Linden Vincent - from the Department of Irrigation and his ideas on organising practices. This unique configuration of chairs and ideas in the Wageningen setting of the early 1980s facilitated a further blossoming of Long's views on social change. Expanding his Department to include a number of newly appointed staff and young Ph.D. researchers, Long's ideas evolved into a solid 'School of Sociology'. The 'School' gained momentum when one of his staff members, Jan Douwe van der Ploeg, was appointed to the chair of Western Sociology. This school, which the American rural sociologist Buttel strangely enough characterises as neo-Chayanovian, was based on Long's actor oriented perspective (Buttel, 2001: 168). Also, the arrival of Paul Richards to the Department of Technology and Agrarian Development signalled the beginning of an anthropological perspective on technology that has interacted with the actor-oriented perspective of Long.

Development sociology and anthropology in Wageningen have moved on since then to become disciplines theorising and studying social transformations in the 'Third World'. Though considered of utmost importance in the application of its insights to the economic and technical fields in the domains of agricultural and rural development, the discipline itself abstains from being an applied discipline, or one that takes a leading role in designing development projects. Wageningen development sociology as conceived after 1981 is, however, not completely unique; it is part of a much broader wave of opposition and reaction to the earlier modernist, (neo-) Marxist and structuralist paradigms. But even among 'friends-in-science' there are differences. The following example clarifies this. While rural development sociology and anthropology in Wageningen means studying the broad field of social transformations, Olivier de Sardan (1995: 7) restricts this field to the study of the *'configuration développementiste'* (the 'developmentist configuration'), an in-depth analysis of the interactions between the multiple social actors involved in or influenced by the policy and projects that are designed to transform other people's ways of life. True, an important

part of the contributions of Long, his Wageningen staff and many Ph.D. students concentrated on the analysis of planned intervention and change, but their field of study is nevertheless wider. The merit of Long is that he broke through the theoretical deadlock in which Wageningen rural development sociology found itself at the end of the seventies. In the process he became a well-known and respected academic through his many publications that had placed the Wageningen group in a large international network. Wageningen rural development sociology and anthropology became one of the 'blue chip' sectors of Wageningen University. His name also resonates in dozens of Ph.D. students from all corners of the world who already have finished their thesis or who are still struggling to complete them.

Actors, networks and cultural repertoires

The world of development theory in the late 1970s and early 1980s was one that was characterised by a confrontation of, on the one hand, modernisation perspectives on social change, and on the other hand by *dependencia* and (neo-) Marxist frameworks. Modernisation theory visualised '*development in terms of a progressive movement towards technologically and institutionally more complex and integrated forms of 'modern' society*' (Long 2001: 10) and was increasingly rejected in the field of development sociology. The makeability of society through planning and the progress it would generate was seriously criticised. The nature and direction of processes of change were criticised as being linear and normative, and people in the so-called Third World were portrayed as being incapable of generating endogenous growth. The community development approach that strongly believed in village homogeneity and harmony arrived at a stalemate because of the naive and insufficient understanding and knowledge of local reality (Van Lier, 1980: 16-17). On the other hand, 'radical' paradigms and approaches, ranging from dependency theory to orthodox and neo-Marxist perspectives, lost much credibility because of their inability to explain differential patterns of development that were specific to a locality or region. Both modernisation and more radical approaches were ' *tainted by determinist, linear and externalist views of social change*' (Long, 2001: 11) and had in common a strong belief in broadly determined stages of development (see also Booth, 1985, 1994). Ideas of development occurring in 'stages' (Rostow 1963) go a long way in academic circles, and can still be felt in the recent literature on development theory. As Long (*ibid*: 11) comments:

> '*While the shortcomings of earlier structural models – especially their failure to explain the sources and dynamics of social heterogeneity – are now widely acknowledged by political economists and sociologists alike, much current social theory remains wedded to universalism, linearity and binary positions. This not only applies to the analysis of development processes but also more generally to theoretical interpretations of contemporary socio-cultural change. For example, many writers on postmodernity succumb to a "stages theory" of history when they write of the transition from "Fordist" to "post-Fordist" forms of production (i.e. from mass production to flexible specialisation) as if this were a simple unidirectional process in tune with other socio-cultural changes. Implicit here is the ideal typical view of what is to be "postmodern".*' (Long, 2001: 11)

Long occupies an original position in the debate on development perspectives, being a student of renowned academics such as Max Gluckman, Clyde Mitchell, and others who shaped the famous Manchester School through detailed anthropological case studies carried out in South and Central Africa (see Werbner, 1984, for an overview). The Manchester School is known for its methodological approach (e.g. the extended case method) and provided a unique focus and foundation for fieldwork, ethnography and data analysis. Long's doctoral fieldwork - resulting in *Social Change and the Individual* (1968) - is a good example of what the Manchester School is all about: through detailed ethnographic accounts of specific situations that spanned longer periods of time, Long 'discovered' and 'uncovered' the actors that were eventually to play a central role throughout his academic career. The title of his first book is telling in this respect, and shows that he was familiar with an approach that allowed the so-called 'researched' to voice their opinions and to enrol the researcher (or ethnographer) in the interpretation of the data collected

Trained in the Manchester School, Long elaborated his perspective in the good tradition of science: responding critically to existing paradigms in the field of development (Long, 1992). At least three, partly overlapping but crucial paradigmatic debates need to be briefly mentioned here to underpin this point. Firstly, he became involved in the debate about whether or not social change was to be seen as a linear process with homogenous outcomes, or rather as a non-linear process resulting in the creation of social heterogeneity. Secondly, he opposed structuralist interpretations of processes of transformation by actively engaging in the so-called 'actor-structure' debate. In so doing, Long countered those views that reified the importance of structure in the understanding of human behaviour (*Verdingligung* as Marx called it) and proposed an actor perspective on social change that attributed 'agency' to people *and* institutions. After all, he reasoned, it was flesh-and-blood people who acted and changed the world they are living in: not abstract and reified notions such as 'capital', 'market', or 'labour'. Thirdly, his approach (like that of some of his contemporaries) is suspicious of preconceived ideas about the nature and direction of development processes. Arguing against teleological interpretations of processes of change, Long abandoned simple causative notions (such as 'the logic of commoditisation', 'the subsumption of the peasantry', 'capitalist development', 'modes of production') and moved beyond these notions by not taking them as his point of departure, but as concepts that needed explaining. The innovative and most important point in the work of Norman Long is the emphasis on '*methods of social research that centre upon an actor-oriented and interface analysis of rural development*' (Long, 2001: 1). An important methodological guideline of Long's actor-oriented perspective consists, in the first place, of identifying the relevant actors *without* starting from preconceived notions about actor categories or uniform classes. Once the relevant actors are identified, what follows is ethnographically documenting the situated social practices of these actors, and the way in which social relationships, technologies and other resources (such as discourses and texts) are deployed. Social actors, individuals and groups are considered '*(...) as active participants who process information and strategise in their dealings with various local actors as well as with outside institutions and personnel*' (*ibid.*: 13). As far as rural change is concerned, Long's actor-oriented approach stresses the importance of giving

weight to how farmers and other rural players shape development themselves. Although actors are often limited in their choices by a lack of critical resources, they should not be seen as passive recipients or victims of planned change, or as 'cultural dopes' who simply follow existing rules or conventions. Actors also create room for manoeuvre for their own interests so that they might benefit from, or - if need to be - neutralise interventions by outside groups or agencies. Central to this view is the concept of 'agency' which *refers to the knowledgeability, capability and social embeddedness associated with acts of doing (and reflecting) that impact upon or shape one's own and others' actions and interpretations*' (*ibid.*: 240). The centrality of the notion of human agency arises from the need to locate actor's lifeworlds in the socio-cultural and political settings in which they manage their everyday affairs. Since they are not 'puppets on a string', actor's lifeworlds are not preordained by the logic of capital as implied in structural theories of development. Methodologically, this implies focusing on the organising practices and ordering processes that are relevant to the different arenas and institutional domains. The fashionable study of 'livelihood' i.e. the strategies and practices by which individuals and groups strive to make a living, is a concept that should capitalise on Long's notion of active social actors.

Another cornerstone in Long's work is the so-called 'interface analysis'. The elaboration of this analytical scheme was crucial for the understanding and conceptualisation of interventions as transformational processes in which a number of social actors play a role. Interfaces between the actors are *'characterised by discontinuities in interests, values and power, and their dynamic entails negotiation, accommodation and the struggle over definitions and boundaries*' (Long and Villarreal, 1993: 143). Long thus portrayed development interventions as processes of negotiation involving multiple levels, values and 'realities' – ranging from diverse local patterns of organisation and management of natural resources, to regional economic, political and cultural phenomena informed by the intervention of state and non-state institutions, as well as global market and political scenarios. At the core of this view lie central issues concerning livelihoods, organisational capacities and discourses, and intervention practices and ideologies. In short, as Long succinctly puts it, *'rural development represents a complex drama about human needs and desires, organising capabilities, power relations, skills and knowledge, authoritative discourses and institutions, and the clash of different ways of ordering the world*' (Long, 1997: 2). Development, then, is nothing more and nothing less than an arena of struggle where actors negotiate, compete and manipulate each other at the different interfaces.

It may be clear that this approach, with its 'room for manoeuvre' of social actors, heavily criticises any form of linearity in thinking and theorising about processes of development. Among the core themes and issues of Long's work we hence find *'differential outcomes of structural change'*, *'variance and heterogeneity within economic systems'*, *'differential impact of commoditisation processes'*, and *'processes of globalisation creating heterogeneity'*. These themes and issues cannot be explained with reference to evolutionary or structuralist theories or to the various strands of neo-classical economics.

It is probably understandable that Long's actor-oriented approach is on strained terms with communication and innovation studies. Their initial focus on

system thinking may have changed under the influence of the actor-systems debate, but Long insisted that our guidance in this debate should be discontinuity and not linkage, transformation and not transfer of meaning, and knowledge being fragmentary and diffuse rather than unitary and systematised. This approach is always highly critical with regard to 'systems thinking (cf. Long and Villarreal, 1993: 147).

The actor-oriented approach as conceived by Long and his colleagues should be regarded as quite different from actor-oriented rational choice models based upon the individualism of 'utilitarian man' (see for instance Long 2001, p.14). The thinking, behaviour and choices of social actors, whether individual or collective, are shaped by many factors. Cultural disposition, the distribution of power and resources, past experience, life style, emotions and feelings (envy for instance), individual concerns, personal habits and peculiarities: all these have an influence in shaping choices. To escape narrow rational choice approaches Long always has insisted to contextualise actors' 'behaviour'. All over his work he refers to notions such as cultural repertoires and social networks to show that, and how, social actors embed their actions, the strategies they device and the choices they make in a social and cultural environment which is largely taken for granted but which, nevertheless, is shaped by actors themselves. What people say, do, and the language and symbols they use only have meanings when understood in context. Throughout his career and writings he consistently defines cultural repertoires as characterising the differentiated stock of cultural components that relate to differences in life styles, social values and rationales for living. Of course, cultural repertoires need to be understood as dynamic and constantly changing, rather than as static and 'stifling development'. The analysis of social networks, then, shows how actors link up with other actors to conduct their businesses or device a certain livelihood. As Long has shown in many of his articles, networks are characterised by flows, content, span, density and multiplicity (cf. Long, 2001: 242) and may embody sets of direct and indirect relationships and exchanges (inter-personal, inter-organisational and socio-technical) that usually transcend institutional domains and link together a variety of arenas.

The landscape of the book

Commenting on a book for a good friend and academic is not an easy task. Normally a festschrift is written - as the academic tradition prescribes - by colleagues and close friends. Keeping to this prescription would however have rendered a massive and unpublishable work. The editors - in their limited wisdom and knowledge - decided to keep this book within manageable proportions through the application of a surprisingly simple formula that entailed dividing the book into three sections. In the first section of the book, the chairholders from five Wageningen University departments with whom Long had close contact during his tenure, reflect and elaborate upon his work and how this was or still is useful for their own specific discipline and fields of interest. The second section consists of contributions by colleagues presently working at the department of Sociology of Rural Development. They comment on how they perceive Long's paradigm or wish to bring it further in their own separate fields

of interest and studies. The third and final section comprises contributions by four of Long's former Ph.D. students, who in some degree have 'applied' the actor-oriented approach in their work as practitioners. All these chapters provide ammunition for a critical and appraising review of Long's work. Some dissonance will be there as well, but the chapters provide a stepping stone for the development of a rural development sociology agenda for research and education in Wageningen University. The latter will be taken up in the last section of this chapter.

The first part of the book - *actors in rural development: translation to a wider arena* – begins with a contribution from Paul Richards. In his chapter, he links Norman Long's career to the rise and fall of the Green Revolution. Long's field work in Africa and Latin America, Richards tells us, has been carried out against a background of transformations and tensions sustained by Green Revolution seed technologies. Arguing that Long's 'Manchester School' approach deserves better than to be passed over by anthropologists as a faintly old-fashioned 'modernist' ethnography, Richards proposes that the struggles over land, machines, water, seeds, and the institutions of development are as performative a field as any of the complex rituals analysed by Manchester peers following in the tradition established by Victor Turner, and as deeply a matter of belief and culture as any religion. This tradition, in his view, thus deserves a better name – 'technography'.

Franz and Kebeet von Benda-Beckmann in their joint paper expand upon what they as legal anthropologists have in common with Long: a historical focus and the notion of struggle or arenas. The historical dimension is not treated here as a way of understanding the past, but as one for disentangling the present and looking at the future. They argue in their contribution that legal rules and normative frameworks are condensed ways of binding the future. Their paper elaborates how a multitude of actors operate in the political arena of decentralisation in contemporary Indonesia. This particular process has led to a re-assessment of local, ethnically informed legal orders. They show how actors in their struggles and negotiations with the 'traditional' legal repertoire, the *adat,* becomes differentially interpreted, and how though these processes state-society relationships are likely to become constituted differently.

Niels Röling and Cees Leeuwis confront the actor perspective with system thinking. Their contribution first explains how system thinking became infected by Long's actor oriented approach. Due to a productive and constructive engagement, system thinking moved from the naive and primitive to soft-systems thinking, taking most of the actor-oriented criticism on board. They argue, however, that from then on the paradigmatic differences between the two approaches become irreconcilable and so apparent that the 'bedfellowship' is now over. Rather than moving towards an arena of actors in struggle, they both prefer to follow the route of 'convergence' and 'collective' action. This is deemed necessary, particular in the context of a Wageningen University that embarks on a bèta-gamma project that demands, in their view, a 'praxeology' rather than a retrospective and purely disciplinary perspective.

In her essay, Linden Vincent describes the interaction of the Irrigation and Water Engineering Group with Norman Long and his work as it has evolved over time. She does so by first discussing her first encounters with Long's views.

Vincent then goes on to narrate how a social dimension was built into the study of irrigation at Wageningen, and how this resulted in a focus on the struggles involved at the interface between technology and resource users. In the final part of her contribution, she explores the reasons why the language and ideas of Norman have reached mainstream agricultural research organisations like the CGIAR, but also discusses critically some of the problems arising from this success.

In the last chapter of this section Jan Douwe van der Ploeg reflects, in a somewhat unusual style of presentation, upon one of the strongholds of Long's perspective: the importance of context and local cultural repertoires. He argues that texts, accounts of local people and the symbols and language they use become meaningless when detached from their contexts. By annotating a letter to a grandfather, he shows the interrelations between two different contexts he has worked in himself i.e. Friesland and the Peruvian Highlands. In doing so, he also elucidates how notions mainly derived from Development Sociology, travel as it were, between contexts as well as between different historical periods.

The second part of the book - *broadening the research agenda* - opens with a contribution from Alberto Arce. He discloses some of the intricacies and the roots of the actor oriented approach. Long's intellectual journey is scrutinised with a focus on how he has captured people's experiences. Arce, who has worked closely with Long for the past 20 years and has inspired his thinking, focuses in his contribution on the work Long has done in the field of state planning and intervention. Karl Mannheim comes to play a role in the chapter when it comes to understanding modernity and planning. Long, so he argues, has gone further than Mannheim by arguing that we need to analyse the experiences of actors to understand modernity. In this way, Long's actor perspective has contributed to a theory of everyday experience, rather than a theory of consciousness.

Paul Hebinck's contribution aims to develop a framework to understand technological change. Long's work has affected such understanding with a serious analytical treatment of the knowledge encounters and processes that produce and reproduce heterogeneity. With reference to the maize landscape in Kenya, he underpins the notion of socio-technical regimes, a notion that requires actors to come to life. He shows how socio-technical regimes in the field of maize have evolved over time, how they operate, and whether or not there is continuity or discontinuity between them.

Monique Nuyten explores how the study of organisation should be rethought. Long's work, she argues, provides a good starting point for such an endeavour for its emphasis on understanding local forms of organisation 'from below'. Insights from recent organisation theories have much to offer as well, and they can very well enrich the actor-oriented approach to organisation. While locating her chapter in a Mexican *ejido* and taking local forms of organisation seriously, she elaborates an organising practice perspective that goes beyond the systems perspective of organisation.

Sarah Southwold-Llewelyn elaborates how Long's work on entrepreneurs compares with her own perspective. She shows how Long has studied entrepreneurs and how they draw upon, create and manipulate social networks to conduct their business. Examining and re-examining her own data collected

some 15 years ago and very recently in Sri Lanka, she elaborates these networks as providing a context to understand how entrepreneurs operate and why some are successful and others not.

The chapter by Pieter de Vries critically engages with current thinking about participatory extension methodologies and argues that approaches which stress the need for user's participation and front-line workers' discretion can learn a lot from the kind of contextualised ethnographies that have become the hallmark of the Wageningen School. Participatory extension methodologies, de Vries suggests, tend to reproduce naive notions of locality while holding to rational choice explanations of extensionists' commitment. Based on ethnographic material on an integrated rural development programme in Costa Rica, de Vries proposes that front-line workers not only have to cope with the contradictions of implementation but that they also have to come to terms with varying sets of pressures and demands which they, in constructing operational styles, internalise in differing ways.

In the last chapter of this section, Gerard Verschoor takes issue with the notion of 'heterogeneity'. He argues that Long's actor-oriented approach has misunderstood heterogeneity (that what holds the social together) for diversity (the outcome of bringing dissimilar and hitherto unrelated elements together). To make his point, he first outlines the character of their disagreement, and shows that what lies at the base of Long's misunderstanding is his reluctance to become *infected* by the flesh-and-blood actors who fill his books. Verschoor then goes on to propose - by way of three short cases - that in becoming infected by what one works with, one can indeed say original and exiting things about variation and diversity. The author closes the chapter by suggesting that there is much to learn from the people one works with during fieldwork, as it is they who can eventually 'authorise' one to say 'dangerous' things about the object of sociology.

The third part of the book delves into the issue of *the actor-oriented approach in practice*. The first contribution is from Ronny Vernooy. He reflects on the way in which he, as program officer at the International Development Research Centre in Ottawa, has mainly supported *others* in their efforts to carry out research. In so doing, he narrates how his emphasis has shifted from constructing development theory in an academic environment to contributing to social change outside an academic setting. Attempts to do this in a reflective manner, i.e., through critically informed (or grounded) development practice, have directed Vernooy toward the exploration of new conceptual and particularly, methodological paths. These paths include attempts to use insights from ecology, learning theory and participatory (action) research in people-centred, natural resource management research programs and projects. In a perfect world, he imagines, grounding development theory and shaping and reshaping practice walk hand in hand.

The next contribution by Roch Mongbo makes a threefold argument. Firstly, Mongbo argues that the decentralisation reform in Benin lags far behind local political dynamics and the actual decentralised and autonomous functioning experiences and practices of local communities. Secondly, he proposes that the power supposedly relinquished to local authorities for shaping economic processes with regard to the organisation of fair and equitable access to resources

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at communal level appears quite unrealistic, especially if one considers the complete failure of the central state itself in this field since the end of the colonial period. Thirdly, he suggests that, given that both technocrats and politicians designing and/or voting on these laws, as well as donors supporting the reform are full stakeholders in the political bargaining process, it would be naive and misleading to assume that these actors are not aware of the realities involved in 'decentralisation'. This contradiction, Mongbo tells us, between policy and discourse on the one hand and experiences and practice on the other is functional to the reproduction of each of these social categories, and emphasises the marginality of the state's formal dispositions in the everyday life of local communities.

Horacia Fajardo - herself a medical doctor - opens with the case of a sick child suffering from what appears to be malnutrition. This helps to open the discussion of how contrasting knowledge and belief systems clash at the interface between, on the one hand, western medical practice supported by government health directives and rural development practices of the Mexican state and, on the other, *Huichol* healing customs that are carried out on the basis of existing cultural repertoires. In so doing, Fajardo situates health problems within a framework that takes account of living conditions, knowledge and beliefs, human agency and government practice. Given the 'expert role' assigned to Fajardo within an institutional health programme, an important part of the chapter addresses how she came to terms with the incongruities and conflicting interests and beliefs involved.

In the last contribution, Pieter van der Zaag, Alex Bolding and Emmanuel Manzungu delve into the entanglements of water networks in Zimbabwe. Their main argument in relation to Long's actor-oriented approach is that, if it treats human and non-human actors symmetrically, then the approach would have the potential not only to productively engage in some of the important sociological debates, but also to increase the relevance of sociology to the development practice. The authors apply this insight to a series of case studies on diverging water management practices. These varied practices, they say, emerge from existing and evolving relationships between and among resource users, the resource itself, the knowledge-base concerning that resource, the techniques used to develop the resource, and the economic circumstances of the various actors. When, the authors argue, in such complex situations new institutional forms are introduced from outside, then ingrained practices may become misfits to the new reality. The chapter closes with the argument that, in order to attain equitable and efficient management of water resources, decision platforms such as the sub-catchment councils in Zimbabwe are key. For such platforms to operate effectively, however, requires that all actors adapt their practices, since the legal and institutional reality which gave rise to these practices have changed dramatically, at least on paper.

New challenges for an actor-oriented approach to development

In this final section we provide some critical notes on the actor approach, and conclude with what we see as promising new avenues of engagement with development issues. We feel free to do so because Norman Long would be the

last person to believe that his thinking and latest publication represent the sole surviving paradigm or approach in the present fragmented field of theories of social change. We remember, for example, a lively debate in one of our Advanced Research Seminars during which Norman was criticised because of a particular view apparent in his earlier work. He answered: '*Yes, but that Norman Long does not exist anymore*'. Long thus realised perfectly well that his scientific thinking was not static, and that there was ample space to take the actor-oriented perspective into novel areas of critical inquiry.

Having said this, it is nevertheless clear that Long's approach can be associated with a number of difficulties. One of these relates to the added value that the approach may have for those (e.g. technical scientists, economists, communication experts) interested in managing or shaping development processes proper. What lies at the basis of this perceived difficulty is that Long's approach problematises a number of issues that were previously thought to be relatively straightforward. He added complexity to development processes, for example, by pointing out the entanglements of social actors, by criticising linear and systems thinking, or by depicting interventions as arenas of struggle. In so doing, Long and his followers probably created the image that reality was very complex and thus not easily managed by scientific 'experts' and 'do-ers'.

Another difficulty relates to the tension between action and structure or between the micro and the macro inherent in the approach. What is, for example, the available room for manoeuvre in situations where important decisions are taken outside the immediate arena on which we focus? It is clear that the laws of the capitalist market, cultural patterns, Muslim fundamentalism, budget cuts for universities or whatever factors limiting the room for manoeuvre of people, do not fall from heaven. They are all man-made, and result from the interactions, negotiations and struggles taking place at the interface between social actors who, each in his or her own way, try to push through their interests and projects. But how do these processes add up? Is an actor-oriented approach sufficiently equipped to study and understand the broader movements and changing patterns at regions or supra-regional level?

Long makes clear that the actor-oriented approach is most fruitful in the study of (global) commodity flows and linkages. It is able to analyse the interfaces between the many actors involved, from producer to consumer, including the cultural identifications and the specific language strategies and discourses involved (Long, 2001: 229). But the use of this approach in analysing broader cultural models or organising principles, movements and changes, and their causes and effects seems more difficult. Long (2001: 70) writes:

'*It becomes necessary, therefore, to identify the conditions under which particular definitions of reality and visions of the future are upheld, to analyse the interplay of cultural and ideological oppositions, and to map out the ways in which bridging or distancing actions and ideologies make it possible for certain types of interface to reproduce or transform themselves.*'

Is Norman Long thinking of clashes between ideologies, religious and ethnic groups here as well? Can we understand them completely by studying the 'local embeddedness of global phenomena' (Long, 2001: 223)? Or is it also necessary to approach and understand 'globalscapes: cultural flows, "imagined worlds" and changing socio-political identities' (*ibid.*: 221) and the linking of individuals to various 'imagined communities' throughout the world? Does this, in other

words, entail a lesser actor-orientation? It is clear that Long does not turn his back on these 'globalscapes' and indeed discusses broader patterns of change which entail, as he points out,

> '...*struggles against the national state and international institutions, but also within and between social groups mobilised on the basis of ethnicity, family and clan affiliation, gender difference, and membership of movements focusing upon specific concerns, such as environmental conservation, human rights and food risks.*' (Long 2000: 184)

Clearly, more actor-oriented thinking and research needs to be carried out in the area of global social transformations, without of course taking on board '...*essentialist and reified interpretations of global change, which assume rather than demonstrate the force and uniformity of such change*' (Long, *ibid*.: 185). A final difficulty - perhaps more a warning than criticism - involves the notion of 'agency'. Referring to Giddens (1984), in several of Long's publications we find more or less the same definition of it. For example, the notion of 'agency' which:

> '... *attributes to the individual actor the capacity to process social experience and to devise ways of coping with life, even under the most extreme forms of coercion. Within the limits of information, uncertainty and other constraints (e.g. physical, normative or politico-economic) that exist, social actors possess "knowledgeability" and "capability".*' (Long, 2001: 16).

It is clear that this interpretation of agency has a rather optimistic flavour as far as the room for manoeuvre of social actors is concerned. Of course, this can be seen as a reaction to the fatalistic and atrabilious views of (neo-) Marxists, but we would suggest caution here. The 'weapons of the weak' (Scott 1985) are often a reality, but this should not prevent us from seeing the serious limitations of the room for manoeuvre of many people, the sheer misery of distressed living conditions and the hopelessness for the future that we find in many places. This is worthy of attention because in a number of studies employing an actor-oriented approach, the reader could get the impression that the authors are dealing with people who are doing rather well in solving problems and monitoring their own actions. Not every author warns his/her readers that he/she is studying poor people who have limited possibilities to improve their situation. Norman Long, of course, is not unaware of people who are in trouble:

> '*But the downside (of particular technological and institutional changes) is the fact that much of this is achieved at the cost of those in the low-paid, work-less, or resource-scarce sectors of society, whose livelihoods and relative living standards remain extremely low and highly vulnerable to economic and political pressures.*' (Long, 2000: 184)

One is nevertheless left with the feeling that this observation somehow curtails the 'agency' and 'room for manoeuvre' of people and groups. This in turn poses new challenges to Long's actor-oriented approach. Indeed, at the dawn of the 21st century, citizens all over the world are experiencing the effects of what may aptly be termed *globalisation*. In our everyday lives, globalisation means that we are now part of a complex, yet common world that is increasingly shaped by the modernising goals of the World Bank, the IMF, and a limited number of large-scale, corporate organisations. Supported by the WTO and the policies of the G7, market-led globalisation has brought unprecedented prosperity for many,

particularly in the developed countries. At the same time, however, an increasing majority of the world's population has found itself deprived of the accoutrements of modernity and globalisation. This is especially true for those who happen to live in rural areas of what were once called 'underdeveloped' societies.

Contrary to the promises and well-meant efforts of heads of state, bankers and industrialists, more and more rural dwellers are joining the ranks of the have-nots every year. This is often the direct result of market regulation, the collapse of state and societal institutions, and ill-conceived social policies designed on the basis of so-called expert knowledge. Dispossessed, disenfranchised and excluded, many rural populations have begun to object openly, and are trying - in an organised and co-ordinated way - to create their own space for change. Moreover, they now want to exercise their right to access markets, but not on the conditions dictated by global players. Instead, they are proposing to carve out sustainable livelihoods *on their own terms*. In so doing, endogenous forms of development are being engendered that can assimilate material well-being, while complying to local and extra-local values and notions of dignity and solidarity.

These social movements or counter-tendencies are becoming apparent in different ways. Participatory plant breeding, co-management of forest areas, communal water management, eco-certification, community-based conservation, slow food, fair trade, organic farming and so on are all indicative that something important is afoot. Yet these efforts, these counter-tendencies, face enormous challenges. There is no recipe for endogenous development, and each counter-tendency encounters its specific bottlenecks, creates its peculiar turbulence, and has a history of its own. We thus speak of counter-tendencies in the plural. Yet all counter-tendencies share a determination to renegotiate the terms in which they articulate with wider regimes of production, consumption, and exchange. This involves a new framework for using and managing local resources such as land, water, bio-diversity, labour, and so on. This invariably leads to a redefinition of the relationships between resources, (external) users, and managers.

Of central importance in this respect are the factors that mediate these relationships: knowledge, labour, institutions and technology. These renegotiations are often of a conflictive or controversial nature. This is because redefining the relationship between resources and their users/managers requires a re-negotiation of the type and level of expertise that is needed, the amount of labour implicated, the appropriateness of the technology involved and the institutions within which this redefinition needs to be embedded.

The renegotiations implied in the dynamics of counter-tendencies form the core of the new challenges facing an actor-oriented approach to development. We are convinced that we must keep the promises made we over a decade ago (Long and van der Ploeg 1989) to exploit the full potential of the approach. This means that, next to sound analysis of development situations, an actor-oriented approach should become involved in the *practices* that shape the very processes it studies. Such an endeavour could encompass five distinct, but interrelated components. Firstly, by focusing on the different ways actors identify alternative pathways for development and on the conditions facilitating viable counter-tendencies. Secondly, by describing the way in which the different actors involved in these counter-tendencies manage to create space for, and make sense of, their own projects. Thirdly, by actively strengthening the learning processes

at stake in redefining the relationship between people and their resources. Fourthly, by creating policy proposals that support new alternatives for endogenous development. And finally, by reflecting on the different bodies of knowledge systems that attempt to define the relationship between technology and the institutions that regulate resource dynamics.

This 'turn to practice' is not devoid of problems and the path we need to follow is uncertain. We nevertheless wish to dedicate a few words on just how such an endeavour could be achieved. We believe the problems implicated in the counter-tendencies (or collective experiments) that we wish to concentrate on can no longer be solved by science or technology alone. This is sometimes suggested by a rhetoric of multi or interdisciplinarity (apparent in for example the proposed integration of bèta-gamma research at Wageningen University) that echoes the spirit of modernisation. In the 21st Century, however, modernisation need not be modernised any further and this is precisely what counter-tendencies as we envisage them imply: an opposition to (the effects of) modernisation. There are no 'shortcuts to progress'. Scientism, the engine of the modernisation machine, which tends to view 'local knowledge' as superfluous, is certainly not one of them. This implies that one should be careful when proposing 'scientific' solutions to complex social problems. But being wary of scientism does not mean that one must turn one's back on science. On the contrary: one can turn scientism's weakness - the silencing of public discussion about technical controversies and the regulation thereof - into the strength of an actor approach. This can be done by contesting simplification on all fronts, and by introducing complexity at all levels. But we can only do so by becoming strongly involved with research, with engineering, with design, with innovation - as well as with the political choices that go along with them. Although we have no recipes for doing this, a possible first step in the right direction would be to question the inferences that we live in a world which - as some social scientists would have us believe - is becoming increasingly culturally homogeneous. Instead, we should join forces with those who demonstrate the contrary and who, in so doing, subvert the very notion of what it is to be global and what it is to be local (e.g. Appadurai's 'globalisation of differences'; Long and van der Ploeg's notion of 'social heterogeneity'). A possible second step would be to question the way in which the different sciences *frame* collective experiments and counter-tendencies. This could be achieved by bringing together - through detailed, anthropological description - that which the "framers" separate and thus render incomprehensible. A third step would involve a critical look at the way in which scientists (e.g. economists) simplify internalities (for instance, by not appropriately describing what it is that people do when they become practically entangled with goods, new technologies, or collective experiments) and by calculating, *together* with those negatively affected, the externalities involved in scientific solutions to their problems. Finally, we would need to become more sensitive to the social projects of future recipients of scientific 'products', and help advocate what they deem the adequate social, economic, or political optimum. This means that one needs to go beyond naïve forms of social engineering (apparent for example in simple notions of 'participation' or 'community') and devise alternative forms of intervention, without of course becoming overtly populist or uncritically glorifying local knowledge.

In summary: we favour an actor-oriented approach that is aware that it can 'make a difference' by improving the visibility of collective experiments and counter-tendencies. In this respect, we think that we must, as social scientists, consider ourselves as fortunate to be at work within a technical university. Working together with scientists in the natural and biophysical sciences could facilitate our future plans - even if communicating with the so-called *bèta* sciences may prove difficult at times. This task may also be somewhat ambivalent because one first needs to get one's own discipline right before being able to embark on a 'project' that can potentially compromise one's own disciplinary foundation. Nevertheless, a self-complacent 'splendid isolation' would be most dangerous in times of (continuous) budget cuts, and within a (Wageningen University) setting that forces the formation of 'Knowledge Units' or *kenniseenheden*, which in the case of the Social Sciences, envisages co-operation between the Agricultural Economic Institute (LEI) and the Department of Social Sciences, strangely enough jeopardising the linking of *bèta* and *gamma* sciences. Whatever the near future holds for us, we have to bear in mind that an actor-oriented approach to development is not especially interesting in or by itself. It can only become interesting and worthwhile when it resonates with other views within and outside our discipline.

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16

Part I:

Actors in rural development: a translation to a wider arena

2

Reviving the Green Revolution: a technographic approach

Paul Richards

Introduction

Norman Long's career as an anthropologist of rural development in Africa and Latin America coincides with the rise and fall of the Green Revolution, a post-colonial (and largely American-inspired) attempt to bring food security to the countries of the South. Reflecting his early career in the 'Manchester School' of social anthropology shaped by Max Gluckman, Norman Long has mainly been interested in conflictual aspects of rural social change. The architects of the Green Revolution thought they were heading off the conflict that would accompany a worsening global food security situation (Perkins, 1997). Some would argue today that the Green Revolution fostered as much conflict as it prevented. Much of Norman Long's fieldwork (in Malawi, Zambia, Mexico and elsewhere) has been carried out against a background of transformations and tensions sustained by Green Revolution seed technologies. While other bearers of the Manchester torch headed towards a post-modern emphasis on discourse or dramaturgy, Norman Long has kept alive, through his work in Wageningen, a tradition of ethnographic analysis focused on agents of rural transformation. This focus on precise sociological analysis of struggles over land, machines, water, seeds, and the institutions of development, deserves better than to be passed over by anthropologists as a faintly old-fashioned 'modernist' ethnography. It is as performative a field as any of the complex rituals analysed by Manchester peers following in the tradition established by Victor Turner, and as deeply a matter of belief and culture as any religion, and deserves a better name. I propose the term 'technography'. In this chapter I shall attempt to visualise options for the revival and reform of the Green Revolution through the optic of a technographic approach.

Green Revolution and Cold War

The Green Revolution had its roots in advice given to the Rockefeller Foundation in 1941 by Paul C. Mangelsdorf, a geneticist, Elvin C. Stakman, a pathologist and Richard Bradfield, a soil scientist, to establish an agricultural

research support programme for Mexico (Perkins, 1997). Key work on breeding semi-dwarf, fertiliser responsive and broadly adaptable wheat varieties was undertaken by one of Stakman's students, Norman Borlaug (an American pathologist and breeder who would eventually win the Nobel peace prize for his contributions to global food security). The Foundation reviewed the lessons of the Mexican programme in the light of neo-Malthusian and Cold War security concerns for the stability of Third World populations and environments, c. 1950 (Perkins, 1997). The situation in developing countries at that time was dominated by the process of decolonisation by European powers and the success of the communists in China. Would food riots open the gate to the spread of a Chinese-led thrust towards communism?

A Rockefeller programme for crop improvement modelled on Mexican experience was launched in India in 1952. The approach - focused on the major grain crops (wheat, rice and maize) - was extended to South-East Asia, Africa and Latin America in the 1960s, in collaboration with other donors, and dubbed by a journalist as the Green Revolution. While compatible with the spread of market institutions, the Green Revolution eschewed commercial techniques (notably F_1 hybridisation for maize). Instead, the emphasis was placed on stable, fertiliser-responsive types of wheat, rice and open-pollinated maize types farmers could readily adopt without dependence on elaborate seed market structures.

The research was undertaken in a network of international public sector research centres intended to 'cap' (or replace) national institutions considered 'weak' as a result of colonial neglect. From the perspective of breeding strategies, this network made the inter-continental linkages of gene pools for major grain crops that had begun under colonialism more systematic. The Green Revolution used its increased global command of plant genetic resources to bring about major changes in plant architecture. Specifically, breeders drew on dwarfing genes for improved short-straw varieties of wheat and rice that were both earlier and much higher yielding than the farmer crop types they replaced.

The typical Green Revolution semi-dwarf plant types began to make a major impact in the late 1960s and early '70s. They were a success in those areas of India and SE Asia where farmers had access to credit, supplies of fertiliser, and land suitable for irrigation (water control was necessary to grow the second crop made possible with early maturing ideotypes). Where one or two popular high-yield varieties (HYVs) quickly displaced a wider variety of local cultivars farmers also needed chemicals to deal with consequent pest and disease explosions. Attention was then paid by Green Revolution plant scientists to incorporating better genetic resistance to diseases and pest attack into HYVs.

The new seeds were regularly delivered to farmers through specialised short-term public sector delivery vehicles known as Integrated (Agricultural or Rural) Development Projects (IDPs), rather than through market channels. The IDPs were first conceived and funded by the World Bank under Robert McNamara in the 1970s, reflecting lessons emerging from the Vietnam War. Low-resource farmers in countries vulnerable both to population pressure and to Chinese-inspired communist insurgency needed a small low-interest credit package to give them access to 'scale-neutral' seeds-and-chemical technology packages. This would enable them to beat off chronic indebtedness and hold Malthusian pressures at bay. They could then participate in thriving local markets for agricultural produce as urban centres burgeoned.

Where the World Bank led, most other Western country donors followed. However, two problems bedevilled the strategy. HYVs did not work very well where farmers only had access to poor soils unsuited to irrigation (this was true of Africa especially), and IDPs were readily *co-opted* by local political interests (needy farmers might still have to offer bribes to gain access to input packages, or loans might go to the urban clients of political heavyweights 'protecting' local management teams). Stopping short of a call for re-colonisation, the World Bank and other aid institutions gave up on many corrupt post-colonial states during the 1980s and '90s, dis-empowering them through a crude series of financial 'restructuring' programmes that proved fatal to the further systematic elaboration of the Green Revolution strategy.

Meanwhile, the Chinese, having faced a disastrous famine in 1958 that was held by many to illustrate the basic deficiencies of the communist system (over-regulation of peasant agriculture and lack of 'feed back' from the grass roots), solved their own huge internal food security problem by buying into US commercial seed system solutions (Song Yiching, 1998). At first the lessons of US hybrid maize were thoroughly absorbed. The Chinese then showed that a centralised command-and-control economy could successfully apply F_1 hybridisation to in-breeding crops (notably wheat and rice) on which commerce was unable to make a profit.

Criticisms of the Green Revolution

Early critics of the Green Revolution focused on its alleged destabilising impact on agrarian society (Griffen, 1974, Pearse, 1980). Farmers unable to access the new inputs were impoverished by falling prices for food, and some lost their land. The urban poor, however, benefited from cheaper food (Lipton with Longhurst, 1987). Later criticisms tended to focus on biological deficiencies. High-yield rice monoculture was accompanied by outbreaks of pest and disease, resulting in the over-use of chemicals. A further criticism was that the Green Revolution plant ideotype was fundamentally unsuited to regions of poor soils and low irrigation potential. Greenland (1984) and Anderson et al. (1991) note that high-intensity wetland research at the International Rice Research Institute was only applicable to the 20-30 per cent of better favoured rice growing land in South and SE Asia. The focus in Green Revolution research on only one or two major crops has been a particular problem in Africa (Richards, 1985), a continent with an especially wide variety of locally-specific and semi-domesticated food crops. Some of these crops have, from a scientific perspective, received very little attention (for instance, the locally-important West African grain staple, *Digitaria exilis*). Consequently, some critics are calling for a major reorganisation of the Green Revolution, perhaps merging the international institutes with the national and NGO supported research facilities from which they were first differentiated in the 1960s. Other critics charge that the Green Revolution is too remote from farmers, advocating direct engagement with peasant activist groups and greater attention to local knowledge.

But behind these arguments loom serious problems of funding and political will. The Green Revolution is a child of the Cold War (Anderson *et al.*, 1991; Perkins, 1997; Richards, 1997). Its architects envisaged an application of science

to the problems of food security much along the lines of the 'military-industrial' complex that helped win the Second World War. The Cold War is no more. Strategists still conjure up the threat of 'rogue nuclear states' in order to mobilise resources for 'Star Wars' missile defence, but donors (and rich-country tax-payers) are no longer easily alarmed by the threat of mass uprisings of the hungry poor. Nor do they fear that possible uprisings of this kind would constitute a signal for an expansionist surge of Chinese communism. To the contrary, developments in the commercial life sciences seem to promise to solve food security problems across the globe. Donor support for strong international public sector agricultural research has drained away. The Green Revolution institutions now seek alliances with the 'populists' who once opposed them, or (in the most striking irony of all) advocate developing the public sector F_1 hybrid wheats and rices the Chinese pioneered as the solution to their own internal food security problems. The Green Revolution is dead; long live the Green Revolution. Although the political context is vastly different, the problem the Green Revolution was intended to address - the poverty of up to two billion rural people dependent in part on their own cultivation activities for food security - is still with us. Reviving applied agricultural science in the public interest may still represent one of the best ways of tackling this problem. At issue is how this revival might best be achieved.

Green Revolution alternatives

There have always been alternatives to the 'top-down' Green Revolution, as advocated by Borlaug and others. The 'top-down' approach treats the superior crop type as a 'magic bullet', so effective and attractive in itself that it induces necessary changes in both natural and institutional environments. Introduce a high-yield crop, and environment and institutions are forced to change around it.

Advocates of a more ecologically-sustainable Green Revolution, in effect, put the problem the other way round. Their conception is to work on understanding and developing that environment (both biological and social) in such ways that crop innovations find a comfortable and sustainable place in a local dynamic 'mix'. The metaphor changes. There are less 'magic bullets' homing unerringly (but perhaps destructively) on 'targets', and more attention is paid to 'bedding down' and 'fitting in' valuable exotic elements to a living, diversified, and highly-valued landscape. Innovations need to find not a target, but a home.

As a newly arrived lecturer in the University of Ibadan in Nigeria in 1968 I was invited to an official event at the recently opened International Institute for Tropical Agriculture (IITA), the Green Revolution centre for the lowland humid tropics in Africa. There I met a young British banker. He was full of praise for the millions of dollars the donors were sinking into IITA. Tentatively, I asked whether the money might not have been as well spent upgrading facilities in the university and the Nigerian federal agricultural research facility at Moor Plantation. I was given a withering reply. Colonialism had failed to find an answer to Africa's food security problems for 50 years. IITA would find these answers within a decade. Others had similar experiences to mine. A forester of many years Nigerian field experience asked a young Green Revolution agronomist in eastern Nigeria what he was working on, to be told, starkly,

'teaching agriculture to Africans'. A Sierra Leonean scientist - a man with many years experience at an up-country colonial research station - described how he once vainly tried to stop a colleague from a Green Revolution partner institution throwing away old station research records, only to be told 'the British never did anything for you people; we are showing you how to do scientific agriculture'. Evidently, the Green Revolution aimed to start on a clean page.

This made me deeply curious about what exactly had (or had not) preceded the Green Revolution. So I took every opportunity to examine some of those crumbling research records before it was too late. A striking 'find' was the old Nigerian forestry department research journal *Farm and Forest*. This had been begun (as *The Nigerian Forester*) in 1940, and almost died at birth due to a wartime shortage of paper, but was revived (in 1941) to serve as a medium through which members of the different colonial technical departments concerned with rural issues could explain their work and concepts to each other (Richards, 2002). At its re-launch it invited contributions from agriculturists and veterinarians as well as foresters, and included items from Gold Coast and Sierra Leone as well as Nigeria. The founding editor, John Ninian Oliphant, Conservator of Forests in Nigeria, explained that the larger inter-disciplinary remit came about as a result 'of the strengthening movement towards better planning of land use'. The journal's sub-title was *Land use and rural planning in West Africa*.

Oliphant had been trained in forestry at Oxford and had worked in the Indian forestry service (1909-23). He then went to British Honduras as Deputy Conservator of Forests, and after further service in Malaya returned to Oxford in 1935 as Director of the Imperial Forestry Institute. He accepted a short-term appointment as Conservator of Forests in Nigeria and arrived just as war was declared. He conceived *Farm and Forest* as a medium through which he and other officers inhibited by war-time restrictions on activities might 'clarify ideas [and] keep the mind active' while awaiting better times. The journal continued until 1952, but the greater part of its productivity was during the war years; 70 per cent of all articles published appeared within six years,1940-45.

Much of the tone for early issues was set by Oliphant himself (until he left Nigeria, on retirement in 1943). Although he notes that scientific ecology had greatly advanced since his own student days he was keen to promote the latest insights, doubtless encountered during his time in Oxford in the 1930s, and through the pages of E. B. Worthington's influential *Science in Africa* (1938). What makes Oliphant's voice distinctive for its time is his determination to amalgamate scientific ecology with consideration of social issues (approached through the idea of land use planning). As a forester, he thought in landscape terms, but perhaps unusually for a forester at that date, the landscape included people. His approach is outlined in two articles: 'Planning for conservation' and 'The need for research on the soil-vegetation-climate relationship'.

The second piece (Oliphant, 1941) is worth examining in some detail as an effective map for a path the Green Revolution never travelled. The Green Revolution prided itself on its scale and scope. A first point to note is that Oliphant's vision is not lacking in ambition. The paper starts by noting in an age of scientific specialisation 'many problems of human welfare...call for concerted attack from several different angles...' but that 'only under the spur of dire necessity, as in wartime, is there any approach to proper co-ordination of

scientific effort' (p. 36). 'Pending the resuscitation of the Colonial Development Scheme' Oliphant offered a discussion of 'one of the most important of these fields', the soil-vegetation-climate relationship. He cites Worthington (*Science in Africa*) having identified the importance of 'the soil-vegetation unit as a controlling factor in the environment' as something 'only now being recognised by scientists' (p. 36).

The paper picks up the specific instance of local impact of forests on climate. The hypothesis that forests make more even distribution of rainfall by minimising run-off 'merits much closer attention' (p.37). If established, it would support a general case for protective forestry (in the French West African territories the emphasis was almost exclusively on productive planted forests). At this point Oliphant draws his agriculturist colleagues into the argument with the teasing remark that they are 'too preoccupied with fitting the crop to the environment' (p.37) and ought to spend more time on fitting the environment to the crop. 'It is, for example, difficult to understand why anyone should go to the labour of planting 'shade' trees over cocoa when the same effect could probably be secured by retaining suitable trees or belts of tree growth when the original forest is cleared to establish the plantation' (p.38). This is, in fact, exactly how cocoa farmers in eastern Sierra Leone proceed, if left to their own devices, but a World Bank IDP spent several years in the 1970s trying to get farmers to remake their environment with line-planted trees and planted shade (looking developed has always been an important part of the Green Revolution). He then turns to a very specific local example. 'The behaviour of *Andropogon (tectorum)* in farmlands round Ibadan suggests that, without human intervention to that end, and because the environment happens to be favourable to its spread, it is a major factor in the recovery of soil fertility in that area' (p.38). The important conclusion he draws (basic to a Green Revolution alternative) is that 'it is a reasonable supposition that Nature could be induced to do by design the same sort of thing as she does by accident' (p. 38). He quickly cautions, however, against drawing too wide a generalisation from such observations, noting that on the acid Benin Sands farmers know that only prolonged forest fallow is effective in restoring fertility after farming. Local knowledge is not enough. It must be scaled up by reference to underlying principles of ecological agriculture, many of which remained to be discovered.

This is illustrated with reference to a central issue - labour efficiency in relation to agricultural innovation. 'The African farmer is not unnaturally loth to adopt intensive methods of cultivation', and for this reason 'will continue to rely largely, for decades to come, on the action of natural growth in restoring fertility' (p. 38). But while recognising that African farmers act rationally in managing scarce resources (a matter far from widely acknowledged at the time) Oliphant points out that local knowledge is limited in time, place and scope. 'It is a mistake to assume that the African farmer knows all that there is to be known about the method [of natural fallow management], and there are obviously wide variations in the efficiency with which it is applied in various parts of the country'. There is work to be done in teasing out the underlying principles. Better scientific knowledge of 'natural bush fallows' might then lead to 'possible means of maintaining and restoring soil fertility' through extensive, as well as intensive remedial action (p.39). One of the intensive measures he mentions is the planting of a quick-growing shrub *Acioa barteri*, something farmers practice

on degraded land in eastern Nigeria. He also mentions the need to understand better the role of termites and tree roots in 'bringing up plant nutrients from some distance below the surface' (p.39).

Oliphant concludes his article by asking what kind of institutional support is needed for this kind of activity. Instead of an elite Green Revolution campus, he envisages research proceeding by means of an interdisciplinary survey team undertaking reconnaissance studies lasting for perhaps two-three years. In other words, research would be based on fieldwork, and directed first towards understanding what exists. Station experimentation would come later. Oliphant's willingness to include an anthropologist in the team implies farmers as well as farming would have been part of the overall picture. The agro-ecosystem issues to which he directs attention have returned to the research agenda in more recent years. But it was only after the failure of the main Green Revolution strategy based on 'miracle seeds' that IITA began to examine planted fallows, and farm ecosystem management issues more generally.

Oliphant was not alone in having an articulate vision of an alternative large-scale approach to agricultural improvement starting from the realities of existing landscapes and farming communities. When the Rockefeller Foundation first contemplated funding the Mexican Agricultural Support programme in the 1930s, the Berkeley geographer, Carl Sauer, was one of the people asked to advise. He suggested that it might make best sense to seek out and build upon the best of peasant farming practice (Marglin, 1996). Other advisors accused him of wanting to hold on to the Mexican peasantry as a 'heap of ants' for research purposes. Perkins (1997) suggests, however, that the real reason was the Mexican government's desire for an agricultural revolution built around the activities of larger landholders. At the time it was assumed that most peasants would leave agriculture and find work in the cities. In war-time Nigeria a mass rural exodus was the last thing any colonial administrator wanted to see. The emphasis was to strengthen peasant output, beginning from the production processes already employed. Oliphant was perhaps more explicit than Sauer about the need to find a scientific framework through which local knowledge could be scaled up and transformed, while Sauer was perhaps more aware of the social and community significance of maintaining peasant livelihoods. Both were advocating valid policy paths never travelled, even if 'pro-peasant' research never ceased entirely.

The current British minister of overseas aid (Clare Short) states that relief of poverty is now the guiding light of development assistance for the first decade of the 21st century. If the Green Revolution is moribund, a casualty of the ending of the Cold War, there is no reason why it should not now be extracted from its Cold War policy context and revived as a tool meant purely for poverty alleviation. But a shift needs to be made away from the 'magic bullet' approach towards a greater understanding of what is to be found on the ground, in all its social and biological complexity, in order to find a better 'home' for the innovations that plant sciences can provide. In effect (in Wageningen terms), this means blending the approaches of the actor-oriented approach of the school of Norman Long with the ecological production systems approach, as developed in the research school of C. T. de Wit. Applied agro-science needs to return to the field, and pursue the kind of linked biological and social 'reconnaissance' (in consultation with local interests) envisaged by Oliphant as a way of establishing

the agenda for subsequent experimentation. This reconnaissance needs a name. As possible terms, agro-ecology and ethnography are too one-sided (biased towards biological and social aspects). I therefore propose 'technography'. This would emphasise the importance of attempting to describe social and biological worlds in their full complexity. At the same time it would stress that agriculture, as the sustainable management of natural resources for social ends, is technique as well as biology, and thus a matter for cultural and organisational analysis, as well as a focus for applied bioscience (Richards 2000).

The dynamic landscape: farmer-plant-soil-water interactions

This essay instances the use of 'technography' as a means of exploring the scope for plant innovation in complex dynamic landscapes. The overall objective is to indicate ways in which breeders, agronomists, social scientists and farming groups might cooperate to bring about sustainable agro-technical change in low-resource agricultural settings. The section summarises long-term study (1983-2001) undertaken on rice farming systems in Sierra Leone by the author, an anthropologist (cf. Richards, 1986; 1995; 1996a; 1996b; 1997; 2000), with inputs from a breeder, Malcolm Jusu (1999). Brief comparisons are drawn from an agro-ecosystem study of maize farming in Guatemala (van Etten 2001). All three researchers are members of the Technology and Agrarian Development group (TAO) in Wageningen.

The unexpected survival of African Rice
African Rice (*Oryza glaberrima*) was domesticated in West Africa, perhaps two or three thousand years ago. Both dryland and wetland adapted types exist and cultivation remains restricted to the West Africa region. The crop yields only about half or two-thirds of the output of Asian Rice (*O. sativa*) per hectare, though it can survive better than Asian Rice on the poorest soils. Asian Rice is today the main cultivar in West Africa. This dominance dates back to the 19th century. In Sierra Leone, the most rice-dependent country in West Africa, African Rice now accounts for only about 5 per cent of total output, but in some communities in the forest-savanna transition 40 per cent of farmers' fields are planted to types of African Rice (Jusu, 1999; Richards, 1997). Colonial agriculturists predicted the rapid demise of a crop seen as highly marginal. Our studies indicate, however, that African Rice is maintaining, and perhaps even slightly increasing its ground in Sierra Leone. Farmers innovate as much with African Rice cultivars as with 'improved' sativa varieties (Jusu, 1999; Richards, 1996a; 1997). Where (in the east of the country) the cultivar is being pushed towards extinction it is more because of niche competition from high-value cocoa than because of its inherent weakness as a food crop. Farmers value its hardiness, earliness (African Rices tend to ripen quicker than Asian rivals for the same soil niche, Jusu [1999]), and superior eating qualities. Scientific attention has been paid to African Rice only in the last ten years. The West African Rice Development Association (WARDA) began a programme to introgress African Rice traits into Asian Rice in the early 1990s. Some promising inter-specific hybrids have now been released to farmers. But several of the most popular

farmer selections of African Rice in Sierra Leone have morphological features intermediate between the two species (Jusu, 1999). Its seems likely that some hybridisation may have occurred under farmer management, perhaps long predating the WARDA inter-specific releases. Recent WARDA research on the physiology and phenology of African and Asian rices in West Africa has clarified why African Rice retains certain advantages as a niche-adapted cultivar under low-resource farmer management (Dingkuhn & Asch, 1999). WARDA propaganda speaks of a new African Green Revolution for the poorest rice farmers (and women cultivators in particular) based on its inter-specific hybrids. We will argue this is only likely to be achieved through an adequate understanding of the relevant plant-people-landscape interactions. Institutional support needs to be re-shaped accordingly. Programmes should be led by farmers and not breeders (for examples of how this might be achieved see Jusu, 1999). The lessons are not restricted to rice alone. Parallel work on maize in Guatemala yields similar lessons (van Etten 2001).

The ups-and -downs of life: cultivating on slopes

Colonial research in Sierra Leone tried to shift farmers from hill slopes to valley wetlands. This was seen as an epochal step - helping the primitive West African cultivators catch up with more advanced Asian peasant farmers, by stepping down hill and into a more evolved future of wet-rice cultivation (Richards, 1986). The Green Revolution continued the emphasis by stressing the importance of level land for the new IRRI ideotypes (short-straw, low-tillering, early varieties that could be packed more tightly, and twice a year, into wetlands with good water control). But much of the land to which the poorest farmers have access undulates. In Sierra Leone farmers turn farming on slopes to an advantage. Many are short of labour for peak season agricultural tasks. This limits farm output more than land access. So they plant up and down topographic sequences, changing their rice cultivars and crop types as they do so, to spread out labour peaks and lengthen the harvest period. Most farmers find access to both wetland and dryland farms essential to survival (Richards, 1986).

Oliphant was one of a generation of African-based scientists who first began to respect the ecological knowledge of even the poorest African farmer. This is why *Farm and Forest* retains its value today as a repository of this knowledge (comparable with later ventures such as the Dutch-based *Indigenous Development Monitor* and Anil Gupta's Indian-based *Honey Bee* journal). The key to understanding indigenous knowledge of agriculture is to ask what kind of secure empirical experimental knowledge does the actual performance of farming activities yield? Nigerian farmers well understand Variegated Grasshopper outbreaks (Richards, 1985). Those old enough to remember locust invasions in the 1940s and '50s threw up their hands when asked to explain the physically similar desert locust, invoking God or witches. The key differences is that the Variegated Grasshopper's life cycle events all take place in the farm and are visible to the naked eye (aided by a little rooting around in loose soil to expose egg cases).

But to understand these kinds of 'spontaneous' experiments we need also to take account not only of farming but also social life as performance (Richards, 1994). I once sat with a farmer on a hilly ridge overlooking his farm and asked

him why he had started to innovate with an apparently 'ancient' African Rice when he had earlier successfully adopted high-yield research station Asian releases. He swept his hand over the farm below and stated 'we farmers also experiment, but some of our experiments are accidental'. The previous year, he indicated, he had intended to plant the entire plot to the high-yield variety, but ran out of seed. A friend offered him a hardy African Rice with which he was unfamiliar to finish planting the cleared area. When the women of the household began to weed the field they started from one side, weeding part of the improved rice and part of the area planted to the African Rice. Then social imperatives intervened. A kinsman died and the women all departed to make the funeral arrangements, and never returned. Nothing comes before a burial in Mende village life. About a third of the field, divided between the high-yield variety and African Rice remained unweeded. The farmer thus had two varieties, sub-divided into treatment and control. The weeded high yield variety out-yielded everything. The unweeded portion yielded nothing. When it came to the African Rice the yield of the unweeded section was hardly inferior to that patch the women had weeded. Henceforth, the farmer concluded, he would plant about a third of his farm to the African type, and use limited family labour resources only to weed the high-yield Asian variety. The breeder Norman Simmonds (personal communication) remarked he would love to see this experiment repeated under statistically controlled conditions. Technographic survey - or 'reconnaissance', in Oliphant's term - might yield an entire agenda of similar 'farmer designed' experiments to be tested under rigorous conditions. But to spot such opportunities we need to be able to understand the intersection of social and biological events in farming communities - in this case the interaction between varietal selection, weeding and funerals.

More generally, I have argued elsewhere (Richards, 1986) that the focus of the Sierra Leone rice farmer's on-farm 'experimentation' is the issue of what happens in the intermediate zone between upland and wetland (the very junction that colonial agriculturists and the Green Revolution wanted farmers to leap). This transition zone is complex. For a start, it is often a zone of distinct soils (typically developed on river terrace materials or modified by soil creep). Then it is generally marked by highly variable water supply conditions (very wet some years, drier in others, depending not only on rainfall but on springs and seepage). But by-and-large it offers a good place to start the planting sequence, which then moves up-slope as the rainy season advances, and then into swampland proper as the mid-rainy season flood abates. However it is also a risky place to farm. In particular, weed growth is often very abundant and birds attack the early ripening rice. The zone is also important but complex in its social significance (Richards, 1990). A harvest of early rice planted in this zone releases farmers from 'hungry season' indebtedness (the basis of the village political system of patrimonial loyalties). But farmers who over-commit resources in this zone - especially where the soils are moisture-retentive silts - often find themselves in trouble with un-seasonally early rainfall, which makes it difficult to burn and clear the plot. They end up borrowing to hire extra labour, or deal with subsequent weed problems, and become more highly indebted than ever (Richards, 1986; 1990).

Farmers regularly try out any new material in this zone, looking for niche adapted rice varieties which are early (to supply food before the main harvest, vital both to feed the family and to sustain access to co-operative labour groups),

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weed tolerant (for occasions when labour is in short supply or clearing incomplete) and non-photo-periodic (to permit variations in planting date according to whether rains are early or late, without affecting total maturation intervals). Dingkuhn & Asch (1999) have determined that a-photo-periodism is a characteristic associated with African Rice germplasm from 'middle belt' latitudes in West Africa. In our own surveys, farmers in southern Sierra Leone describing African Rice 'innovations' regularly claim to have acquired the material from northern Sierra Leone. Dingkuhn & Asch point out that photo-periodic and a-photo-periodic rices embody two different drought escape mechanisms. The a-photo-periodic types can be planted any time during the season, according to whether rains are early or late, and rely upon earliness to out-compete weeds and complete their growth cycle. The photo-periodic types - and many of the main upland dryland and swamp cultivars are photo-periodic - can be planted over longer periods, and, subject to an astronomical trigger, flower and ripen together during the main harvest period. Broadly speaking, farmers need early a-photo-periodic rices to sustain the household and set up conditions to produce a main harvest in which photo-periodic types may predominate. The issue is not African versus Asian rice. Nor is it the introgression of features from one species to the other. The real issue is securing an adequate balance of hardy, early, non-photo-periodic and longer-duration photo-periodic material to make the best use of limited household labour resources so that indebtedness and the abuses of a patrimonial political system can be held at bay. These abuses have driven many young people from Sierra Leonean villages and have laid the foundations of the terrible war afflicting that country in the past ten years (Archibald & Richards 2001).

Some Guatemalan comparisons.
Van Etten (2001) has studied farmer crop selection activities in a highland peasant community in Guatemala. Here the staple is maize. The scale of landscape diversity is greater than in lowland central Sierra Leone. Farmers plant maize at the edge of a large lake, and up the slopes of the surrounding mountains, including a steep volcano. Population growth and the adoption of coffee at mid-slope altitudes on the mountain, has disrupted traditional maize cultivation schemes and forced farmers to experiment with new maize types. After examining the main classes of established planting material, van Etten shows that farmers need new material to make more effective use of poorer hillside soils just below the main coffee belt. The same applies for high altitudes, above the coffee zone, where new niches were opened and the area planted under maize expanded before the introduction of coffee. The data shows that farmers are actively selecting for adaptation to these changing niches. Earliness is an important and heritable property. In at least one case, a farmer has been effective in selecting for earliness over a fifteen year period, giving a maize type better suited to free-draining, drought-affected, soil types pressed into use through increased demand for land. It is not possible to understand the farmer's experimental problematic without taking account of the intersection of biological and socio-economic factors. Van Etten's technographic focus allows the weaving together of social, landscape and crop genetic factors in a broad preliminary account that directs attention to a number of features to which crop researchers

might pay more detailed attention. An important part of his analysis is to draw attention to scale factors in the 'mix'. Some of the relevant changes are operating at a regional scale beyond the scope of local adaptation. Van Etten captures the idea by talking about the 'selecting landscape'. This raises issues of peasant farmer access to material better adapted to the changing circumstances. There needs to be some kind of partnership between farmers and formal science (between place-specific knowledge and science-led bioinformatics) if the dynamic 'selecting landscape' is to be harnessed for sustainable agricultural production.

Agricultural science and the poor: a new deal?

The work of Norman Long has made us aware that rural transformation cannot be understood unless we pay close attention to human agents. Farmers (and other rural actors) represent more than just the rational calculating ciphers sometimes glimpsed in farming systems research. Human agents scheme, dream, contest and perform. Any account of landscape dynamism that neglects human agency in its cultural dimensions is deficient. But the landscape is also a complex living entity that 'selects' for human variation. Understanding how these two complex, dynamic spheres are intermeshed is more than a matter of paying lip-service to inter-disciplinary co-operation (Beta-Gamma integration, in the jargon of Dutch academia). It requires new methodological tools and new institutional supports. Sixty years ago John Oliphant suggested a useful starting point by envisaging the formation of interdisciplinary teams to undertake field reconnaissance as a way of defining the agenda of agricultural sciences and land-use policy. 'Technography', it has been suggested, is a useful label to capture what it is that such inter-disciplinary reconnaissance might seek to achieve - the contextual understanding of sustainable agro-ecosystem development. By analogy with ethnography it implies taking the knowledge of local agents seriously. But what should then follow from this 'convergence of sciences' (including farmer science)? Clearly, we need to re-think the strong 'top-down' aspects of the Green Revolution. There is an opportunity to do so, because the contest between Western political systems and (Chinese) communism for the souls of the rural poor is now history. While it lasted, both parties poured in subsidies to make their own chosen version of the Trojan Horse look good. Each afternoon at 16.00 hours precisely the hidden underground electrically-operated sprinklers came out of their housings to spray the lawns at IITA, as if to reproach the brown of the harmattan landscape. But donors need no longer waste money on making things *look* green. They should instead focus on the client group directly. Science policy, for the poorest of the poor, should be established 'from below'. In the donor-supported struggle to create new institutions of 'good governance' finding the poor a place at the table where science agendas are set is perhaps as important a priority as elections. If one way to kick-start such a process of local interaction is to experiment with the kind of inter-disciplinary reconnaissance we have argued for above, the next step might be to offer the rural poor 'purchasing power' to commission the specific scientific investigations to which technography points. The idea of sustained agricultural bioscience to relieve some of the problems of the rural poor remains a sound one. The defect with the

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Green Revolution, however, was that an elite tail wagged an impoverished dog. If global poverty is to be alleviated, agricultural research needs to be decentralised and given a much greater actor-orientation than hitherto.

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Actualising history for binding the future: decentralisation in Minangkabau

Franz von Benda-Beckmann and Keebet von Benda-Beckmann

Introduction

One of the main themes running through the work of Norman Long is the differential ways in which policy statements and directions are being re-interpreted and transformed at the various levels of organisation and interaction on their way to 'the local people'. Much of his and his students' work (often illustrated with wonderfully detailed case studies), has been devoted to showing how local actors, in their own interaction or in interaction with development agents, have appropriated external policy messages and the resources that often accompany them. In this way, these actors have created or expanded their 'room to manoeuvre' and have thus been able to transform policy programmes and projects themselves.[1] The central issue concerns the question of how to conceptualise and analyse the ways in which the state operates and affects people's lives.

Norman Long has been exceptionally sensitive to the problem of avoiding simple dichotomies between state and civil society. His work on what he initially called the interface over time developed into a sophisticated analysis of the complex contexts in which what is conveniently summarised as 'the state' affects peoples lives, be they part of the state or not. It could also be characterised as an attempt to come to grips with what is known as the 'actor-structure' problematic, an attempt that combines micro and macro levels, devoting particular attention to variation in time and space. His interests have been largely similar to our own concerns, though clearly the emphasis is slightly different. What binds Norman Long and us perhaps the most is a strong focus on the historical dimensions of the issues we are interested in: issues such as the development of a time-oriented legal anthropology that combines a long-term historical perspective with the perspective of individually centred, short-term, choice making instrumental action and interaction (Moore, 1978: 256; F. von Benda-Beckmann, 1979: 6). One way of looking at institutionalisation is by studying how, why and to what extent actors are involved in trying to *'bind the future'* (Stinchcombe, 1997) through their actions, deliberations and struggles. History is treated not so much as a focus on the past, but as a dimension for understanding the present and as a

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[1] See Long (1983, 1989, 1992, 1997)

way for looking into the future. Legal rules and normative frameworks are viewed as condensed ways of binding the future. Treating law as one of the most important means and products of institutionalisation is particularly interesting, because law creates potentialities or opportunity sets, as Sen (1978) would call them. This paper, then, is an exercise in social science as characterised by Tilly (1997: 17) *'Social science is the systematic study of what could happen, what could have happened, what will possibly happen, in human social life, and why'*.

In this paper we shall focus on ongoing processes in which a multitude of actors in different arenas (Long, 1997: 6) of rule and decision are making attempts to institute new legal structures for local government in order to come to a new balance between state regulation and other forms of political legitimacy and economic rights. The historical setting for this is the current process of decentralisation in Indonesia, which was set in motion after the demise of the Suharto regime in 1998.[2] The greater political freedom that came with the fall of the Suharto regime and the decentralisation policy adopted in 1999 in many parts of Indonesia have led to a re-assessment of local, ethnically informed legal orders. In Indonesia, these legal orders are generally referred to as *adat* (*adat* laws and forms of *adat* based social organisation), and the new decentralisation policy has initiated a re-appraisal of *adat* by local people, local and regional government agencies, and national and international non-governmental agencies. As is often the case in periods of high political turmoil, the decentralisation policy has also triggered a re-assessment of local history, and in particular, forms of political organisation and economic rights based on *adat*. It has also initiated an acute concern of how and to what extent this history is to become relevant for the future. The Province of West Sumatra is of particular relevance because the process of decentralisation has been taken up to renegotiate the structure of local government in order to *'actualise'* (Giordano, 1996) earlier historical forms of local government and to change the relative significance of *adat* officials and rules.

We shall consider two aspects of these processes. One is the change within local government organisation, the newly emerging and partially established forms of legitimacy of political representation and decision making powers, and the role which elements of *adat* are given in these new forms. The other is the revitalisation of *adat* as the basis for economic claims to natural resources on the village territory. Many of these resources had earlier been appropriated and exploited by the state under legislation. Some had also been exploited by para-statal enterprises or 'privatised' through licences and concessions to national or transnational enterprises, which were usually closely connected with the inner circle of the Suharto clan. These processes are still in full swing. There are serious forces that would like to weaken and change decentralisation, leaving greater powers to the central government and the provinces. The most recent change, the demotion of President Wahid and the installation of Megawati Soekarnoputri as President may have far reaching consequences since Megawati is said to be much less attracted by decentralisation and to favour a strong central

state. She may also occupy a different position than her predecessors, Habibie and Wahid, towards the external pressure applied by donors. While there is still strong and unrelenting pressure for more regional autonomy from within the country, especially from the economically strong regions, the stage seems to be changing internationally. Development analysts seem to have lost some of their earlier enthusiasm for decentralisation in the light of the problematic evidence brought forward to date, and there have been voices calling for more restraint. It is very difficult to predict what the situation will be a year from now. Our findings are therefore very preliminary, all the more so because we are in the middle of a new research project on these issues ourselves (Benda-Beckmann, F. and K. von, 2001).

Decentralisation in West Sumatra: the general context

Indonesia has entered a dramatic political process since the fall of the Suharto regime. A wider range of political freedoms characterises it, with a completely new role for parliamentary politics. This, however, has also been accompanied by high political instability. In many of the outer islands, independence movements, civil and religious wars, and sometimes violent forms of ethnic cleansing are taking place. To redress political problems, the government initiated a process of decentralisation, which was officially inaugurated by the Decentralisation Laws of 1999. This process was the outcome of both internal and regional pressures aimed at rendering greater economic and political independence from the formerly strong political centre. Important donors such as the World Bank, the International Monetary Fund (IMF), the Asian Development Bank (ADB) and others have also applied pressure in the hope that decentralisation will enable a more democratic and economically responsible policy to be pursued. In fear of encouraging secessionist developments, the new decentralisation law did not opt for the provinces as the most important autonomous regions, but for the regencies (*kabupaten*).

In West Sumatra, decentralisation also brings an important change in the organisation of village government. Until the early 1980s, village government in Minangkabau region of West Sumatra had been based on the *nagari*, the name for the traditional, pre-colonial political units often referred to as village republics. These had largely been incorporated into the Dutch administrative system as the lowest form of indirect rule. During their rule, the Dutch government repeatedly intervened and changed the traditional political organisation of the *nagari*, a process that continued after Independence. When we were doing our research in West Sumatra in the 1970s, many *nagari* had a dualistic political organisation. One official hierarchy incorporated into the local government organisation of the state consisted of the Village Mayor and the Village Council,[3] in which traditional *adat* elders always played an important role. The other was the *adat* organisation in which leadership was legitimated in Minangkabau *adat* only. However, this *adat* was not an 'authentic',

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[3] This Village Council, which was composed of *adapt* leaders, religious leaders and intellectuals should be distinguished from the Village *Adat* Council, whose members are *adat* leaders only. The terminology is, however, not always consistent.

'uncontaminated' set of norms and institutions. It was deeply affected by the colonial experience and has continued to be affected by the wider national setting in which it has operated during the last 50 years of Independence (see K. von Benda-Beckmann, 1984).

When Indonesia attempted to homogenise the plurality of laws on its territory and to consolidate centralist rule in the 1970s, the then existing regional variations in local government were also standardised. The Javanese model of the village (*desa*) as the lowest local government unit became the standard model throughout Indonesia. In Minangkabau, this meant that the *nagari* were split into several *desa*. However, a provincial regulation of 1983[4] allowed the *nagari* to become the '*adat* law community' (*masyarakat hukum adat*) and the Village Adat Council to become the institution representing this community. A number of implementing regulations gave detailed instructions of how the Village Adat Council was to be constituted according to *adat* and on how it was to exercise its main tasks i.e. strengthening traditional values, maintaining the unity of the *nagari* population, managing its riches and settling disputes on *adat* matters. A circular letter of the West Sumatran Appeal Court made it clear that *adat* disputes would not be accepted unless the Village Adat Council had decided them upon. The *nagari* as *adat* law community and the Village Adat Council thus, paradoxically, were formally regulated as 'informal law and institution'.

With decentralisation or 'regional autonomy' coming into view, discussions on what this could mean for Minangkabau erupted in the provincial and regional political arenas, among engaged citizens and in the villages. Many local politicians and traditional village leaders claimed that local government should 'return to the *nagari*'. It was generally held that the *desa* system had not functioned well, that it destroyed *adat* and the unity of the *nagari* population, and eroded the authority of elders. Optimists hoped, somewhat naively, that going back to the *nagari* would solve these problems. More sceptical voices, among them many urban intellectuals and the acting *desa* heads, pointed out that a return to some nostalgic past would not remedy these evils. In their eyes, the unsatisfactory functioning of the *desa* was primarily due to the inadequate financial and personal resources provided to the *desa* administration, and to the fact that *adat* leaders did not co-operate with the *desa* administration. Moreover, if anyone had destroyed *adat* and *adat* authority, it was the *adat* leaders themselves who no longer really knew *adat*, had failed to develop the Village Adat Council into a functioning institution and had manipulated whatever control they had over *nagari* assets for their own personal advantage. Similar reproaches were also heard from many favouring *adat* and the return to the *nagari*, although in their view, the problems were the consequence of the *desa* system itself and that the situation would improve once village government was returned to the *nagari*. Others maintained that the expected changes would be minimal and that reform would be confined to simply changing the name of the local government unit. Those who were still vehemently opposed a year ago, had changed their position in March 2001, and not only because the political decisions had been made. By spring 2001, it had become generally accepted that West Sumatra was to revert to a *nagari* structure. The provincial regulation No. 9 of 2000, which

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[4] *Perda (Peraturan Daerah)* Regional Regulation 13 of 1983.

provided the framework for going back to the *nagari*, constitutes a point of no return in the eyes of most people. Now the debate is focused on what type of *nagari* should be reverted to (if at all) and to what extent and how general principles of democracy could be included into the new structure.

The provincial arena

Prior to the general elections in 1999, the 'back to the *nagari*' policy had been officially adopted by the governor and the West Sumatran provincial parliament. There were a number of critics in parliament, some because of their strong alliance to the centralist Suharto regime, others out of a deep concern for democratic structures. The decision-making arena reached beyond its members and the political parties. The influential provincial organisation of *adat* leaders, *Lembaga Kerapatan Adat Alam Minangkabau* (LKAAM), was a strong player as its most important members were former high officials in the provincial and regional administration. Some of these were members who had returned to a position in the regency after regional elections and some were academics who were also *adat* leaders in their own villages. Though the LKAAM claimed to be an organisation totally outside of the state structure, this is not how others perceived them. The establishment of the LKAAM had been supported by the government to contain political *adat* aspirations, and the organisation had been deeply involved in the state administration throughout the Suharto regime. Nevertheless, the LKAAM's position has become increasingly independent from the provincial government, advocating the most far-reaching form of a return to the *adat* structure of the *nagari*. They want to place control over village resources exclusively with the council of *adat* leaders, and are critical of those seeking a too easy compromise between *adat* principles and administrative structures of a democratic organisation. In addition to this, there are a number of influential consultants to the governor within Andalas University. The governor had committed himself to a return to the *nagari* before parliament had taken a decision. A research team, headed by a long time consultant from Andalas University and a strong protagonist of a return to the *nagari* structure, was sent out to poll the views of the village populations. The poll concluded that a large majority favoured a return to the *nagari*.[5] In contrast to the LKAAM, a number of these consultants showed considerable sensitivity towards the contradictory demands of *adat* and modern democracy. The findings of the team were a persuasive factor in the political decision but may not have tipped the balance without the disenchantment that existed towards the national political situation of the *reformasi*, something that reinforced the general tendency towards regionalism. *Adat* is a powerful resource for mobilizing and legitimising opposition to the Javanese political centre of the nation state. A return to the *nagari* structure is thus a symbolic act within the wider national political debate. This revitalisation of *adat* is not confined to West Sumatra. With the help of NGOs, an All Indonesian *Adat* Alliance has been formed that claims greater

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[5] It is not quite clear how these consultations were conducted. Our impression is that predominantly *adat* officials, local administrators and local religious and secular elites were consulted and that the ordinary village population were largely ignored.

legal recognition of *adat* and *adat* based rights to natural resources (see Acciaoli, 2000). Minangkabau seems to be taking the lead and other regions look with interest at the developments taking place there.

However, the most important political controversies were not yet resolved by the general decision to return to the *nagari*. Three major issues had to be debated:

- The territorial boundaries (including the possibility to separate away from a *nagari*)
- The composition and competence of village institutions, including the control over project funds from higher levels of the state administration
- Control over village resources.

After extensive discussions concerning approximately twenty draft regulations within and outside the provincial parliament, and consultations between non-governmental *adat*, Islamic organisations and influential Minangkabau migrants in Jakarta, the province enacted a provincial regulation[6] which became effective in January 2001. This regulation contained the framework for 'going back to the *nagari*' and a general framework for new local government was established. The language of the regulation is full of references to *adat*. The preamble states that West Sumatra goes back to *nagari* government, followed by the ritual formula that it is based on '*adat basandi syarak, syarak basandi kitabullah. Syarak mangato adat memakai alam tabang jadi guru*'. (*Adat* is based on Islam, Islam is based on the holy Koran; religious law orders, *adat* is used; nature is the teacher of mankind). The regulation provides for an initial return to the pre-1979 *nagari* territorial boundaries (par.2). Furthermore, it mentions the *nagari* resources: a market, village field, council hall, mosque and prayer houses, land, forest, rivers, ponds, lakes and part of the sea which used to be common *nagari* resources (*ulayat nagari*), public buildings and movables and other properties (par.7). This is indeed in line with classical *adat*. The village government consists of an elected mayor, an elected legislative body, and an advisory body consisting of representatives of four or more of categories, i.e. *adat* leaders, religious leaders, intellectuals and women. The *adat* council, consisting of *adat* leaders, is regulated in the Provincial regulation but does not form part of the official village government. This council is to mediate in disputes relating to family property and to protect *adat* in general. This structure resembles in many respects the mixture of *adat* and state principles that have characterised local government in West Sumatra since the late colonial period.

The regulation leaves the most important issues open. The crucial question as to how these resources are to be managed and by whom is a different matter. This is left to a separate provincial regulation, while more detailed regulations as to the precise form of the village institutions are to be made by regencies. So far, the Regulations of the Minister of the Interior and of Agrarian Affairs[7] states that the newly recognised rights cannot be exercised on land, which has been declared by the regional government as belonging to private individuals or legal entities holding a right under the Agrarian Basic Law. They also do not apply to land that has been 'freed' or otherwise obtained by governmental agencies, legal

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[6] Perda 9 of 2000.

[7] No. 5 of 1999, section 3.

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entities, individuals in accordance with governmental regulations. As we shall see below, this has not prevented land claims from being successful.

Regency arenas
The new regency heads and parliaments have (re)acted with marked variations in speed and enthusiasm to these developments. In two districts, 50 Koto and Solok, energetic regents, one of whom was a leading member of the LKAAM, have taken a number of initiatives to implement the new structure as soon as possible, revising their regency administrative structure and pushing forward the return to the *nagari* system. They were quick in promulgation of their own Regency Regulations and were ready to start at the moment the provincial regulation became effective. They have taken this new, more autonomous position seriously. This means more control over their resources, but less funding from the central government.[8] Both call for a far more intensive occupation with development potentials within their region. In line with the greater autonomy of villages, they have initiated collaborative economic activities with local governments. The same regents also promote the installation of new *adat* leaders, but not so out of a concern with *adat* itself. They argue instead that since the new structure of local government allows for a stronger and more substantial role for *adat* leaders, there is a need for well-educated *adat* leaders who understand the way the modern economy works. These regents also use the new legal structure to create links that would have been unthinkable under the hierarchical legal structures of old regime. During Suharto's New Order the only important links were hierarchical, if possible directly with the central government, from which all funding came and which had the final decision in all-important economic matters. Regents all over Indonesia have now started to organise themselves horizontally, in order to create a political platform strong enough to oppose those who want to revert to the old hierarchical structures. Moreover, they realise that they have new economic problems in common and hope to learn from the experiences of other regencies. Thus a new arena of debate and decision making is emerging that was not foreseen, let alone intended. It has resulted instead from the new potentialities created by a new legal framework.

Not all regents are as energetic. Many have remained relatively passive, waiting to see what other regents and higher political authorities are going to do. There is still much criticism of the new structure. What is perceived as a challenge for some regents is a reason for profound anxiety for others, especially about the economic future. Those who had always depended on a continuous flow of funding from the various departments at the central level, and who had successfully siphoned off parts of these funds, look with alarm to the drying up of central government funding. Moreover, those who had arranged themselves successfully in the centralist clientilist system and had carved out a private forest business backed by licences from the centre, now face strong controversy and

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[8] Some of the line departments, such as the Department of Social Affairs, have been dismantled. As these departments were the most important sources for funding, there is much confusion as to how the funding will be organised in the future. Generally substantial cuts are expected as part of the IMF policy to reduce state expenditures.

opposition from local communities who are already claiming back control over forest resources. Decentralisation thus has created substantial insecurity for those who occupy the new power positions. However, it would be wrong to conclude that reluctance grows out of private interest only. Some regents are genuinely concerned about a too powerful role for *adat* leaders. They have seen too many *adat* leaders who took private advantage of their position, who are poorly educated and know little of *adat*. They have no confidence in the capacities of these *adat* leaders and think that more autonomy can only harm economic development. These hope that by sitting it out, they will be able to survive until a more centralist policy comes into place.

Nagari *arenas*

The lowest arena in which these issues are being negotiated is the *nagari*. Here, too, the response to the new regulations and political debates is quite diverse, both in terms of pace and content. Some *nagari*-to-be have been quick in establishing the new *nagari* governmental structure and began designing regulations even before the regency regulations had been enacted. Others have remained passive, waiting for orders from higher up. The *desa* heads established an organisation, *Forum Komunikasi Kepala Desa*, which vehemently opposed the return to the *nagari* originally. They have, however, come to accept the decision that there will be a *nagari* structure, though they continue to point out that there are many controversial issues and the move back to the *nagari* is not in line with the aspirations of the people (Padang Ekspres 28 May, 2001). Draft regency regulations are being discussed, criticised and amended, and in the more advanced regencies the first new-style *nagari* with their new leaders are being formally installed. Debates are at times hot and nasty. The arena is, in the first place, constituted by the inhabitants of the *nagari*. Also, migrants from the village living in the regional or provincial capital or even in one of the large cities outside of West Sumatra often take a keen interest in the issues and participate in the debates, by phone, fax, e-mail and if necessary in person. It is in this arena that the composition and competence of each of the village institutions will reach its final form.

During the New Order, when hardly any decisions of political or economic consequence were left to the village government, having a position in the village government provided the possibility to gain access to project money. This time it may involve much more. In addition to control over funding flows, there is the issue of who will control village resources. Since the expectation is that less money will come from above, with more remaining within the village in the form of land, forest and market taxes, much (potential) economic and political power is at stake. Many, however, may have an unrealistic view of how high such revenues will be.

The re-construction of history is most actively pursued in the debates about the division of power positions. *Adat* leaders and their followers argue that originally (i.e. before the colonial period), they constituted the village government. As guardians of the village and family histories, they claim legitimacy as being responsible for the control the village resources. The *desa*-heads respond to these claims by arguing that *adat* leaders have long ceased to be interested in *adat*, that they don't know anything about *adat* anymore, and are in general a reactionary,

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backward bunch of people who have been known to cheat their relatives. They go on to claim that the *desa*-heads, on the other hand, have proven to be much closer to the ordinary village people during the past years and therefore should keep their position. Derisory remarks by *Adat* leaders and supporters counter this by arguing that the only thing *desa* heads are interested in is keeping their motorbikes and other material goods acquired through their office. Issues such as these are prominently discussed in the newspapers.

The procedure for selecting the members of the village parliament is an important issue in *nagari* politics. Some are of the opinion that the new village parliament as highest authority should be a democratically elected body and not (in their view) an autocratic *adat* council. This is vehemently denied by the *adat* lobby, who claim to be the guardians of the true, Minangkabau type of democracy based on a consensual model, far superior to the 'western style 50+1 voting democracy'. The debate is interesting, because it revolves around different opinions of what constitutes democracy. Others have different interpretations of *adat* and opt for a structure in which the four or five basic categories are represented: *adat* leaders, religious leaders, intellectuals (people with a reasonable education and with a good position in business or otherwise), women and youth. General elections and party politics are associated with the Suharto regime and therefore widely rejected. According to this view, balanced representation can only be reached by means of *adat*, understood in this sense. Labelling this as *adat* is a powerful political act, for in public discourse, *adat* is 'below' and development from below means development based on *adat*, not on individual people. As far as we know, most *nagari* that have had general meetings over the composition of the village parliament have opted for the selection of members from such categories, whereby *adat* members are to be selected by consensus within *adat* clan units, and others at the level of the former *desa*. Donor agencies who are supporting the formation of new village governments, such as the German Agency for Development Co-operation (*Deutsche Gesellschaft für Technische Zusammenarbeit-GTZ*), uncritically adopt these principles.[9] There is a remarkable and widely shared lack of historical understanding. The same categories that are employed now figured in the various bodies of village government throughout the Suharto era, an era that is now generally interpreted as having been utterly undemocratic. What is more, the Golkar was originally established not as a political party, but as a body of representatives of 'functional groups'. The irony is that what is meant as a rejection of the undemocratic New Order of Suharto, is taking over precisely the principles upon which its main political support was founded.

Splitting nagari

Generally, the majority of people currently accept the policy of returning to the *nagari* as the local government organisation. In some former *nagari* however, some *desa* do not want to re-unite but wish to establish their own *nagari* instead. Here, the strong emphasis on *adat*, the historical roots of the *nagari* and *adat* leaders and the *adat* council also becomes important. Minangkabau villages

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[9] The GTZ in three *nagari* has sponsored and supported the meetings through which the Regency Regulation and the ways of selecting members of the village parliament were concretised.

often make a clear distinction between original settlers and newcomers, and this distinction has political and economic relevance in *adat*. Newcomers may be very recent settlers, such as traders, but they may also have lived there for over one hundred years and still don't have a status of full citizen in the *adat* sense (F. von Benda-Beckmann, 1979). Most of these settler groups are Minangkabau themselves, descendants from former slaves or traders, but there are also some Javanese trans-migrant and spontaneous settler communities as well. Some of these groups live in a more or less separate section of the old *nagari*, forming a *desa* of their own in the present structure. Such groups very much fear losing their independence with the reversion to the *nagari* structure and hope to establish their own *nagari*. The territory on which these communities live is usually part of the inherited property of certain clans or village property. Consequently, this is a source of much consternation for *adat* leaders who fear a loss of control over village and family property if trans-migrant communities and spontaneous settler groups succeed in establishing their own *nagari*. During the drafting of the provincial regulation an intensive lobby was launched, fiercely opposed by the *adat* lobby, to convince the governor that it should be possible to return to a *nagari* structure but to split the old territory right at the initiation of the new regulation. In this way, the new regulation could be used to get rid of the claims by original communities and their *adat* leaders who continued to insist that newcomers submit to such claims. The governor, who was aware of the political dynamite of this issue, decided that there was to be a return to the *nagari* boundaries of before 1979 first, and that negotiating a split-up would become a second step in the process. This was a great disappointment for those who had hoped to be freed from the dominating elite in the name of *adat*. No doubt it will be more difficult to negotiate a division of the *nagari*, if it happens at all. The new interest in village resources as a result of decentralisation, and as a result of the interest of migrant community members, has rendered *adat* leaders more reluctant to relinquish village control over their territories. However, *desa* who are pushing their claim towards independence in *nagari* in pursuit of a speedy recognition have a means to force the other *desa* and *adat* leaders into some compromises concerning their future position. They are placing their bets on reluctance from the regent to recognise a *nagari* facing internal difficulties. Not all *adat* leaders are opposed to such a split, but most would agree that a split could only be done under their guidance and with their consent. And this is precisely what these communities had hoped to avoid.

Actualising and reconstructing history

These processes have therefore elicited a renewed keen interest in village history and its reconstruction, but also of the history of individual clans and families. It has become very important to know the history of settlement of a *nagari*, the history of clan and lineage cleavages and the history of inheritance, because this knowledge is decisive for the procedure and pace of *nagari* foundation and potential division. The interest in history is also spawned by land claims. The demise of the Suharto regime and the ensuing new political freedom has been used up to claim back land and forest that was appropriated by the government. Fear of repression had previously kept the local population from complaining but

constraint is no longer necessary. As a result, numerous claims have been filed in court or lobbied for in political negotiations. The most controversial claims regard village property (*tanah ulayat*) that had first been placed under state control by the so-called *Domeindeclaraties*, in West Sumatra enacted in 1874. While the Basic Agrarian Law of 1960 recognised the *ulayat* rights of local communities in an ambiguous way, state legal and administrative practices did not really take these rights seriously. These acts have been contested throughout history, because village governments claimed entitlement on the basis of *adat*. Under the Dutch regime, but more so under the New Order, much land was taken away by the government and handed out in semi-public or private hands, usually to those close to the regime. Some land was simply taken without compensation, but handsome amounts of money are also known to have been given in exchange for other land. Moreover, some land undoubtedly had the status of village *ulayat*, but clan *ulayat* has also been appropriated. Thus it is not always clear who the legitimate claimants are: the village government, the *adat* council, the head of one particular clan, all lineage heads within the clan, or even one particular lineage and its head? And although many of the claims that the land was taken by force or coercion are probably correct, the chaos of the situation provides ample opportunity for energetic lineage heads to claim land that was transferred without coercion and properly compensated for or to claim land that did not belong to their lineage in the first place. The newspapers, for example, are full of reports of open conflicts and negotiations about forest areas, plantations, water resources and the land and materials used by a certain cement factory in Padang. The first successes have been booked. Some land has been placed back under village control and some clans have successfully reclaimed their land.

These successes also demonstrate how important the division of competence among the new bodies of village government is. More generally, there is a great urge to move forward and score successes. It is important to place one's claims on the various tables, be it a proposal for a village government structure or the claim for the paramount position in village government, the claim to split-off as an independent *nagari,* land and forest claims, etc. Moving forward quickly and energetically provides village leaders with the opportunity to shape the future village organisation according to their values and interests. It also means that funding flows will start flowing early. Speedy regulation and speedy land claims are both important devices to bind the future. They serve to establish a reputation of successful management in the village, which will be a strong legitimising factor in a situation that is subject to so many diverse interpretations. It could well be that these types of activities today have the same function as successful mediation in disputes among villagers or being present at important occasions such as land transactions (see K. von Benda-Beckmann, 1984). As in former times, village history and village *adat* have to be restated and re-invented. But the arena in which this is done is not only the village setting as such. It also includes negotiations with higher levels of state government, notably the regency and the province.

No reliable documents are available for most of these contested transfers. What remains is the oral history of village, clan and lineage. And it is in connection with these issues that the recreation of history is most acute. The problem with this oral history is that recent decades have been marked by a dramatic decline in interest in the function of the *adat* leader. Yet the *adat*

system was built on the legitimate knowledge of *adat* leaders who were required to hand down this official knowledge to their successors. Modern education and the oppressive regime have placed little value on *adat* and have made the position of *adat* leader unattractive. Certainly, it had become fashionable for high state officials in the armed and civil service in Jakarta to show off with an *adat* title, but this was mere folklore and was not paired with any knowledge of *adat* matters. Thus there has been a serious rupture in the chain of oral history. Today the office of *adat* leader has become attractive once more. Offices that had been vacant everywhere for many years are being filled again. Often, well-educated and well-connected men who live in the regional or provincial capital are installed. They are close enough to their village to be able to come when there is a problem, while being expected to mobilise their connections with the region and province when required from their position in the cities. But these men also have little or no knowledge of *adat* matters. Knowledge of Minangkabau *adat* as a cultural and legal system, with its innumerable *adat* sayings, rules and maxims, is increasingly available from books written by *adat* experts. However, *adat* knowledge in the sense of village, clan, lineage and property history is only orally transmitted. For this, urban *adat* officials have largely to rely on their elderly, often female, relatives. It is this knowledge in particular that is required to assert, and manipulate, claims to political position and economic rights under the *adat* constitution.

Conclusions

Decentralisation in West Sumatra is therefore a dynamic and complex process. A multitude of actors move in and across several and often overlapping '*semi-autonomous social fields*' (Moore, 1973), putting forward and negotiating their claims and proposals for instituting the structures for new local governance and resource rights. As far as 'going back to the *nagari*' is concerned, regents, parliamentarians, village leaders and ordinary villagers alike actualise history by intentionally 'mobilising' an earlier form of local government organisation into the present as structure for the future (Giordano, 1996). Once actualised, the past itself offers several different repertoires of *nagari* structure for concretising the future meaning of the past, or rather one of the pasts. When it comes to a more concrete normative interpretation of, for instance, whose positions in adat will be politically relevant in the new system or who has what claims to natural resources, then the history of the village, clan, lineage and village property is also reconstructed to fit the actor's political and economic ambitions.

The interfaces in which different (and opposed) actors present relatively homogenous views of how the political and economic village constitutions should be are not clear-cut. Most of the models proposed form a complex mixture of direct state regulation and *adat* elements within state regulation. Reconstructions of 'pure traditional *adat*' resort mainly to clarifying the nature and function of the *adat* elements within the complex new structures. The most radical mobilisation of *adat* that largely denies the political superiority of state rights can be found in claims asserting the fundamental village rights to village *ulayat* land: claims from which state legislation can only derive lesser rights.

Most actors are also 'Janus-faced' (F. von Benda-Beckmann *et. al*, 1989). They hold positions in varying relations of power and legitimisation. This goes for many *adat* leaders prominently involved in these discussions; they are *adat* leaders but also university lecturers or government officials or businessmen. They view the new structure from a variety of interests, trying to find structures sympathetic to their interests. The common village population is less involved, more passive and more frustrated about these processes. Not unjustifiably, they feel that most of the deliberation and decision making processes occur over their heads, and they have cynical views about the political rhetoric which is so strongly emphasising *adat* values and the 'bottom-up' character of the political process.

The different social processes that constitute the 'decentralisation', which take place in small-scale locales, have their own preliminary outcomes, that form the contexts for new social processes, are highly interdependent. Many actors move through and participate in different arenas. There is an intense interest in knowing what has been said or decided in other arenas, and information is sought and distributed at a high pace. This is facilitated by the widespread networks of which the main actors are a part of and by forms of communication such as mobile phones. The local newspapers (increased from two to seven in the past three years) are an important medium and constitute an arena themselves. Each day the papers are full of reports about meetings of *adat* elders with regency officials, the state of claims against plantation enterprises, the discussions of draft regency legislation in *nagari* A and B, the official recognition of the first *nagari* and the election of *nagari* heads etc. Prominent *adat* leaders, university professors and journalists regularly give their interpretation of the pros and cons for going back to the *nagari* and the conflicts over resource rights, adapting their ideas to the most recent state of affairs.

It is difficult, however, to obtain a good grasp on all deliberations, conclusions, and draft regulations being simultaneously debated in the innumerable meetings in the different arenas throughout Minangkabau. Clearly, a good overall picture at any given moment of what is summarised as 'the decentralisation process' would require a continuous aggregation of micro events, as demanded by Collins (see Collins, 1992). But even if such aggregation contained, for each micro situation, analyses of how macro-structures and representations (Knorr-Cetina, 1988) through interactions become involved and reproduced in these small-scale settings, it would not allow us to come to a full understanding of the effects of such interactions or for what might happen in later and different contexts. We would still have to 'trace the ripple effects', the intended and unintended consequences of such interactions for more distant arenas in time and space (Long, 1989: 230). Our research is at a stage in which hundreds of people each day throw a handful of pebbles into the water of decentralisation. We hope to be able to trace some of the ripples after the high waves of political turmoil have subdued.

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4

Strange bedfellows: how knowledge systems became Longer and why they will never be Long

Niels Röling and Cees Leeuwis

Introduction

Actor-oriented perspectives in rural development sociology and knowledge systems thinking constitute two academic perspectives in the social sciences at Wageningen University that have flourished alongside each other from the 1980's onwards. While the former originates from the Development Sociology group led by Norman Long, Niels Röling and his colleagues in the Communication and Innovation Studies group developed the latter approach.

Actor-oriented development sociology and knowledge system thinking ostensibly have a lot to fight about. To begin with, since systems cannot have purposes (people have purposes but systems don't), systems thinking is an anathema to sociologists. In addition, systems thinking locks actors into predetermined courses of action, negating their agency. Yet some of us in Communication and Innovation studies have embraced knowledge systems with a vengeance. Secondly, actor-oriented perspectives seem to prefer arenas and battlefields. Actors are locked in struggles and interfaces are abrasive. At most they might enrol each other in their projects. In short, they tend to focus on strategic action. Yet most scholars in Communication and Innovation studies focus on convergence, the innovative performance of theatres of innovation, properties that emerge from interaction, participation, and other forms of collaboration, collective action, and negotiated agreement. We like to probe the opportunities for communicative rationality. And finally, a major issue is that intervention is perceived as the misplaced effort of social engineers that try to predetermine the outcomes of the struggle among actors, which is inherently impossible. Most of us in Communication and Innovation studies see it as our task to train professionals in the facilitation of learning, participatory methods, persuasive communication skills, and other forms of intervention.

Notwithstanding these major differences, the two groups co-supervise M.Sc. and Ph.D. students, co-manage an M.Sc. course, participate in the same research projects and do other things together that assume intellectual agreement. What's is more, one only has to look up Long's review of Röling and Wagemakers

(1998) on Amazon.com, to become convinced of the intellectual agreement, if not bedfellowship of the two paradigms. So how can we explain this contradiction? Is it that the two groups have agreed not to address their differences, to agree to disagree, so as to enjoy each other's camaraderie and bonhomie? Or is it a question of '*on dôit être d'accord pour se combattre*', i.e. one has to be close to have something to fight about?

This chapter explores the surprising similarity between the points of departure of the two fields of intellectual endeavour, if only to put into sharp focus their totally different perspectives. The chapter concludes with an exploration of the possible complementary contributions of the two groups to the new field of bèta/gamma studies, which is emerging as an important concern at Wageningen University.

Convergence 1: knowledge systems

Knowledge systems thinking has evolved and changed face considerably over the years. In this section we describe how it started off, and how our thinking was influenced by actor-oriented development sociology.

The initial contradictions between actor-oriented sociology and knowledge systems

In the early days, Knowledge Systems thinking was incredibly primitive (e.g. Röling, 1986, 1988). Its protagonists had the objective of fostering innovation. The objectives were comprised of research, extension and farmers as pre-given actors, and their main focus was on fatal gaps and communication barriers among these actors. But this was a first and necessary step forward from a mono-disciplinary focus on extension education as the critical factor in explaining and promoting innovation, and opened the door to a new perspective on innovation as an emergent property of interaction. Moreover, what was promised was to provide a practical diagnostic framework for the then still existing army of hundreds of thousands of publicly funded extension professionals world-wide that the Wageningen Extension Education Department - the predecessor of the Communication and Innovation Studies group - considered its clientele. Finally, the new emerging perspective on knowledge systems liberated extension education from its isolation as an applied social science with a low status.

Knowledge systems were invented in the United States by scholars like Lionberger (e.g. with Chang, 1970), Rogers et al. (e.g. 1976), Havelock (e.g.1986), Swanson and Peterson (1989). Their work was inspired by the American Land Grant system, which places agricultural research, education and extension in one institution. Through their dependency on the state for their student catchment and on the state legislature for funding, Land Grant Colleges are forced to be responsive to the needs of the state's farmers. The alleged success of American agriculture was said to be attributable to the resulting 'knowledge system' in which the functions of research, extension, education and utilisation are forged into a synergistic whole (Havelock, 1986).

Röling took over the professorship in extension education from Anne van den Ban in 1983. With his 1970 Ph.D. from Michigan State University, his Kenya-

based experience that small farmers could not be helped through extension alone (in fact, extension appeared to be an instrument to make farmers poorer), and the then still widely shared conviction that the success of Dutch agriculture ('the second largest agricultural exporter by value after the US') could be explained by the synergy among agricultural research, education and extension (the 'triptych'), it is quite understandable that a knowledge systems perspective was embraced as a promising concept. In hindsight it proved an excellent choice, but perhaps not for the reasons envisaged at the time! One of the reasons why it was a good choice was that it led to a constructive conflict with the actor-oriented sociology of development introduced by Long when he took over the chair from Rudi van Lier in 1984.

Long was a breath of fresh air. His actor sociology was liberating after the macro sociology and uni-dimensional thinking of the earlier years. Long and Jan Douwe Van der Ploeg (who joined the group a few years later) quickly found each other in a focus on diversity, pluriform development paths, strategic rationality, and agency. What's more, Long - as an Englishman - had none of the inhibitions that Dutch intellectuals usually have that would cause him to think twice before pugnaciously challenging his colleagues.

Knowledge systems soon became a target for actor oriented development sociologists, and the constructive conflict that emerged has since kept scores of M.Sc. students busy in trying to reconcile the apparently totally different viewpoints. But first, we must clarify the fundamental objections of an actor-oriented perspective sociology to knowledge systems thinking as it was in the early days. An initial critical issue is that it is not systems but people that have objectives, intentions, or other voluntary characteristics. In fact, knowledge systems with their assumed functions seemed reminiscent of the functionalism of Talcott Parsons' social systems, and a worse neighbour could hardly be imagined for Long in his endeavours to establish his Wageningen School of actor-oriented development sociology. The system perspective negated the very fundaments of actor-oriented sociology: the agency of actors to make a difference in the social arena. A second area of concern was that the boundaries drawn around the knowledge system to comprise research, extension, education and farmers reified a figment of Röling' imagination, as if those actors really form systems that can be observed in the arena of social life (Later we realised that this type of thinking was 'hard systems thinking'). Long suggested that the study of networks across time and space would be more appropriate. Thirdly, the cosy emphasis on synergy and collaboration among the actors in the knowledge system neglected the conflicts and struggles among the totally different life worlds that one can expect among the assumed components of the knowledge system. Fourthly, knowledge system thinking with its focus on innovation and neglect of culture and context seemed to negate the pluriform development paths and multi-dimensional futures that arise from the clashes of life worlds that emerge in the rich patchwork of development arenas. Fifthly, the exchange of knowledge could not be understood in isolation from the exchange of other resources, and hence the focus of an *aspect* system obscured rather than clarified the issue. If there was any system to be looked at, it needed to be a *social* system.

But your enemies define you, as the revolutionaries say. Long became fascinated by knowledge and acknowledged our contribution in the foreword to his *Battlefields of Knowledge* (Long and Long, 1992).

And what did we do with the devastating criticism? To understand this, a number of events need to be mentioned. In the first place, Cees Leeuwis, a student of Van der Ploeg and Long, was appointed on a Ph.D. position in the then Department of Extension Education and he defended a dissertation that applied actor sociology and farming styles ideas to the field of extension communication (Leeuwis, 1993). His work was supervised by both Long and Röling and did much to incorporate actor-oriented sociology into knowledge system thinking.

A second major event was the 'discovery' of University of Lancaster's (UK) Peter Checkland and his soft system thinking (Checkland 1981; Checkland and Scholes 1990). This discovery was greatly aided by Röling' visits to Australia where he was exposed to the application of soft systems in land care and agriculture in Queensland's Department of Primary Industries and in what was then Hawkesbury Agricultural College and is now the University of Western Sydney in New South Wales. At Hawkesbury, a group of innovators under the leadership of the Faculty of Agriculture's Dean, Richard Bawden, had incorporated soft system thinking into a revolutionary approach to the academic training of agriculturists as facilitators of the processes required to help Australian agriculture learn its way out of the mess it had created for itself in the 100 years of European settlement (e.g., Sriskandaradjah, et al, 1989; Bawden and Packham, 1993, Woodhill and Röling, 1998). Bawden's group was also heavily inspired by the Chilean biologist Humberto Matura and his work on cognition as the basic process of life (e.g., Maturana and Varela, 1992; Capra, 1996).

Soft system thinking and the Santiago School of biology were eye openers for us in the actor-sociology inspired struggle with the theoretical fundaments of knowledge systems. They introduced the following major elements. The epistemological understanding of the difference between positivism and constructivism, and the ontological understanding of the difference between (naive) realism and relativism, became deeply ingrained as fundamental points of departure for knowledge systems thinking. Soft systems thinking was basically constructivist while hard systems thinking was basically positivist. Hard systems became sub-systems of soft systems. But constructivism did not necessarily imply relativism. Though *a* (not *the*) reality is 'brought forth', it is not simply *any* reality that is brought forth. If you get it wrong, you are likely to become extinct (Maturana and Varela, 1992). A second realisation was that soft systems comprise human actors who share a problem. Soft Systems Methodology (SSM) takes a set of actors through a systemic learning process that potentially ends in a shared perspective that emerges from the 'rich picture' of multiple perspectives among the actors. Such a shared perspective can underpin collective action to address the shared problem. Soft systems are also perceived as constructs that only exist to the extent that the people comprising them accept that they form a system. Soft systems are basically 'human activity systems' (Checkland, 1981). That is, where natural systems (e.g. plants) and designed systems (e.g. computers) can basically be regarded as hard systems, i.e. systems for which the challenge is to realise *given* goals. For soft systems, however, the goals are the major bone of contention. It is in this sense that our earlier knowledge systems with their assumed functions could be considered hard systems. Lastly, soft systems thinking, as it was developed by Bawden and his group, places the observer squarely in the system to be observed (see Figure 1), as opposed to a

system observed from a safe 'hide'. This turns soft systems into reflexive or critical learning systems (Bawden, pers. com. 2001).

Knowledge system thinkers such as Paul Engel (1995: Engel with Salomon, 1997) and Röling found it very easy to embrace soft system thinking. It gave a deep theoretical foundation to knowledge systems thinking, while maintaining its hands-on character in the sense of providing a methodological perspective for facilitating learning processes in the direction of collective action. Key desirable outcomes such as innovation and sustainability became 'emergent properties of soft systems' (Bawden and Packham, 1993). Soft systems linked extension studies into an exciting new world that tied into biology, ecology, and self-organising systems, and allowed it to escape from the strangle-hold of social sciences such as social psychology, public relations and rural sociology which had spawned it.
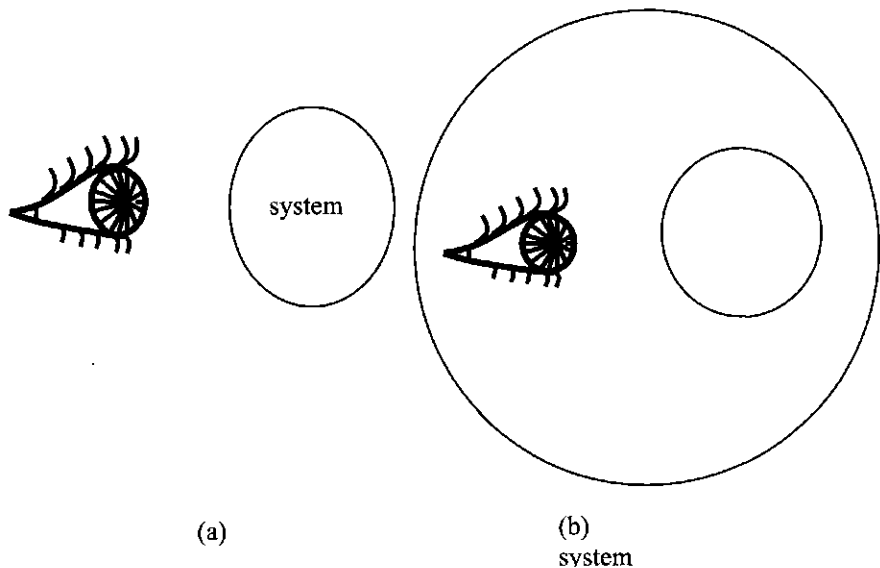
Figure 1: Areas of discourse in hard (a) and soft critical learning systems (b) (after Bawden, *pers. com.* 2001)

Having said this, we have to add that embracing soft system thinking made it easier to incorporate important elements of actor-oriented sociology into knowledge system thinking. Actors with their multiple and conflicting 'life worlds' (i.e. multiple realities) are the obvious components of soft systems. Soft systems with their arbitrary and negotiated boundaries were an obvious improvement over the hard and pre-conceived boundaries Röling (e.g. 1988) had worked with before. Identifying the boundaries of the arbitrary system - as Leeuwis insisted during our first seminar with Peter Checkland in 1993 - became a question of a preliminary actor-oriented, and possibly participatory, exploration (Kwaaitaal, 1993). Instead of a given basis for collaboration among actors, Long's actor-oriented development sociology forced us to consider the possible reasons why, and the processes by which, a bunch of strategic actors struggling to realise their own projects in the arena could be turned around into improving

'the collective performance of the actors in a theatre of innovation', as Engel so aptly put in his dissertation (Engel, 1995).

We became totally convinced of the validity of the Long' insistence on non-preconceived observation in the field with a minimum of concepts (such as agency, interface, life world, arena, etc.) rather than an imposition of pre-conceived ideas such as knowledge systems which render the researcher blind. Knowledge systems became a perspective, a diagnostic framework with which one could look at what was actually happening in the field to realise opportunities for collective action. This approach was developed into a fully-fledged methodology (Rapid Appraisal of Agricultural Knowledge Systems or RAAKS) by Paul Engel with Salomon (1997).

With that, Knowledge Systems came of age. It proved a useful and attractive perspective as the basis for the M.Sc. Course Management of Agricultural Knowledge Systems (MAKS) In the MAKS course, Communication and Innovation Studies and Developments Sociology have always co-operated intensively as core groups, joined first by Agricultural Education and later by Paul Richard's Technology and Agrarian Development Group. Perhaps a sign of the times is that 'MAKS' as an acronym stands, but now means Management of Agro-ecological Knowledge and Socio-technical change. But we are running ahead of the story.

Remaining differences
It must be emphasised, by way of completing this section on knowledge systems, that the embrace of the basic tenets of actor-oriented sociology by knowledge system thinking, and the close collaboration within the MAKS course, only served to highlight the remaining differences. Knowledge systems thinking remains relatively blind to conflict. It emphasises communicative rationality rather than strategic rationality that is the hallmark of actor-oriented perspective (Leon Pijnenburg, pers. com.). Knowledge systems thinking remains focused on supporting professional intervention with an assumption that some good can be wrought in this world, while actor sociology continues to look at intervention basically as social engineering and doomed to failure. We shall come back to these points later, as well as to the strange unwillingness of actor oriented sociology to consider the possibility that actors can voluntarily engage in collective action on the basis of trust in institutions, participatory approaches, and non-coercive facilitation of negotiation.

Convergence 2: knowledge, communication and participation

The criticisms directed towards the knowledge systems perspective did not only come from those belonging to Norman Long's department, but also from scholars (sometimes labelled 'infiltrators') within the Communication and Innovation Studies group itself. This is, for example, reflected in a co-production by Leeuwis, Long and Villarreal (1990) in which a number of 'equivocations' on early knowledge systems thinking were presented. As is demonstrated above, many of the concerns were taken seriously by the most outspoken proponents of systems thinking. Some of the remaining issues continue to be 'worked on'.

These include the conceptualisation of knowledge itself, the interrelations between knowledge, power and conflict, and -in connection with this- the way in which the idea of 'participation' is approached and operationalised. As we will show below, additional convergence is forged in these areas.

Knowledge, power and conflict
The influence of an actor-oriented perspective on the way we look at knowledge cannot be overestimated. It is through the lectures, advanced research seminars and writings of Norman Long that we started to (re)read Schutz and Luckmann (1974), Knorr-Cetina (1981, 1988), Latour (1987), Callon and Law (1989) and others. In short, we became social constructivists, and started to invite celebrities like Karin Knorr-Cetina to come to Wageningen. But some of us became more constructivist than others. For purposes of advancing knowledge systems thinking, the idea of 'multiple realities' (see e.g. Long and Villarreal, 1994) was incorporated with enthusiasm by Röling and Engel. However, inspired by Long, Leeuwis (1993: 58-59) argued that this was not sufficient, and that we needed also to come to grips with the political and normative dimensions of differential realities. In other words, that it would be a mistake to look at multiple perspectives as merely originating accidentally from differential experiences and cultural frames, and that we needed to recognise that they were shaped by diverging interests and values, and associated micro and macro politics at social interfaces (Leeuwis, Long and Villarreal, 1990; Long and Villarreal, 1994). The realisation that knowledge and perception cannot be understood in isolation from power, conflict and struggle for resources is an essential proposition in constructivist thinking, which has long been ignored in Communication and Innovation Studies, despite our self-proclaimed constructivism. And indeed not accidentally so, as it seemed incompatible with our interventionist interests and the associated Habermas-inspired embrace of communicative action in knowledge systems thinking. In fact, this illustrates a related idea derived from actor-oriented development sociology (and also from Winograd and Flores, 1986), namely the inherent connections between knowledge and ignorance (see Arce and Long, 1987). More recently, however, there is more recognition for Leeuwis' earlier (1993: 98, 347-386; 1995) observation that 'communicative' and 'strategic' action are in many ways two sides of the same coin. That is, the occurrence and outcomes of interactions that in themselves might well be termed 'communicative action', can only be adequately understood if one recognises that they usually are at the same time strategic actions vis-à-vis *other* communities of actors. Thus, we have gradually come to realise that conflict and power may also play a constructive role in processes of change and innovation. We will further elaborate this when discussing the issue of participation in a next section.

Our changing conception of knowledge had far reaching implications for our field of study. It has led us to re-conceptualise related concepts like communication, and made us rethink the differences between scientific and other forms of knowledge. Communication is now looked at as a process in which meanings are 'negotiated' rather than transferred or subjectively interpreted (Leeuwis, 1993; Te Molder, 1999). Furthermore scientists are basically looked at as particular communities of actors with their own specific epistemic cultures

and rituals, who generate (local) knowledge relevant to their particular locality. The fact that some of them claim universal validity, then, is merely an interesting cultural and political phenomenon, that is often regrettable from the point of view of productive intervention and bèta/gamma co-operation (Leeuwis, 1993, 2000a).

Clearly, these sorts of issues touch the heart of our discipline. Therefore, actor-oriented sociology has consequences for almost everything we study and do, regardless of whether the topic is computer modelling, ecosystems management, Internet debates, health promotion, change management, etc. As such, Long' impact is there to stay, and recognised in several advanced introductions to our field of study (see Röling et al. 1994; Leeuwis with van den Ban, forthcoming)

Participation as a learning and negotiation process
Knowledge systems thinking went along with a plea for 'interactive science' (Röling, 1996) and the promotion of participatory methodologies like RAAKS (Engel and Salomon, 1997) and PTD (Jiggins and De Zeeuw, 1992). At first, we may have been rather naive believers in participation, assuming that it was something that was always desirable and 'good'. However, gradually our conception of 'participation' has altered, and again Long has played a significant role in this respect. First of all, actor-oriented studies (van Arkel and Versteeg, 1997; Zuñiga Valerin, 1998; Amankwah, 2000; Pijnenburg, in prep.) showed that there was often an enormous gap between participatory *rhetoric* (including theoretical discourse) and participatory *practice*. Subsequently, it dawned on us that this discrepancy pointed not only to 'bad' application of participatory principles (which indeed can be frequently observed), but also to fundamental flaws in the theoretical rhetoric (including principles) itself. Many participatory methodologies, for example, still implicitly draw on the mistaken idea (see e.g. Long and Van der Ploeg, 1989) that change is something that can be planned (see Leeuwis, 2000b), and/or mechanically engineered through the application of methods. Similarly, theories and methodologies of participation seemed to ignore almost completely that meaningful change never happens without tension and conflict. To some extent such a 'neutral' representation of participation may have served to make the idea acceptable to governments and the like (Pijnenburg, in prep.). But it is also connected to the Habermassian idea that power can somehow be banned from interactive processes by the creation of 'ideal speech situations' (Habermas, 1984, 1987), and that conflict resolution merely requires the development of a shared understanding of a situation as a result of learning and improved communication. In contrast, studies of participation practice showed that conflicts and power issues usually play a dominant role in shaping the dynamics at different levels and interfaces (e.g. among stakeholders, between stakeholders and interventionists, among interventionists, between local interventionists, governments and international donors, etc.). Along with this, we came to realise that 'participatory intervention' (already a paradoxical term) and search for consensus is not always needed, feasible and/or likely to be productive, and that conflict, competition, leadership, power and 'top-down' intervention can at times contribute significantly to processes of change and innovation (see Leeuwis, 1993).

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On the basis of these and other considerations (see for elaboration Leeuwis, 2000b: Leeuwis with van den Ban, forthcoming) we have looked for different foundations and modes of operationalising interactive processes. We feel it is necessary to develop an approach towards participation that does not negate - conceptually and methodologically - the significance of strategic action and conflicts of interest, by somehow rendering them 'normatively undesirable'. Again, an anthropologist aided us, this time in the person of Noelle Aarts who introduced the idea of 'integrative negotiations' in our group (Aarts, 1998; Aarts and Van Woerkum, 1999).

This idea derives from negotiation theory (Pruitt and Carnevale, 1993), begins with the assumption that actors are likely to act strategically in relation to existing and emerging conflicts of interests, and attempts to make this productive to solving societal problems. In integrative negotiations a lot of attention is paid to the facilitation of learning, including social learning (i.e. learning about the interests, values and perspectives of other stakeholders). The idea is that through critical reflection on one's own (and other stakeholders') assumptions, processes can become creative, and result in new joint problem definitions and the identification of 'win-win' solutions. Integrative negotiations, then, are the opposite of 'distributive' negotiations. In the latter, stakeholders tend to hold on to their own perceptions and positions, and basically use negotiations to divide the cake (or the pain). In essence, our basic proposition here is that -in many situations- effective social learning is unlikely to happen if it is not embedded in a well-'managed' negotiation process, while effective negotiation is impossible without a properly facilitated learning process.

Using negotiation theory as a source of inspiration for the organisation of interactive trajectories has far reaching practical implications. It requires new roles, tasks, methods, skills and social status for facilitators of participatory processes, as well as new modes of analysis preceding and during participatory trajectories. The contours of such an integrative negotiation approach to participation are steadily emerging (see e.g. Aarts, 1998; Van Meegeren and Leeuwis, 1999; Leeuwis, 2000b; Leeuwis with van den Ban, forthcoming). It is already quite evident that it shows little resemblance to conventional 'methodology-oriented' approaches like PRA (Chambers, 1994), PTD (van Veldhuizen et al. 1997), RAAKS (Engel and Salomon, 1997) and PLA (Pretty et al. 1995). Eventually, of course, Norman Long, who has so powerfully demonstrated the negotiated character of development and change, also inspires our flirt with negotiation theory.

Why we retain totally different perspectives

As we said before, the perspectives of an actor oriented development sociology and communication and innovation studies have refused to merge, which perhaps underpins the naivety of knowledge system thinkers who believe that convergence is possible or even likely. In the current section we examine these differences for history's sake. After all, both the actor oriented perspective and knowledge system thinking are likely to be 'passing paradigms' as new protagonists enter the arena. What is more, a focus on differences also serves a

strategic purpose: nowadays too great a similarity only leads to hostile mergers by the university authorities. So, here's to our historical differences.

Focus on inervention

In the eyes of actor-oriented sociologists we have always remained 'terribly normative' (as opposed to norma*n*tive?). Clearly, this relates to the fact that we are, and always will be, 'interventionists', trying not only to deconstruct but also 'reconstruct' society. In fact, we take pride in it. More precisely, we are normative in several interrelated ways. First of all, we are willing to accept -at least for the time being- that certain problem perceptions are relevant, and are worthy of our attempts towards solving them. Thus, as academics we are willing to make our political stance explicit, and try to remain self-critical while doing so. In addition, we do not hesitate - after careful exploration and reflection- to make suggestions about how intervention towards solving perceived problems may be done better and more effectively. We are still interested in 'praxeology' (Röling, 2001). Finally, we tend to propose concepts and definitions that have normative connotations. For an actor-oriented sociologist it is irrelevant, for example, to try and define exactly what 'extension' or 'participation' is. Essentially because -in everyday life - extension (or participation) is everything that actors label to be extension (or participation). Hence, what it actually 'is' can only be clarified through empirical investigation.

For us, such descriptive definitions are in the end not sufficient, since we want to train practitioners and therefore need a vision of what extension (or participation) could and should be. Nevertheless, the descriptive work inspired by Norman Long has been of enormous value to us, also for the purpose of developing praxeologies.

But although Long was aware of the practical implications of his work, and in fact promised to address the issue of transforming intervention practice (see Long and Van der Ploeg, 1989:242), we are not aware of him ever having made an elaborate attempt. What is more, serious attempts to 'help out' in this area were never responded to. An article by Leeuwis and Arkesteijn (1991), for example, tried to tackle the issue 'head on', but did not lead to further debate. The same fate was met by later attempts (Leeuwis, 1993; Engel, 1995). Apparently, the very possibility of being associated with 'normativity' or 'interventionism' is so threatening to actor-oriented sociologists that it prevents them from being explicit about practical implications. In our view, (perceived) peer pressure has contributed to the construction of this deliberate area of ignorance. Here we refer to the belief and/or experience that one cannot be taken seriously as a post-modern sociologist if one resorts to being normative or making even mildly predictive statements. So be it. After all, we are the ones that have benefited from it, since many M.Sc. and Ph.D. students are looking for practical clues. But at the same time we feel that -from a broader perspective- the social sciences in Wageningen could have gained more if we had engaged in more constructive debates on practical matters.

Focus on collective action

It seems beyond doubt that collective action at different ecosystem levels is a condition for dealing with anthropogenic destruction of the vulnerable web of life on which human society depends (e.g., Röling, 2001). Hence collective action, solving social dilemmas in common property resource management (Ostrom, 1990), social capital (e.g., Uphoff, 2000; Uphoff and Wijayaratna, 1999), collective and distributive cognition (e.g., Hutchins, 1995), post-normal science (Funtowiscz and Ravetz, 1993; Funtowicz, Ravetz and O'Connor, 1998), actor network theory (Callon *et al.*, 1986), reflexive modernisation (Beck, 1994) and other perspectives that examine the possible bases for collective action are searching to make contributions to the quest for ameliorating humans' self-inflicted problems. One could also say that the 'soft' side of natural resource use is likely to gain greater prominence as a complement to the conventional focus on hard systems in such institutions as Wageningen University. What's more, participatory approaches, at first a bit of a side show, are increasingly commanding centre stage, also in industrial countries such as the Netherlands, as it becomes increasingly clear that issues, which are highly salient but of which the outcome is highly uncertain, do not easily lend themselves to puzzle solving science, expert-driven solutions, and centralised sectoral institutional decision making (Funtowicz and Ravetz, 1993). The context is changing on both actor-oriented sociology and knowledge system thinking.

Given the premium on understanding (the absence of) collective action, it seems strange that actor-oriented sociology has so little interest in the issue. The relentless strategic rationality of the approach is on par with economics in transforming students into sceptics who are pre-programmed to listen only to strategic narratives (Röling and Maarleveld, 1999). Meanwhile, Communication and Innovation Studies has embraced interactive policy making with a vengeance (e.g., Van Woerkum, 2001). It managed to obtain funding for a number of research projects which emphasise the convergence of actors around solving shared problems, multi-stakeholder management of natural resources, and stimulating interaction among producers and consumers in coming to grips with problems which cannot be solved at lower system levels. Communication and Innovation Studies currently receives little scientific support from development sociology in these enterprises and de-facto collaboration between the two chair groups has decreased in recent years.

But that is regrettable. As we have already explained above, Communication and Innovation Studies has always taken on a normative stance, in the sense that it tries to deal with major societal problems, as they are perceived at the moment. In taking such a normative perspective, it has embraced the need for technical innovation, the need for poverty alleviation, the need to foster policy acceptance, the eco-challenge and other trendy problems, such as multi-stakeholder natural resource management, all in a matter of 30-odd years. Obviously, there is a need for dispassionate, more disciplinarian approaches, such as development sociology and anthropology, which are inspired by scientific rather than societal problems. In that sense, actor-oriented sociologists are characterised more by a tendency to demythologise, deconstruct, and critically demolish trendy discourses, such as participation, than by engagement in them.

Yet this argument does not seem to explain the seemingly total lack of interest in collective action, voluntary collaboration, or the emergence of shared life

worlds, among the Wageningen development sociologists. It has been acknowledged that an actor can be a collective but from then on, it is strategic manoeuvring and battlefields as usual, with little interest in how a bunch of struggling individual actors can *become* a collective actor. It is hard to explain this absence of interest, except perhaps by pointing to the temperament and romantic lure of Latin America whose inhabitants seem to have developed an uncanny tendency to strategically 'psych out' those they encounter. Be it as it may, the two groups continue to differ a great deal in their research interests.

Complementary roles in a Bèta/Gamma University

Long and his colleagues made it their business to develop a Wageningen school of sociology and Long has become one of the most quoted social scientists in the Netherlands in the process. He obviously has succeeded in this quest given the list of publications and dissertations. Meanwhile, several technical chair groups in Wageningen University, especially irrigation, but also forestry, entomology, soil and water conservation, household technology studies and soil science, have been forced to leave their erstwhile technical and hard systems perspectives and embrace social science perspectives to ensure the professionalism of their graduates and the usefulness of their research (Röling, 2001). It is essential to recognise that these shifts have occurred with very little collaboration with the social sciences, although a number of joint dissertations with irrigation (e.g., Van der Zaag (1992) and Bolding (in prep.)), soil and water conservation (e.g., Mazzucato and Niemeyer, 2000), entomology (e.g., Van Schoubroeck, 1999) and other technical departments have been produced. In that sense, the disciplinary focus and further elaborating a Wageningen School of Sociology has not helped. It is typical that Paul Richards, who joined Wageningen more than a decade later than Long, has embraced collaboration with technical departments and 'the social construction of technology' with a vengeance, thereby risking disconnection from his own discipline of anthropology. In his research, technical phenomena, problems and details (rather than actors) are the starting point for further inquiry into social dimensions; this may be a form of research to which technical groups can relate more easily than to an actor-oriented approach.

Meanwhile, it has been increasingly recognised that what the Dutch call 'bèta/gamma science' is crucial to the mission of a successful Wageningen University and Research Centre. Bèta stands in this case for the (bio-physical) sciences, and Gamma for the social sciences, including economics. Bèta/Gamma science therefore emphasises the duality of a soft/hard approach to agriculture and natural resource management. It is quite obvious that Wageningen' main strength lies in developing this Bèta/Gamma approach, a reason why the retooled (2001) M.Sc. course MAKS has embraced Bèta/Gamma science as its main perspective.

Figure 2 is for us is useful in describing Wageningen's move in the direction of bèta/gamma science. *Quadrant I* represents reductionist and positivist disciplinary science, as it is carried out in laboratories. It is the original Wageningen approach in which the best technical means are developed to solve assumed societal problems. *Quadrant II* represents the move to hard systems

thinking which occurred in Wageningen under the influence of Cees de Wit who managed to integrate the work of technical disciplinarian departments into crop growth simulation models. *Quadrant III* represents the embrace of constructivism and soft systems thinking to allow analysis of problems from a bèta/gamma perspective.

Holism

II ECO-CENTRIC (apply Integrated) Pest Management	**III** HOLO-CENTRIC (construct critical learning system)

Positivism (Objectivism) ———————————————— Constructivism (Subjectivism)

I TECHNO-CENTRIC (spray budworm)	**IV** EGO-CENTRIC (pray)

Reductionism
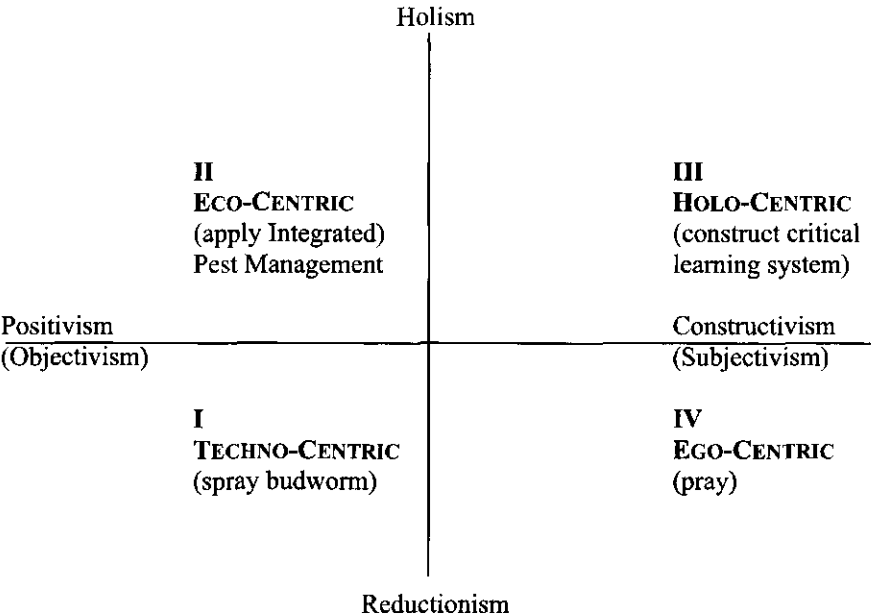
Figure 2: A typology of paradigms in the move towards bèta/gamma science
Based on Miller (1983 and 1985) and Bawden (1997)

Miller (1985, 1987) who initially developed the quadrants to explain the behaviour of fellow scientists engaged in the battle against the spruce bud worm in New Brunswick's forests, distinguished the following approaches. In *Quadrant I*, scientists focused on the budworm as an isolated problem. Their advice was to 'spray'. Scientists in *Quadrant II* realised the hard systems nature of the problem and favoured integrated pest management, which uses natural processes to control the budworm. The (very few) scientists in *Quadrant III* realised that the whole problem of the spruce bud worm was generated by human greed and the planting of large tracts with the same tree species, thus asking for problems in the first place. Their remedy: critical and reflective human learning towards new social and technical arrangements. We believe that the three quadrants represent the different approaches that are required for an agricultural university and research centre such as Wageningen to make a useful contribution. Notice that we stress *all three* approaches. They are all necessary and will have to be used in different combinations, depending upon the nature of the problem (e.g. Tekelenburg, 2001).

We have purposefully left out *Quadrant IV*. We believe it is too early to elaborate that one. If anything, scientists in that quadrant embrace spirituality as an essential element in addressing humanity's self-inflicted predicaments (Van Eijk, 1998; Röling, 2001). But this issue is beyond the scope of this article. It is suffice to say here that we believe that actor-oriented development sociology with a disciplinary focus will have a crucial role to play in the development of a fully-fledged bèta/gamma approach. Long has laid important foundations. Now Paul Richards, another independent English social scientist who is not afraid of pugnacious criticism of his immediate colleagues, is increasingly making his presence felt in developing Wageningen Bèta/Gamma science. His enthusiasm for Mary Douglas' cultural theory is bound to add a new and important dimension (e.g., Hood, 1998). Soft system thinking can be expected to gain from withering criticism of the methodological individualism implied in the focus on emergent properties. That is, the idea that structure, collective action, sustainable development and other 'goodies' emerge from interaction is not much different from the idea that the 'good' market emerges from the selfish search for utility by individuals. Soft systems thinking, then, has much to gain from ideas about how 'institutions think' (Douglas, 1986) for example. And clearly an actor-oriented development sociology has much to offer here as well.

As we have hinted at, we still hope to enter into constructive debates and joint research with actor-oriented development sociologists on issues like intervention, praxeology and collective action, which are all of considerable importance to *Quadrant III*. We feel that the pursuit of building a Wageningen School of Development Sociology -indeed a monument to a great guy- may have hampered such efforts to take place. Yet, the nature and mission of Wageningen University demands that we make progress in this area. This requires us to reflect critically on the dynamics that take place at the interface between Development Sociology and Communication and Innovation Studies, and re-invent our 'bedfellowship'. It has been a worthwhile and productive experience so far, but in order to realise the full potential of actor-oriented development sociology some further 'cross-breeding' is of essence.

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5

Struggles at the social interface: developing sociotechnical research in irrigation and water management

Linden Vincent

Introduction: why struggle, what struggle?

Why struggle for interdisciplinary concepts, when they are often challenging to their users to develop and disliked, if not ignored, by disciplinary researchers? Why use the term 'sociotechnical', without a hyphen, for work in irrigation? As Mollinga (1998) discussed, interdisciplinary research (and the ideas it can then bring into learning) has at least 'two gaps to bridge...' The first is the conceptual gap between the technical and social sciences, and the second is 'the gap between theory and practice, or knowledge and action' (Mollinga, 1998, p. 5). I would add others. One would be to bridge the 'learning gap' between theory, knowledge, practice and action in order to get new understanding of change processes through better communication, recognition and reflexive analysis. In 2001, agrarian questions are still important and serious, but there are other frameworks beyond political economy to study them, while new resource management questions loom for people and societies. These give other gaps to bridge between other sciences and the professions. Since 1980, the Irrigation and Water Engineering Group, hereafter referred to as IWE, has striven to relate its teaching and research with emancipation. This understands irrigation and water management from the perspective of small and marginalised water users, and others employed in this water use, to work for irrigation and water resource management that better supports them. To develop irrigation studies to this end, the Group has worked to develop new ideas, and to engage critically and constructively with mainstream thinking on modernisation and reform. It is with all these purposes in mind that the sociotechnical approach to irrigation has evolved. This has not only led the Group to interact with many different academic disciplines. It has also looked at the work of these groups through the critical lens of their engagement with the forces of social transformation and the world of development assistance.

This contribution shows how and why the IWE Group has evolved their sociotechnical research as an interdisciplinary approach to the study of irrigation. It has been written not only to show how IWE has engaged with actor-oriented

theories from sociology and social anthropology (and the ideas of Norman Long). It has also been written to show our work with ideas from the sociology of development and development theory in irrigation studies. This has been an interesting and sometimes more serious struggle by the IWE Group with the work of Norman Long and his group at Wageningen, in relation to his political economy framework and its linkage with actor-oriented analysis. For this reason, this paper is structured to present the work of the IWE through its publications on irrigation, and their links with development.

This is also done for another reason. I was not involved in the early struggles to develop a sociotechnical approach and I do not want to reproduce work already written. What I can do, however, is hold a mirror up to the IWE, Norman Long, and Wageningen University to show the nature and dynamic of interaction over time. This can also explain the contemporary interdisciplinary focus and struggle of IWE in understanding irrigation and water management. This review is based on my own understanding of how others and myself were interacting with the Irrigation and Water Engineering Group, and Norman Long's work over time.

Any such discussion of course, requires me to say how I had interacted with Norman Long's ideas before coming to Wageningen. Actually, I first read Norman Long around 1989 when I moved to the Overseas Development Institute and started work for a book on hill irrigation (Vincent, 1995). Prior to this I had spent three years in Yemen 1984-87 in an assistance programme. This ended after a spring-fed water point was destroyed. A local political struggle crystallised into a proposal to remodel a very small irrigation system, which might change water rights and would change the power balance in decision-making over water rights. Almost everyone misjudged the strength of the collaborative front created by local representatives and villagers to support the scheme. I had engaged with Norman Long's work from Peru and Bolivia (in Long and Roberts, 1984; Mallon, 1983; Dandler, 1987), before I had read his work on actor-oriented theories and concepts, such as 'Encounters at the Interface'. Thus, I engaged first in his work that looked at individual struggle and action in a kind of 'non-structured' political economy - which I first found quite powerful given my recent work - before I began to look critically at his actor work. I reflected on this lack of previous contact. I realised how my knowledge of social science and the struggle for interdisciplinarity had been shaped in Norwich more by structural theories about development and underdevelopment which were then dominating the public debate there (Barnett, 1977; Harriss, 1982). They had also been shaped by the difficulties I had in the late 1970's to connect with them. I realised that I, like perhaps many natural scientists and some social scientists, had been drawn into farming systems and participatory frameworks of analysis, as a different and radical means to explore social reality, natural resource use, innovation, and social action. This, I think, explains an important point. Norman Long's work provided a new kind of entry point to social realities of development work and social action, for those struggling with theory and searching for a 'people-based' perspective to natural resource management. Later I was often frustrated, if always informed and entertained, by the way he described development interventions and change processes. I nevertheless always found the interaction creative.

What social analysis in the sociotechnical approach?

Much internal review already exists on the sociological research that has been drawn into the IWE Group. Mollinga (1994) explains how the Group has drawn not only on actor-oriented theory, but also on the work on the social construction of technology and Marxist theory, particularly labour process theory. All these opened up possibilities to see social processes linked to engineering technology and water distribution. After IWE had debated this review, it opted to follow an actor-oriented approach in research methodology, rather than specific actor-oriented analysis. Wester and van Halsema (1995) looked at how all these bodies of theory would shape such an actor-oriented approach in research with a sociotechnical perspective, putting forward the actor-network framework. Hoogendam (1993) showed how actors and practice came into design, through a wider focus on technology and its paradigms. In these reviews, the role of Norman Long is recognised for his contribution in further developing actor-oriented theory but as one of many who have shaped thinking in this area and in 'sociotechnical' analysis. His work remains a guide and a discussion point for actor-oriented methodology and research design, and we recognise the continued value of his concept of social interfaces and arenas.

In the wider study of the sociology of development, and social processes of transformation, Norman Long's work has been valued for helping to open the development debate at Wageningen. However, it has also generated frustration for some within the IWE. Thus I would like to summarise the contribution of Norman Long here in three ways, simultaneously showing some of the stresses that his work brought for irrigation research. These are:

1. As an active debater of social theory and the clash between structural and actor approaches to the study of development, and eventual proponent of actor-oriented theory. His work provided references, and acted both as a lens and a springboard for IWE students and staff already beginning to explore and review ideas about social and development theories to understand the role of irrigation in society. His critique is one of several that IWE put alongside others in the early 1980s, in their own wider reading of development theory and development practice. His actor-oriented perspective was one that helped in the conceptualisation of irrigation and water management distribution, and in the understanding of the processes shaping and reshaping water management and water use. The concept of the 'social interface' has been used to explore the role and significance of irrigation infrastructure and institutions in social action, and the social interface of knowledge between irrigators and engineers. However, Norman Long's own political economy perspectives, which focused very much on relations of production, restricted exploration into the world of irrigation. His framework of interpretation on agency in development policies and programmes limited reflection on public action, and on social relations acting within technology and not just across it. It also restricted exploration of the ways in which, and how, micro-and macro forces come together in irrigation. All these reasons explain why the Group rejected his ideas in actor-oriented analysis, but did keep their own actor-oriented approach as a research methodology.

2. *His work on deconstruction of 'planned intervention' and actors' behaviour with such programmes.* This linked with the Group's own desire post-1980 to

understand more about processes of intervention and how outcomes were shaped by actors and events. His open descriptions of social action and strategy by people, and even irreverent treatment of development programmes and organisations, were quite revolutionary eye-openers to the way development contexts could be explored. It opened up some new ways to see change and struggle over water management. Again, however, stresses have emerged. Sometimes development policies and programmes got reduced to an unexplored status of some kind of 'Technical Mission', and technical workers to undifferentiated '*tecnicos*', against which local actors played out and evolved strategies. This not only reduced understanding of wider agrarian dynamics. It also gave little help in learning for development practice.

3. *His work was accessible, readable, personal, and often humorous.* It was an immediate entry point to anyone who had struggled in development work. It enabled engineers and natural scientists to see ways they could critique development work, and start to explore the complex inter-disciplinary world of both water distribution and development work. The irreverence mentioned above has made Norman a fairly open partner to those wanting to learn about and work with social perspectives, even if they eventually moved into other ideas from sociology and development. However, for some, Norman Long's pursuit of his own actor-oriented analysis lacked reference to other work on social change. While people in the Group found some of his concepts useful, they wanted to move beyond these into studying possibilities on negotiated innovation, and contest around water. They also sought new sources of complementary theory. This pushed the Group out to other new interfaces with other researchers working in rural transformation, farming systems and innovation, law, philosophy and political ecology.

What I argue here and in the following sections, is that the interdisciplinary quest in irrigation studies has never been just about developing more social science or development theory, or researching the sociology of development. For the Group, this objective is derived from recognition of the understanding necessary to work in the complex world of irrigation. The Group must understand the processes that shape water distribution and shape the work of engineers acting in irrigation systems design, water delivery, and water management reform. They must also understand the social and political world in which engineering is (re)negotiated. As both planned development and wider forces of change shape and reshape irrigation, they wish to understand how and why these processes impinge in water management and are translated in irrigation systems by their users. They also want to present concepts that challenge professional and development orthodoxy that is socially constructed and without empirical validity.

I now present some elements of our interdisciplinary approach, using the above-mentioned overview of where I think struggle has come from, as my starting point. The oldest and most developed of these is that irrigation is a sociotechnical phenomenon, and an irrigation system a sociotechnical system. Also that, in wider water resource management, irrigation systems are sociotechnical systems within wider agroecological dynamics and water resource management systems - where change is contested and mediated within, between and around them. I focus now on the approach to irrigation and water management as a sociotechnical phenomenon. The lack of a hyphen is deliberate

to indicate it as a distinct approach. In fact, the Group responded to a growing use of sociotechnical terminology from several areas of research work and innovation theory, but adapted it for themselves. The first use was from social scientists within the field of irrigation and development (Uphoff, 1989). The second was its use in the field of the social construction of technology and actor-networks (Bijker *et. al.*, 1987). Yet a third was from the work of engineers concerned with understanding innovation processes and design processes (Checkland, 1981). As I show in the following sections, the Group explored these ideas but moved beyond them, in their drive for interdisciplinary understanding.

Irrigation is a sociotechnical phenomenon because it is socially constructed, has social conditions of use, and has social effects (Bolding *et al.*, 1995; Mollinga, 1994, 1998). Operational water management is also an interplay of domains and of practice and control in crops, water supply and people (Manzungu, 1999). An irrigation system can be seen as a network of heterogeneous elements held together by a diverse set of relationships, and is both social and technical at the same time. This network is held together by people, who mobilise resources to link these elements and consolidate their control over them, through various forms of control acting together in the system and beyond it. It is here one can see the social interfaces and arenas. Thus the social and the technical act together.

From this starting point we have also developed a 'sociotechnical approach' to irrigation and water management, working from a starting point on the nature of technology. Technology defined in its widest sense, is a capacity for transformation or what Benton (1992) describes as mediation between society and natural resources (Knegt and Vincent, 2001; Vincent, 1997; Mollinga, 1984). How we choose to see, describe and act towards this transformative capacity is also socially constructed, has social conditions of use and has social effects. There are many social structures in which people act – relationships, norms, institutions and knowledge - embedded in technology and its infrastructure. They interact and shape this transformation in the supply of a resource, between society and the natural world. In my inaugural address, I thus described how irrigation is both a technology and a resource. Irrigation and water systems are technologies - and bring transformation of society and natural resources - through social action. Secondly, that irrigation water, and water for other uses, is a resource, the regime of which is shaped by societal and environmental structures and processes. Thus, in irrigation there is an ongoing interdependence between the infrastructure system, the normative system and the organisational system (Boelens and Davila, 1998): change in one affects the other. We can also explore design further within these interdependencies, recognising that transformation involves work and power in an environment. This requires control but also creates dependencies. Thus one can open up interplay of these dimensions in social and technical relations. This allows more detailed exploration of infrastructure and system design, and water delivery. It also allows us to look at adaptive design and actions for change.

The Group works with this approach in several ways. One is to continue to do interdisciplinary research and define interdisciplinary concepts, in thematic areas of research, which are also contemporary development questions. These questions include continued work on irrigation as a sociotechnical phenomenon,

but also on water as a contested resource and, policy as process. The interdisciplinary concept of a sociotechnical system is one also used to explore interactions between society and natural resources. Another concept is the typology of 'water control', developed by Mollinga (1998) and Bolding *et al.*, (1995). This shows that hydraulic, organisational, political and social control interact to determine water distribution. The Group has added to this, to distinguish between sociolegal and political control, and cultural and metaphysical control (Boelens and Davila, 1998). Others under development include 'irrigation design concepts' (van Halsema, 1996) and the 'instructions for use' of a water resource (Knegt and Vincent, 2001). These act to open up discussion and negotiation about designs of technology to provide equitable and sustainable irrigation. They also form part of the work being carried out to develop a 'sociotechnical design' approach, as distinct from others (see Vincent, 1995), so we can argue constructively with engineers and planners. We also work on particular normative structures, knowledge systems and social relationships that work through technology and shape the delivery of irrigation and water as a resource. These include water rights, gender, organisational change, and agro-ecological design.

Contrary to the perception of some social scientists, we have never been forcing a 'technology structured' entry to the study of social action and society. Rather, we have tried to search with social scientists (and other professions) to find complementary theory. This helps understanding of the dynamic interfaces of water technology and management, with wider social, political and ecological structures and processes.

Norman Long has often challenged interdisciplinary research to show its recognition of social theory, even if not his own. Without this it could be technocratic, populist and even dangerous in its assumptions, and concerns for joint action and learning. The Group has always accepted this point, although not always his theory – which also perhaps explains our capacity to work alongside each other. Firstly, this is done through the search for complementary theory to build upon the sociotechnical approach. Secondly it is done through the research design of students. The search for complementary theory has differed with the entry point of research. Mollinga (1994) summarised key social theory in use for looking at transformation in technology and its links with society. For others entering from natural resource perspectives and interests in local adaptive design, theories from social anthropology have been used to study the adaptive design of technology and water management by society, and their transformation with new social orders (Cohen, 1976; Hunt, 1987). The research methods also focus on key actors and their social networks and knowledge systems. This research entry from ecological perspectives can also link with theories describing wider processes of social and agrarian change reshaping irrigation technology and water management. These perspectives also draw on cultural theory to explore social concerns, concepts and cosmologies manifested in technology design and water resources management. They can also engage with conceptual frameworks to explore innovation in irrigation and water management.

Interdisciplinary irrigation and development studies

To explore how the Group has struggled over time for these ends, this section takes a chronological approach based on the publications of the Group over the years. The sections below are titled according these publications.

1978-1985: Irrigation and development 1: irrigation, peasants and development
Looking back, it is probably hard to reproduce on paper the intellectual excitement of the development debate in the decade 1975-1985. Liberal and Marxist theories of development were under attack, but the debate had not reached the crisis of development theory recorded by the end of that period. Processes causing underdevelopment were discussed equally as much as approaches to development. The Green Revolution was openly critiqued in its impacts, and more generally the neutrality of technology was openly questioned. Those involved in development - which included irrigation engineers - were in the thick of a range of debates about transformation and approaches to development. Parts of the irrigation profession involved in development assistance and international research began to respond to this debate. Norman Long was not at Wageningen early in this period. I discuss this to show my view of the ideas shaping the start of the interdisciplinary approach, which also influenced work in my tenure.

The work from other universities, and by irrigation professionals working in new intervention programmes, impacted into Wageningen as well as many other irrigation groups concerned about social change. So too did debates about the problems of 'development'. Cornell University set up its Tropical Agriculture programme in 1963, as part of an inter-University programme with the Philippines. By 1970, PhD research on field (rather than model) water balances showed

> *'something rather surprising for that time. They suggested that farmers were rational, if not totally optimal in their water management, notwithstanding that water deliveries were unknown in amount and irregular in timing...The studies showed that farmers actually managed the systems at physical levels that were nominally the responsibility of the irrigation bureaucracy...Our experience made it clear that reasonable understanding was only possible if (irrigation) systems were considered from a holistic perspective that included social, economic and cultural understanding, as well as engineering...'*(Levine, 1977:26 in: Diemer and Slabbers 1992)

Levine was the first to discuss the concept of irrigation performance and 'performance indicators', in his work on Relative Water Supply (Levine, 1977). He used it as a means to study what farmers were doing at local level. However, these indicators increasingly became tools to judge main canal system water distribution, and to compare agency with farmer-managed schemes and prescribe change. Thus at the outset, a tension emerged between research aimed at opening up understanding on irrigation and scope for its transformation, and research designed to objectify problems and find generic models and approaches to help plan change. This has been a key tension that the Group has also tried to struggle with. This shift into more theoretically prescribed and 'logical' thinking on how to improve irrigation was led by the World Bank (Bromley, 1982) and the

CGIAR system. The Cornell Group, with others, led greater efforts to understand the social, economic and cultural dimensions integrated with engineering, and how intervention transformed their interactions.

Unlike Cornell, Wageningen had long colonial roots in its agricultural science, with interests in modelling and trial-based research that restricted easy change. In 1979 a group of students set up a research group on irrigation management to spearhead review and research on social knowledge that irrigation engineers and professionals needed to work with. Almost from the outset, the group moved to look critically at social theory on processes of transformation. They also looked at how development assistance – such as projects of intervention – were also processes of social change with outcomes shaped by local action.

In 1985 Eggink and Ubels published the first review in the name of this group, with the same title as this section. Both these authors worked with Norman Long , and his influence on their ideas is clear. The review set out to analyse how irrigation development was a factor in processes of social change. Irrigation was looked upon as a way of producing – a social activity – shaped by dialectical interaction of social forces, becoming a social force in itself within that process and influencing further developments in society. In identifying wider development theories and concepts relevant to this view, the study looked closely at neo-Marxist theory, and also comparative cultural analysis, as a means to examine and explain irrigation and development. It recognised how irrigation involved wider social processes of articulation through commoditisation and labour processes. To this aim, they represented irrigation as a 'social force', to distinguish Wageningen work from the older 'Technocratic Approach' characterising much of irrigation teaching and research, and from the new and emerging 'Management' Approach coming from the World Bank and CGIAR.

Beyond this review of theory, the authors, and the students they represented, took specific recognition that they must have a normative element to see (as interveners) their own culture and the biases they bring to it. However, this did not really evolve further until the next era, which identified a powerful theme of discussion and work focused on the 'irrigation engineer' and the social analysis they can engage in.

The book sat above some complex differences in ideas within the Group about approaches to a broader study of irrigation: these surfaced further in research published during the following period. Some accepted this approach. Others could work with the concept of irrigation as a social force, but wanted it developed in other ways. They wanted to study other relationships in design and management, and other social relationships between politicians, bureaucrats and engineers and farmers, who had their own goals and paradigms. Also, they wanted more a contextual focus on wider (and other) forces of agrarian change acting in irrigation. It was certainly possible to look at local water delivery for production through this 'actor' and practice lens. However, it restricted attention to wider institutions and the technology of irrigation. Thus others saw limitations in the 'social force' approach. The book's focus in contemporary modernisation restricted study of older historical paradigms of technology. Also, it combined with other theory to have designs always described in language of paradigms and hegemony. While there was truth in this, it became tiresome for field engineers trying to work with change. It was also limiting for those working with locally created irrigation schemes, that often had many more coherent and positive

dimensions of design and management, and different relations of work and exchange practised within them. Additionally, it became problematic for the study of changes in thinking about irrigation reform and water reform. In some places, the separation of these Approaches has remained in irrigation and water reform, with institutional reform superimposed on a technocratic bureaucracy. Elsewhere, however, the problem was how the Management and Technocratic Approaches were actually coalescing into general 'technoeconomic' models for irrigation management and its reformulation, specifying preferred technology and institutions in designs, and the performance levels to be expected from them. I have referred to this as the 'sociophysical approach' to irrigation (Vincent, 1995).

Here, the real issue was the shift from the 'holistic' field studies of Levine (1977), Coward (1979) and Wickham and Valera (1978), to later 'holistic' views. These transformed schematic models of systems, successful institutions and design management relations into systematised models of relationships in irrigation (Small and Svensen, 1992). The authors of these schematic views (Uphoff, 1989, Uphoff et. al., 1990; Keller, 1986, 1990; Ostrom, 1990) were actually non-prescriptive, using insights from fieldwork. However, their ideas got taken up into prescriptive, often untested generic models to structure proposed change. Critique alone could not attack their power. Only research in the field on the realities in design and management, and the different ways that people could share, distribute and manage water could have an impact on that. This set in motion further work on irrigation practices. Myself, together with others in the Group, tried to further this work after my appointment in 1993 to show how a 'sociotechnical approach' to irrigation design exhibited different realities and options. These later studies aimed to examine 'development' orthodoxy in recommending change in irrigation and water management, through studies into the realities of irrigation performance and its assessment under a range of preferred institutional regulations and design concepts.

For all these reasons, the 'integrative view' of Eggink and Ubels (1985) became transformed, and the search for an inter-disciplinary approach began. This was not only to give real impetus to defining approaches for analysis of sociotechnical phenomena. It was also to highlight conscious discussion of what it was to be an 'irrigation engineer', why an engineer's ideas and actions might be different to a farmer's, and the social and political world in which (re)engineering takes place.

Internationally, the work of IWE that made the biggest impact was the 'grey' network publication by Luc Horst (1983), critically comparing 'schools of thought' on irrigation control technology. To many engineers at large, it created a new basis for discussion on water distribution in relation to irrigation development concerns. Until then they had been largely minor commentators on issues of design or maintenance, within the debates on implementation and management of irrigation systems. The Irrigation Group first became more known in international development for its ability to raise new debate on design and operations related to development, in both technical and interdisciplinary ways. However, it attracts criticism from some within Wageningen for its supposedly sociological preoccupations. This paradox has not been lost on its staff and students. Perhaps this chapter goes someway to re-balancing the view.

Fuelled by these internal and international debates, a new study programme and the strong 'Artefacto' debate on technology in the Group (Artefacto, 1990), the IWE embarked on serious thinking about research - thematically, conceptually and methodologically. The title of this section refers to two books (Diemer and Slabbers, 1992; Diemer and Huibers, 1996). These books include reviews of practice in irrigation in general, and the results of field studies, some of which began in the previous period. The books began to show what really happened in irrigation management, the conflicts that could arise in design and in operational water management, and issues within this for small farmers. They show the start of the focus onto technology that grew in this period, especially after the 'Artefacto' study. These studies did not yet locate themselves in wider social dynamics. However, this was a period when the Group began to draw on other social and development theory, political economy and innovation perspectives, and to develop an interdisciplinary perspective with a focus around technology.

The group decided to focus on case study and field research in offices, canals and fields of irrigation systems. This was then characterised as 'action research' or 'operational research' as distinct from 'field experiments' in agricultural research. This made the Group look to social science for methodological as well as theoretical insights. Actor-oriented approaches became a means to identify key human agents in water allocation and distribution, where they interacted, and the role of technology and institutions in these interactions. As both van der Zaag and Ubels point out in their papers in Diemer and Slabbers (1992), physical settings influence the social practice of water management, and create interfaces between actors in irrigation management. Norman Long, in his advocacy of actor-oriented analysis, became a focus of much attention. However, students actually often went on to work with much wider ideas drawn from social science, most notably with the concept of 'practice' (Bourdieu, 1977, 1990), with agency and structure (Giddens, 1981) with action and knowledge (Latour, 1987), and actor-network theory.

At this time, some staff and students also became more heavily involved in the actual project work of the Group, most notably with project-related support to development of small irrigation systems in Senegal and in the large Tungabadhra irrigation system in India. They also became involved in University collaboration in Pakistan and Mozambique. The contact with Norman Long expanded through contacts in teaching and research supervision, with students moving to work within his research programme in Mexico. These activities offered students not only new bases for field research, but also the possibilities of longer-term involvement for more historical analysis, and more direct contact with government engineers and operational staff. Thus beyond analytical research, the group also became involved in new learning and negotiation about development and change in irrigation systems. This active period also brought out some creative tensions within the group that had begun earlier in the 1980's. Some stressed continued attention to broader processes of agrarian change and development paradigms within the study of local action. Others, however, wanted to open up creative study of local water management devoid of systematic critique of agrarian change and forces of development, and left more open to see local strategic action. Yet another group wanted to focus more on the

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process of development and innovation, to see how irrigation design and development might be better negotiated. While the first of these had tensions with Norman Long's work at the time, the second interacted far more openly with it. The latter group, moving much more towards work under the Chair of Communications and Innovation, saw much less of the tension, and was happy simply to use Long's ideas as tools. As Scheer wrote on social interfaces:

> '...It is beyond the scope of this thesis to judge the ideas of Bourdieu or Long, and I use their approaches and concepts as tools...The reason why I wish to add elements of the social interface is that, as van der Zaag points out, the practices at social interfaces are more dynamic than others. The social interface concept of Long leaves more space for possible conscious learning...' (Scheer, 1996, p.17)

However, if this was to cause momentary stresses and disagreements in the group, all three lines of work brought their contribution to sociotechnical perspectives.

Once again, it is helpful to reflect on how the professional world saw the Group through its publications. The biggest impact came from its workshop on 'Irrigation design in Africa' in 1990, whose breath of coverage drew recognition (Ubels and Horst, 1993). It was admired for the way it opened up the complex world of irrigation and its different domains of action and for the way criticisms of both design ideas and development interventions were presented in very readable and empirically grounded text. Also admired was research into irrigation systems that showed the relationships between technological change and social change in irrigation systems and the historical changes of 'modernisation' in this relationship (Bolding et al 1995). The Group interacted in contact and networks in research on Farmer Managed Irrigation Systems (Bleumink *et al.* 1993) and it was during this period that I initiated contact (Diemer and Vincent, 1992). However, while relations have usually been amicable with the international agencies, it was still difficult to challenge design and development paradigms in mainstream irrigation. As mentioned earlier, these were shaped by techno-economic models, strongly based on performance valuation, which I call the 'sociophysical' approach to irrigation (Vincent, 1995).

The Group began to publish a series of papers (Bleumink et. al. 1993, Bolding et al, 1995; Diemer and Slabbers, 1992; Horst, 1990; Hoogendam, 1993; Ubels and Horst, 1993; van der Zaag, 1992). These showed the complexity and interdisciplinary nature of irrigation, the parts played by social actors in water distribution, and the struggle around technical intervention in development. With hindsight, these texts are important to discuss, because they were both admired but also criticised. They showed the richness of interactions shaping agrarian dynamics in irrigation schemes, and the delivery of water. They also showed the detailed ways in which design paradigms played out, clashed with local principles and often were inconsistent within themselves. Finally, they were also instructive to engineers about the range of social awareness necessary in work with change of irrigation and water management practice. However, to social scientists they seemed like poor or biased attempts at thick description that no one but social scientists could or should do. On the other hand, "mainstream" irrigation and development critics bemoaned the lack of clear guidelines, typologies or lessons that they could learn from. Villarreal (1992) also discussed this problem for actor-oriented studies.

The recognition that irrigation was a sociotechnical phenomenon grew out of a wide range of work and struggle in this period. It was the beginning of an interdisciplinary approach internally important for understanding irrigation and water management. However, the approach was also externally important for opening up criticism of wider paradigms in irrigation, development transformation and development practice.

Since 1994: Irrigation and Development III – interdisciplinary development studies, lively practice and hardened history, and making water work
The year 1994 was not only the start of my tenure as professor, but occurred in a watershed period for development. A range of new development policies and new development theories came more prominently into action and discussion – particularly neo-liberal reforms, the ideas of 'social capital', 'new institutional economics', and 'entitlements theory'. These changes impinged forcibly into irrigation and water management. There were new international programmes for 'participatory irrigation management' and 'good water governance' to increase the responsibilities of farmers and local organisations in water management, and radical new Water Laws in some countries. A range of environmental concerns put natural resource scarcities centrally into development debates and even generated new social and political movements. Development intervention evolved further in approaches to facilitating change and also into conciliation work in struggle and conflict over natural resource management. The title for this section refers to three papers, none of which have been published. The first presented the theoretical fields and key interdisciplinary concepts of the interdisciplinary approach to study in irrigation (Mollinga1994). The second developed ideas for studying design in interdisciplinary but theoretically consistent ways. It looked at studying changes and the struggle to transform old canals and dominant and hardened ideas (Hoogendam, 1993). The third refers to a leaflet that summarises the sociotechnical research and teaching of the group, and its concern to understand how irrigation can work in equitable and sustainable ways (Irrigation and Water Engineering Group, 2001).

This return of social and economic theory to shape intervention, and re-emergence of social struggle around resource access and proposals to change it, was important in several ways. It became possible for some in the Group to engage with development intervention and public action in news ways, as institutional reform looked to define new articulations between state and civil society, and society and natural resources. It also put a new technical and ecological debate into play in irrigation around paradigms of integrated water resources management and river basin development (Bolding *et. al.*, 2000). This opened up discussion beyond irrigation water delivery, in the contest over reforms in water management. This was a new debate for intervention that went beyond improving 'performance 'of main system management. It also existed both in the resource dimension and for production - as threats of water scarcity created attention to pollution, degradation, and future food security. This period has been a very different period of interaction with Norman Long, moving beyond alignment and constructive frustration, into tolerant collegiate working. This included the multidisciplinary ZIMWESI programme in Zimbabwe, and

students seeking joint supervision to explore realities in irrigation systems under radical management reform.

To cope with change and create space to reflect on new policies and research questions, the group restated its emancipation objectives, to work for equitable and sustainable irrigation and water resources management, keeping its perspective from that of small, marginalised and vulnerable actors in water use. With this it recognised that, while still committed to understanding the negative and marginalising effects of public intervention in irrigation, it also connected with new collective action at the interface of society and water management. It has done this by aligning more with what Gasper (1996) describes as 'Cultural and Development Ethics'. This approach allows a range of perspectives and interests to shape research on processes of change acting in water technology, rather than restricting study to certain dominant social relationships. The group can no longer be divided and labelled as social scientists or engineers. Perhaps the difference is more between backgrounds in development research and development practice, and in interests in transformation and action. This has brought more light to bear on what Mollinga (1998) saw as the problem between theory and practice, and knowledge and action in interdisciplinary work in irrigation, and what I saw as gaps in bringing them together. The group is structured around contemporary problems in water management and areas of international action within them, drawing on interdisciplinary and social, technical and environmental knowledge for these fields. These include the study of water rights and design of community schemes, gender in water management, organisation change in large water systems, optimal water use, water delivery practice, integrated system design and conflict resolution. These all contribute to our broader concerns of agro-ecological design, water development, social change and public action in water management.

We have worked to extend research showing the realities of water delivery to challenge dominant ideas. To the same end, we have also struggled to make our work more visible and our ideas more accessible in their analysis of irrigation questions and challenges. We seem to be valued internationally for our books and papers challenging normative ideas structuring irrigation development and reform (Horst, 1998; Boelens and Davila, 1998; Koppen and Mahmud, 1995; Mollinga, 2000; Zwarteveen, 1998). Design and policy debates have been influenced by research showing the practice and control in shaping operational water management (Manzungu, 1996, 1999), and the agroecological dimensions of design (Parajuli, 1999). The works of Mollinga (1998) and Kloezen and Oorthuizen (1995) have shown the sociotechnical reality of large-scale irrigation systems in the interaction between people, technology and water, shaping water delivery and shaping change in irrigated areas. In current PhD research we are using performance measurements to reopen examination of field realities, to criticise models for contemporary intervention and thus challenge mainstream thinking (Wahaj *et. al.*, 2000).

Many people cannot understand how, if we can write language like this, we are not social scientists and do not do social science. It is rather that we struggle to engage in the language relevant to society and social action. It allows us to argue how, and why, our sociotechnical approach to irrigation and water engineering is relevant to development questions and global change. Also how it is more likely

than other approaches to irrigation to fulfil concerns for more equitable and sustainable irrigation and water management.

Conclusions

This chapter has used the term 'social interface' in its title, in several ways. First, to highlight the use of what is probably the enduring element of Norman Long's own conceptual work in the Groups interdisciplinary approach, and study of irrigation as a sociotechnical phenomena. Second, it has also tried to show the interface the Group has had with Norman Long and his work on the sociology of development over time, and the wider questions the IWE has pursued at the 'social interface' of irrigation and development, to develop its own sociotechnical approach. Finally, it was used to show the constructive struggle within the Group as it searched to find effective ways to study the social interfaces of irrigation technology. The term 'struggle' has been used primarily in its sense of great effort, exertion, and contention between people to understand and develop ideas between our groups, but also to recognise an element of resistance. The Group has an actor-oriented approach in research, and works with the concepts of interfaces and arenas, but did not accept the actor-oriented analysis that Norman Long used in studying agrarian change. The effort has come in the Group, in its own deep engagement and commitment to struggle with development questions, and not just development theories. In this it has worked with the social sciences, development practitioners and the irrigation profession. This struggle has not only been about theory, but also about how and why theory, practice, knowledge and action can inform each other. Norman Long's work has been a lens, a key, a tool and sometimes a source of constructive frustration to the IWE Group, changing over the time of his tenure. But it has been much less of a battlefield than with other disciplines, and there has almost always been a dialogue.

To use a metaphor from Norman Long's work, we have evolved in a social arena of debate on social action and social change around technology and resource use, interacting with him, other irrigation professionals and social scientists. Contrary to many critics of the Irrigation Group, we have never become purely involved in sociology. Rather ideas from sociology, and the sociology of development, have just been some of many we have worked very seriously with. Our aim has been to generate understanding at the social interface between irrigation and development, between engineers and water users, and between water users and policy actors in irrigation and water management reforms. These inform the engineers, professionals, and water users who work with the ever evolving and complex challenges of water management, - for which action - material and social - will continue to be engineered.

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6

An annotated letter to a grandfather

Jan Douwe van der Ploeg

Introduction

This chapter is written in the form of an annotated letter containing anecdotes and conversations: a form of presentation used by writers varying in style from Kafka (1983) to Chayanov (1976).[1] This might seem an unusual way to reflect upon the work of Norman Long. There is indeed a difference between a scientific article and a letter. However, since the letter contains many elements that are dear to me – and which are at the same time difficult to integrate into scientific discourse – I have decided to use its form as a way of presenting this paper.

The letter discussed here is in several respects a confusing document, as I will explain later. I have nonetheless chosen for this slippery road simply because Norman Long, to a considerable degree, has formed me intellectually. I do not mean to imply with this honest statement that creating confusion is a thing I have learnt from him. Far from that. The point is that the letter seems to be, if I am not mistaken, a nice vehicle with which to highlight some of the less visible cornerstones and complexities of the approach developed by Norman. Thus, the presentation of the letter and the accompanying discussions might also be understood as an indirect expression of my admiration for him[2].

The first issue hidden in the letter regards the relevance of context and hence the importance of local cultural repertoire. As the combination of letter and explanation that follows will make clear, any exposition is meaningless when isolated from its context. Even more so since context is to be found *within* the exposition itself, i.e. in the form of language, symbols and implied meanings. Such an observation is probably the most powerful argument against the often articulated criticism that Long's actor-oriented approach is identical to methodological individualism. Firstly, an actor-oriented approach not only implies an inquiry of context; it is one of the most powerful and precise tools for the analysis of relevant context and the implied 'structural settings'. Secondly, the letter underpins another important element of Long's work: the notion of *interface*. The letter is telling, especially where it highlights the confusion (and

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[1] The letter to be discussed here, though, is not a letter to a father. Nor is it a message from the future. This letter goes back to the past and the person to whom it is addressed is a man who died long ago.

[2] It is very difficult for Friesians, like me, to express admiration and praise in a direct way. In our culture praise is highly suspicious. It usually implies the opposite.

some new insights) emerging out of the encounter of different cultural contexts. In his *Introduction to the Sociology of Rural Development*, Long (1977) stressed the importance of the interlocking of (until then) isolated value circuits for the 'kick-off' of development processes. There is some resemblance here; by being exposed to different cultural repertoires, specific notions often acquire new and often highly valuable meanings. *Inter alia*, this also shows how 'hidden transcripts' (Scott, 1985) emerge in sometimes unwilling ways. Thirdly, the letter refers to a completely different issue: the relevance of development sociology *outside and above it's own privileged object and domain*. I myself am one of people to whom the cry 'they are going back to where they came from' applies to. This might sound a bit cryptic, I am sure, but the discussion that follows will clarify this point. Finally there is a related issue of the 'travelling capacity of concepts, words and symbols'. They move, as it were, from town to countryside and *visa versa*. They travel between Catacaos in Peru and Burgum in *Fryslân*, between past, present and future. This travelling is illustrated in the letter as well. In the conclusion I will return to the meaning of 'travelling concepts'.

A brief introduction to the letter

The original letter upon which this article is based is not mine. A friend who happened to have studied in Wageningen as well wrote this original and fictitious letter[3]. It was originally addressed to a grandfather who had already passed on several decades before. I encountered the letter sometime later by accident and have translated and annotated the original. I am aware that considerable confusion might arise from the fact that the original author carries exactly the same name as mine. This is due to the fact that his grandfather (just as mine) was also called Jan Douwe van der Ploeg. In our Friesian kinship system, the first son of every son and the second son of every daughter is named after the grandfather. This could imply that the original author and the translator/annotator probably have some common ancestor. Robert Goddard (2001) might able to ground current events firmly in the complexities of the past but speculation is the only possibility in Friesland.[4] Having a common ancestor gives me the confidence that I am somehow authorised to use Jan Douwe's letter.

A confusion that arises is that several Jan Douwe's play a role in this text. There is one who found, translated and annotated the original letter. Then there is another Jan Douwe who wrote the original letter. Where necessary, the first Jan Douwe will refer to the latter by saying 'the other Jan Douwe'. *Oare* Jan Douwe (i.e. the *other* Jan Douwe) is an expression often used in the context of extended families where many youngsters carry the same name. I will use the same solution here. Finally, there is the grandfather (or *Pake*) who is also called Jan Douwe. The latter mostly figures as *Pake* in the following transcripts. I will interrupt the flow of the text every now and then to explain events and notions. Although headings are of course lacking in the original letter, I took the liberty to insert some to make the text accessible.

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[3] This friend ended up, very sadly, in the lunatic asylum of the Friesian city of Franeker.

[4] This is partly due to the fact that during World War II, the Friesian resistance destroyed considerable parts of the existing civil registration systems.

Dear Pake

I am very sorry that it has taken me so long to write you to again, and to inform you of my whereabouts. I remember it well; I could explain it to you perfectly. It was in the autumn of 1974, around the time of my experiences in the North of Peru. I had just spent two years there, mainly in the Comunidad de Catacaos, the heroic village about which I wrote to you before. Although you were already an old man at the time (more than 80 years old if my memory serves me correctly), I distinctly remember you asking me a range of very pertinent questions. What struck me so much then was that you seemed quite familiar with the situation that, for me, was a complete surprise: another world so distinct from the one I had known until then.

Notes on a dialogue and on the language used

We were speaking, at that time, our own Friesian language – the 'tribal language' as outsiders call it. I remember this seemingly irrelevant detail so vividly, because my girlfriend of that time was participating in the conversation. Participating is probably too big a word. As you may remember, she could more or less follow our conservation, but she was not able to express herself in Friesian. What else could you expect from a girl from Amsterdam? Anyway, the presence of my girlfriend resulted in some funny complexities. Since she was Dutch speaking, you addressed her as 'Jo'. Evidently that made no sense al all. She should have called you Jo, but she couldn't since she was not familiar enough with our language. But an elder man like you, calling that poor young girl Jo, was hilarious if not a bit ludicrous.

I interrupt the letter to spell out some of the particularities of the pronouns in the different languages involved (see also the following scheme offering a synthesis). Without a firm knowledge of these particularities, the above extract from the letter would be pure nonsense. Evidently, it is not. For dialogues, Friesian language offers two pronouns: *jo* and *du*. The first expression resembles the English pronoun *'thou'* as used in prayers or in medieval encounters with noble people. The latter *du* is only apt for discussions between very good friends, people of the same age and/or within the family. An expression in-between (such as the Dutch word *U*) is lacking.

Friesian	Dutch	English
Jo	Gij	Thou
	U	
	}	You
	Jij	
Du		

I understood the background to your use of 'Jo'. You have been engaged in hierarchical relations almost all your life. As a young boy and later as teenager, you were hired out for one guilder per year to a rich farmer on the clay soils in the west of the province. Later you became a worker in the peat industry and after the big strikes, when you were fired, you went off to work as a hannekemaaier *(an immigrant worker in Germany engaged in jobs like mowing, JD), and finally, you became a peasant. A peasant quite dedicated to the art of poaching (as, I guess, nearly every peasant was at that time). You have been constantly surrounded by superiors – schoolteachers, landlords, clergymen, highly ranked policemen, judges, military*

men, and traders – all of whom were Dutch speaking[5]. In the world you lived in, Dutch was the language of authority, of power. The authorities had to be addressed in Dutch language and if they weren't, severe sanctions would follow. Kneppelfreed [the Friday of the Truncheons], an episode that occurred many years later, only underpins the point I am making here.

This memory refers to a particular and telling episode out of recent Friesian history. In oral history the story is still very much alive but official recordings are thin and misleading, if not almost entirely absent. The *kneppelfreed* event occurred somewhere in 1956 or 1957. It actually started some years earlier when the central government in The Hague decided that all weights and measures should be according to the metric system and be expressed in Dutch. Until then milk for example was sold in Friesland by the *mingle*. That had to become the *litre*. A different word, and a different amount. As always, nobody in Friesland paid much attention to the new imposition. However, the authorities became irritated and new orders were communicated. The unavoidable occurred. In the village of Beetsterzwaag a police officer hidden behind a big tree witnessed a conversation between a housewife and a milkman about the required amount of *mingles molke* (milk). The poor milkman was arrested and brought to trial in Heerenveen. Fedde Schurer, a Friesian poet and well-known advocate for what was called 'Friesian freedom', became his defender. The milkman, though, was declared guilty, after which the case went to the High Court in the provincial capital, the city of Leeuwarden. The lawsuit was scheduled on a Friday. Two details, which are far from irrelevant, need to be explained here. First, the High Court is located in the so-called *zaailand* (literally: the seeding ground), a central square in the city of Leeuwarden. Second, the weekly provincial cattle market was organised every Friday on this same square. Fedde Schurer and the *Friesian Movement for Freedom* had organised some 10 to 20 sympathisers to protest against injustice in general and the fate of the milkman in particular. What happened was the following. The mobilised policemen (some 100) started to knob the demonstrators who fled and tried to hide amongst the many thousands of farmers and cattle traders on the square. In their enthusiasm, the constables started to hammer the farmers as well.

Then there is a third indispensable detail. The *zaailand* was just a normal square during the week. The keen observer would notice, however, that there were small holes in the surface of the square. These were used on Fridays for the placement of iron and wooden poles, to which horizontal poles were fixed so that the cattle could be attached. Now, the farmers and traders, having been hammered on their heads by the policeman, decided to take these poles and convert them, as it were, into a rich arsenal of truncheons. The police fled, the now cheering crowd took arms and proceeded to the military quarters. By the end of the day, the now unarmed military men and police had been hunted and flocked into the pastures surrounding the city. New military forces from the South arrived in the night, but the farmers and traders had already returned to their homes and daily affairs. This is the story of *kneppelfreed* and as such, it continues to be told and retold, even now at the beginning of the third millennium.

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[5] Even if they knew the Friesian language (which often was not the case), in formal situations Dutch language was used to underpin unequal relations.

Dutch language was the tool and vehicle of others: of the powerful. We were assumed to have respect for them, but this was more or less identical to self-defence. This meant in the first place that you had to address them in a respectful way. You spoke 'jo' to them. I remember that you yourself were especially clever in cheating the 'others' with your use of the 'jo' word.

The interesting point here is that language as used by the actors concerned, divides the world into 'macro-actors' (ref. Mouzelis, 1991), who figure as the strong, important, clean and well educated category because they are Dutch speaking. On the other hand there is the mirror image: the pagans, the ones who can't even speak properly. This division, however, is not understood here in the Mouzelian way, that is in an *a priori social hierarchy*, which is merely *reflected* in everyday language.

Of course, cheating or tricking her was not your intention when you addressed my girlfriend with the 'jo' term. It was a simple matter of routine for you: talking to Dutch speaking people could not avoid the use of that particular word and it's implied power relation. It was in your bones, you couldn't do it differently. To me, however, it seemed to be a complete turnabout. Talking to the mighty implied Dutch language. And by talking Dutch it was almost automatically assumed that the person being addressed was mightier than thou: a 'jo'. And this made a humorous contrast with the girl that should have been addressed with the pronoun du.
Evidently, there would have been another, quite obvious solution. I was aware of it and I am sure you had thought about it as well. The absence of the obvious made the situation even more hilarious. Nobody else, though, would have understood this, since they would not have been sufficiently familiar with our tribal language, let alone with the particularities of my private situation.
In order to avoid the social hierarchy implied in pairs of words such as jo and du, Friesians very often use the third person in conversations to refer to a person who is present.

It is quite interesting that without knowing the respective theories, the other Jan Douwe points to the phenomenon that it is through language and the cultural repertoire entailed in it, that relatively amorphous situations are defined and ordered into 'structural settings'. Further on in this letter he will apply the same point of view in his description of modern farming in Friesland.

When talking face to face to e.g. a large farmer, you would not normally say 'what do you (jo? or du?) think about...' but instead you would say: 'what does the farmer think about this or that...' Probably the other will then reply 'well, I would have to tell the labourer (feint) that....'.

This refers to social positions seemingly being fixed, rigid if not objectified in this way. One's identity is reduced to one's socio-economic or class position. Or to put it the other way around: professional identities, class positions, etc. are used as a vehicle in the interpersonal contacts, amongst others to avoid the assessment of some hierarchical order between the involved *persons*.

Class never has been a strange word for you, although you normally talked about ûs slag minsken *(our type of people, JD).*

The grandfather Jan Douwe was a fervent follower of Domela Nieuwenhuis, the clergyman who became the leader of the very strong anarchistic movement in

Friesland in the late 19th century. The old Jan Douwe had a portrait of Domela on the mantelpiece in his house. Whoever said a wrong word about Domela would receive a severe beating. Hence, class and class struggle were indeed familiar notions.

Later I encountered lots of people who indeed did what you seemingly did. They understood the world as fixed. They talked about 'structures' that governed us, that made us, to coin a phrase, like puppets on a string. We knew of course already knew that this was all nonsense. Yes, we used the words that referred to seemingly rigid positions, but in the meantime people like you moved quite differently. You danced through time. It was not an easy dance. That was why the dancers, or should I say the moving people were called wrotters.

Literally, the word *wrotter* can translate to *burrower* but it also can mean *a hard working person*. In the latter case, however, the association with moles and other burrowing rodents remains because the word has subterranean connotations; equally it is a word with associations of being physically strong and a bit stupid. But there is more: *wrotter* also implies that somebody going ahead, creating his own room for manoeuvre.

To make this particular concept more clear to a non-Friesian public I could possibly refer to the beautiful Irish movie 'The Field'. The central person in this movie, the Bull, would be a typical *'wrotter'*: strong, fighting and struggling like hell for progress, engaged in many fights, tough and demanding in the eyes of others with strong feelings of justice, but in the end also terribly stupid and tragic. Of course, this stupidity is not so much an individual trait, but an attribute emerging at the interface of being a 'bull' in a hostile environment.

The typical *wrotters* from Friesland started e.g. as daily workers in the peat industry or in agriculture. Through much hardship they finally obtained a small, (if not microscopic) farm, which they subsequently tried with much toil and suffering, to develop into something more decent, in order to obtain, as the beautiful expression in our language goes, *een pear skonken onder it gat,* i.e. to get a pair of legs under one's backside. This reflects the struggle for autonomy, for room of manoeuvre, as Long would argue (ref. Long, 1984). The use of this phrase is omnipresent in Hylke Speerstra's breathtaking account of Friesian immigrants. Wherever they went (South Africa, Paraguay, Australia, New Zealand, Canada, the United States) they fought to obtain *skonken onder it gat* (Speerstra, 1999).

The letter discusses how being a *wrotter* is at odds with the notion of social hierarchy and a fixed social division of labour. People *move through* these hierarchies and patterns of division, instead of being entrapped by them. But there is more. The letter even seems to suggest that the very concepts of social hierarchy and a more or less fixed social division of labour seem to be suspicious:

You have been pretty much a wrotter *yourself. Walking to Germany, mowing the endless fields, returning and meeting on your way back the woman that later become your wife, and my grandmother. But before that could happen she was your fiancée for some seven years. The both of you first had to save enough money to buy a cow and a pig. Co-habituating and having children would not have been deemed proper by you, her or* ûs slag minsken, *until that minimum requirement had been acquired. And then your being a* wrotter *continued, until you had two sons, seven cows and a*

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garden for horticultural production. And of course the klaverkamp *(a pasture full of clover, JD), which I remember so well. Turning back home from the* klaverkamp *with the wagon full with hay, two horses pulling heavily-- that really was a joyful ceremony. And yes, your son, my daddy, was in a way an unbelievable* wrotter *as well. He had the chance to go to the secondary school. The master had said he should do so. Through self-study in the evenings (the bloody amount of courses he did!) finally became a schoolteacher. And a fine florist to boot, but that doesn't matter here.*

Here the notion of *wrotter* is coming very close to the idea of a self-made man. This is not a denial of the more general meaning spelled out heretofore; it is rather a time and place bounded specification of the general notion. But there is a clear consequence:

Ha, I remember how my pa got very upset when I used the Marxist jargon in the '70's. For you class was not a forbidden word. My pa got mad though, saying that all that structure you're talking about, is nonsense, if people really want and fight for it, well, then they might well succeed. You would not agree that much with him, I think. It is a pity that it is too late too ask you...

It is at precisely this point that we encounter the endless debate that surrounded the beginnings and further development of Long's actor oriented approach. Is it a methodological device that allows you to better understand the 'mechanics' of the world (including situations of exclusion, marginalisation, etc) and to obtain a glimpse of the possibilities to ridicule, to resist and/or to move through this world? Or is it a substantial description of a world containing *per definition* a certain range of degrees of freedom, at whatever location in time and space? This somewhat fruitless debate comes down to the different opinions of a grandfather, a father and the confusion of the son.

And finally myself. Am I a wrotter? *No, I don't think so. It would be far too much honour for me. I would be degrading the meaning of the word by referring to myself as a* wrotter. *But one thing remains: the tremendous stubbornness I inherited from you and your son and, I guess, from the women involved as well. It's in my genes. I drive my girlfriend mad sometimes. Others as well possibly. But what can you do: it is, as it were, built into me.*

Notes on places and farmers faraway

Anyway, the issue at stake is a different one. It is about the words we used in what was probably our last encounter when I had just got back from Peru. Remember? - This is when my girlfriend from Amsterdam accompanied me. The easy way out would have been to refer to her in the third person. We have in Friesian language a wide repertoire of words to do so. There is joffer, *and* frou, *and* mefrou – *all implying hair-splitting differences in social status. Saying* frou *to the wife of the local medical doctor would have been an insult. I remember my pa told me that Beppe, your wife, had to correct him very frequently – the more so since others in the village had been complaining about his mistakes.*
Nonetheless, this reservoir of potential ways out of the dilemma could not be used. My girlfriend and me were not married although she was visibly pregnant. Hence, whatever word would have been used, be it frou, faam, joffer *or whatever, the Gordian knot (the impossibility to slot into established routines) would only have been enlarged further. It was like the song I learned much later, a song about 'a boy*

named Sue'. You solved the dilemma in your own, albeit hilarious way, by calling her 'Jo'. It was even trickier (you never knew), because her father, who was one of the founders of the first communist party in the Netherlands, was named Jo as well. I remember the surprise on her face. Jo? There's no Jo around here! 'His father died a year ago, so what are you talking about' she must have thought. Whatever the confusion that arose at this particular interface...

In the original letter the Friesian word *grinsflak* was used. Generally speaking, Friesian language contains very little abstract words. On the other hand, it is very rich in metaphors, in specific terms derived from the world of visible and material entities, which in turn imply more general or more abstract concepts. Room for manoeuvre, for instance, is a concept impossible to translate directly and *as such* in Friesian language. But then, *earmslach,* literally 'elbow room' (Fryske Akademy, 2000) pops up as an adequate and typically Friesian alternative (see also Fryske Akademy, 1990). The same applies to *grinsflak,* which I translated here as 'interface'. Later on, Norman Long would use this concept in his academic work (Long, 1989; Long and Long, 1992). I remember vividly the genesis of this word (and the underlying notion). Norman Long and I became increasingly unhappy with the notion of interlinkage, as developed especially by the Leiden School of Sociology. A world perceived of as consisting of interlinkages (*schakelingen* as the colleagues from Leiden used to say) all ran too smoothly for us and during one of our conversations Norman suddenly arose and said: '*Eureka,* it is all about structural *dis*continuity and we will call it interface.'[6]

Whatever the confusion created at this particular interface, we had a crystal clear discussion. You asked me what a deihier was in the Peruvian fields. At first I didn't understand you. I had never heard the word before.

Deihier is an old Friesian word, not in vogue anymore. It refers to the daily wage a daily worker could obtain for a day's job. Literally, the word means 'the rent you have to pay for one day'. One has to take into account here that (the other) Jan Douwe did not have any formal training in Friesian language. In those days Friesian language was not allowed at school, even at the level of the Kindergarten. Like many other Friesians of that generation, he is able to speak it, but writing had to be learned later, outside of school. Anyway, the other Jan Douwe managed to do so in one way or another as is illustrated by the original Friesian letter. I on the other hand, was never able to do so and remember the cold shower when going to school for the first time. A horse (*hynder* in Friesian) was suddenly a horse no more - it was a *paard.* A considerable backlog was created in this way and the boys and girls concerned became 'special needs pupils'. I feel like I've stayed in this catagory all my life.

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[6] What nobody knows is that Norman was one of the first in Wageningen with a PC and a printer. This is where he got word 'interface' from. And given the proverbial uneasiness of a social science professor with technology, he really believed that 'interface' meant 'something that is not functioning'.

But then I realised that it was the same as jornal, *the daily wage* golondrina*s would obtain....*

Golondrinas literally means swallows. In Peru, it stands for the daily workers who follow the annual cycle of differently distributed harvest periods. They go, as swallows, from the sugar cane harvest in the middle of the country to the cotton harvest in the North and then on to the citrus harvest in the valleys near Lima and so on and so forth. In the corresponding literature they are mostly referred to as *eventuale*s, i.e. those who don't have stable and protected labour relations, but who will work if they are able to get a day's work.

But then I realised that it was the same as jornal, *the daily wage* golondrinas *would obtain after a day of hard work. Working for a* deihier *was something you were familiar with right from your youth. I only discovered it when I was 23 years old and working in a place as remote as Peru. It seems that sometimes you have to travel far before you understand your own place and time. Or the place and time of your own* pake. *Anyway I explained the* deihier *to you about and the different arrangements it was embedded in. You were not surprised either when I told a bit about the struggles going on over there. Strange contrast: when I wrote a lengthy paper for my study on it, my professor (who was a nice guy, but that's beside the point) was sceptical. He said, 'I don't believe that all those guys (i.e. those peasants, JD) have studied Marxism'. Jo, who could easily follow this part of the discussion, agreed completely with you. She didn't understand much of Marxism. It was even worse than that; she didn't even bother with it. Nonetheless, she was neither very much amused with daily wage systems, be it through* jornales *or* deihieren.
You were intrigued by my story about the 'gringo pobre'. *In Catacaos, as in other places in the department of Piura, people mostly referred to themselves as* 'nosotros los pobres del campo' *(we, the poor people of the countryside). Transferred to other places that might sound a bit pathetic but there it was: simple everyday life language. Of course, there were other versions as well, sometimes more cruel, sometimes far sharper, and sometimes more humorous. You nearly died of laughter when I told the story about my compadre Perez, one of the local leaders of the then FEDECAP, the farmers' union of Piura. It was at a meeting in Chulucanas, that small place where all those lemons are grown. Perez was from the big co-operative,* Luchadores del dos de Enero. *Anyway, at the meeting in Chulucanas, (it was a protest meeting to make clear to the regional authorities that the life peasants were living had become unbearable, although I have to admit that I do not remember anymore the exact reasons or causes), my compadre Perez took the floor and at the end of his flamboyant speech he shouted: 'Don't you see that* el campesinado *is dying of hunger?' To underpin his words he opened his shirt in a dramatic gesture. A big, fat belly flopped out at the very moment he was referring to hunger. Both the authorities present and the mass of protesters burst into peals of laughter. I mean, the* pobres del campo *had a great sense of humour and knew how to joke and have fun. Nonetheless, the barrier was clear as well. On the one hand there was us,* nosotros los pobres del campo *or, as you would have said,* ûs slag minsken. *On the other there were the others, the* gringos. *Those from Lima were frequently addressed in that way. But it applied especially to foreigners. To people from Germany, Italy and Spain who at the end of the 19th and the beginning of the 20th century had taken their lands. And to those from the United States, of course.*
Yes, in the beginning it was difficult for me. I am tall, blond and especially in the beginning my Spanish must have been awful. But then I joined the cotton harvest in one of the common production units the community was having at that time.

One understands that the concerned 'unit' was one of the *Unidades de Produccion Comunal* (UPC), more specifically the UPC called *San Pablo Sur*. It

seems that this particular experience had a considerable impact on the then young (other) Jan Douwe. The remarkable point was that in these UPC's a man to land ratio was realised (a famous and much discussed issue in debates on land reform) that was far superior to the one realised in both the previous *haciendas* and in the later state controlled co-operatives. The thus defined 'room for manoeuvre' would play an important role in the thoughts the 'other' Jan Douwe developed later and which, eventually, would bring him a step closer to the lunatic asylum. Through his travelling he gained a lot of new insights, which allowed him, in the end, to obtain a refreshing view on the Dutch context to which he returned. However, the price he paid, especially when he further developed his type of analysis, was an increased rejection: you are mad, man. The particular experience described here drew a first cleavage, to say the least, between him, that is the other Jan Douwe, and his particular context, i.e. the body of institutionalised knowledge.

It was terribly hard work, starting at 3 o'clock in the very early morning. And then continuing in the burning sun. I fainted several times: the pesticides used during the cultivation enter into your body one way or another. It was frustrating as well, especially in the beginning: young kids picked far more mota *(cotton) than I could. Step by step, though, I got a bit more experienced. You know, I engaged in this work to better understand the functioning of these* Unidades, *a kind of organisational innovation designed by the* comuneros *themselves. It was great to learn all this and much more. Anyway, joining the cotton harvest had another effect that I came to know only later. The first time was in a* chicheria *(a local pub where mainly maize beer is served, JD). Behind me I heard old men talking about me. They were not aware that I was listening. It touched me that they referred to me as* el gringo pobre *(the poor* gringo*). Of course,* gringo *because of my physical appearance, but also* pobre *due to the fact that I had been picking cotton for so many weeks. "Cotton picking is what we,* los pobres del campo, *are doing" seemed to be the underlying rationale behind them calling me the poor gringo. Hence the (at first sight at least) impossible combination. This is how seemingly unbridgeable clefts within or between classification schemes might be overcome. Dancing through time (*omwarberje *as we say in our Friesian language) is, as it were, playing and moving with words, inventing sometimes even new expressions and phrases. And making new realities ... sometimes, at least.*

Notes from the present

From here on the letter is, I think, extremely rich in referring to the particularity of Wageningen. '*We are the place where we are*' as Buttel (1997) would say years later. The interesting point about Wageningen is, of course, that it represents an ongoing, multi-facetted and often extremely rich encounter of different places, different views and different disciplines. This is echoed in the following parts of the letter, where many insights from development sociology (the concept of peasant, the notion of involution and the image of the limited good) are used to enrich rural sociology: that is, the understanding, analysis and representation of agriculture in so called 'western societies'. The *comparative method*, as advocated strongly by Long has evidently inspired the other Jan Douwe. For him it became nearly identical to let concepts travel. He increasingly felt that he was just a vehicle that caused concepts, stories and insights to travel. During the late 1990s and early years of the 21st century, such an approach ran

increasingly counter to the views that became dominant with the merger of Wageningen University and the State Research Institutes. The high-ranking officials of the new 'enterprise' (as the outcome of the merger was called) made it increasingly clear that there was only room (sic) for one 'corporate view'. Contrasting visions, they said, would just add to confusion and severely threaten the newly acquired corporate identity. They constructed, as it were, a new 'context' and sanctioned everything they believed to be deviations.

> *Sorry Pake, but I have to come to that point. If this weren't a letter but a straightforward dialogue instead, you surely would have interrupted me by asking to stop with* eamelje *(whining, nagging, and talking in a non-directed way)*

It is to be noted, though, that Friesians are, amongst themselves, very fond of *eamelje*. It is only in contacts with strangers that they can be very short, blunt and/or silent.

> *By repeating all these memories, I only want to make clear that in your time, you were quite a keen man, not only understanding your own peasant world in a perfect way, but also able to come to grips easily with other peasant realities far away from your own direct experience. That was and still is a thing that turned out to be far more difficult for me myself. And maybe I have to assure myself, by repeating all these well-known points of reference, that I am not yet completely crazy. It was as if I am looking for some solid anchors. The rest of the story really needs them.*
> *You really wouldn't believe it! During the last 10 years or so I have been wandering through what they now call modern Dutch agriculture. I have focused especially on Friesland. It seems that the world of agriculture has gone mad. There are new words and expressions. People talk new phrases. And behind all these new words and phrases is a dazzling confusion sometimes. Words and world do not seem to correspond anymore. Let me try and explain some of this confusion to you. There used to be* boeren *(farmers), simply because* 'sie oan't buorkjen wienen' *(farmers, because they were farming).*

There is no proper linguistic difference between farmers and peasants in either Dutch or the Friesian language. There is just one standard expression i.e. farmer (or *boer* in both Friesian and Dutch). In rural sociology, however, a clear difference is made between peasants and (agricultural) entrepreneurs. I elaborated on this discussion recently (Van der Ploeg, 1999). Here I demonstrated that, from an analytical point of view, it was precisely the *peasant* features and strategies that made modern Dutch agriculture as strong as it is (see also Jollivet, 2001).

It will be understood that (the other) Jan Douwe is referring here to 'peasants', the more so since he discusses here the situation of small Friesian farmers from the eastern sandy soils, to whom the availability of and control over (own) resources - and therefore, autonomy - was central. The same notion, though, applied to nearly all farmers/peasants of that time. Only the so-called '*hereboeren*' (large farmers who contracted several wage labourers on a continuous basis) were different. It should be noted that no equation can be made between small and peasant and large and entrepreneur. A large farm might very well be run in a peasant way, and vice versa.

These farmers were also wrotters, *simply because although they had started with little, they tried to make something out of it.*

There is an interesting similarity here with the work of John Bennett (1981) who described and extensively analysed the (folk) schemes of classification as used by Canadian farmers. *'Scrambler'* is probably the Canadian term that corresponds most with the Friesian word *wrotter.*

Then of course there were other farmers also, the well established, the well-known breeders, de neiboeren. 'Alles hie in namme' *(it all had a name).*

Intriguing is that this phrase was used many years later in another novel *'De Kalde Erfenis'* ('The Cold Heritage') written by Hielke Speerstra (2001). In this novel, the story of skating and especially of the famous 200 kilometre *'Tour of the Eleven Cities'* is retold. The story of the landscape and of farming intermingles in the novel as well. In the past, *'everything and everybody had a name'* according to Speerstra, who at the same time deplores the loss of all of these names. Everything seems to have become anonymous, just another numerical expression of an abstract category.

It was all quite logical. First you struggled to 'get your feet under your backside'. This meant that you would be able to pay more attention to your work and the things you worked with.

Following Bennett, one could argue that the locally valid competence axis is discussed here. The other Jan Douwe used the beautiful Friesian saying: *'de dingen hun gerak jaen,* in which *'dingen'* might refer to cows, fields, canals, but also to activities such as mowing and milking and, finally, also to people e.g. the wife, the children, the neighbours etc'. The Friesian expression *'De dingen hun gerak jaen'* implies 'giving things what they need', e.g. giving the land what it needs, in other words, not treating it in a regardless, disrespectful way. This expression fits very well with the more general expression of *'kreas buorkje'*, which means farming gently (see Van der Ploeg, 1999 and for an example from elsewhere Zuiderwijk, 1998). *Kreas* has strong aesthetic connotations as well. For example, a *'kreas frommes'* means a beautiful girl. *'Kreas'* work, means work that is well done or properly finished in such a way that the end result looks nice, even tempting.

An interesting issue here is the use of metaphors by farmers. Many of these are derived from sailing. In the following part of the letter a reference to this emerges. The expression used ('heavy winds') refers to adverse markets.

And once you had done this, you were able to proceed step by step on your own account or, in the worst case, defend yourself when the winds were heavy and in the wrong direction.
Farmers like you, however, are an exception nowadays. Even the word itself seems to be taboo. Everyone is talking now with new words, especially that new and strange caste of high priests who are telling us how farming should be done. They talk about agricultural entrepreneurs. And they say that these entrepreneurs are different and that they also act differently. Entrepreneurs, they argue, are risk-takers. They take large loans out and carry heavy financial burdens. They work with many resources they obtain in the market. They don't make hay anymore, let alone from a clover camp. All the fields are the same now. They all produce spinach and

nothing else. As well as this, these entrepreneurs buy the feed and fodder they require for each year. You and your companions never would have done that. That would have been shameful in your day. Only a bad farmer bought his feed. And then the heavy loans I told you about. In your time, you would not have had much pity with those so heavily indebted farmers. If the wind turned they could easily go broke. Risks, you would have argued, are abundant enough already: you could find yourself easily engaged in a kneppelfreed *if you went to Leeuwarden market, the winds could change and your most beloved cow could die. I still hear you saying: 'hell! why put your head even further into the gallows?'*

The entrepreneurs of today are not engaged in the steady struggle for more resources anymore. The hard, meticulous and gentle work is no longer understood as the road towards a better resource base. What many entrepreneurs do – and are told to do – is to mortgage the future of their business. Heavy loans, large purchases of additional quotas and land, cartloads of feed and fodder, week in - week out, an open account with the customs worker to be settled at the end of the year (no settling of accounts with half a pig and some cheese!)....

Here reference is made to the then prevailing practices of socially regulated exchange that were omnipresent till the midst of the 20th century. For a vivid description, see Van den Akker (1967).

...huge amounts of chemical fertiliser (whilst simultaneously degrading the quality of the manure as produced by the available cattle), buying time and again expensive cattle. They engage in a heavy burden,....

From other studies published much later it can indeed be derived that these quickly expanding, large farms (later on the notion of mega farm became *en vogue*) do as a matter of fact have relatively high cost price levels. However, both the concerned farmers and the involved institutions and state apparatuses that drive farmers in this particular direction, maintain that such high cost price levels should not be seen as problematic. What counts, in their opinions, is the future cost price. A high cost price now, is understood as a precondition and as a legitimisation for a low cost price later on.

...expecting that this will all be remunerated in the near future. I guess many of them know how tricky the game is, but they feel obliged to do so since they are told that in the near future only very large farms will be remaining, and not so many of them either. They believe that the future can be a joy only for a happy few. That is why they engage in this race. Or maybe I should say: that is why they have created the race. They are afraid.

What is described here is evidently the well known 'image of the limited good' (Foster, 1965). It is often assumed that such an image is only relevant to describe and understand places far away in time or place. This description, however, demonstrates that this very 'image of the limited good' might well be one of the main driving forces in current Dutch agriculture, the agriculture sector considered to be one of the most 'modern' of the world.

They think they cannot do otherwise. They are entrapped in their own beliefs, projects and practices.

It is somewhat remarkable that (the other) Jan Douwe does not describe this type of entrepreneurial behaviour in terms of 'structural development' as is normally

the case in the Netherlands. Here the concerned practice is identified as a particular practise, which is not understood and represented as the more or less unilineair unfolding of assumed technological and economic laws. Instead, it is presented as being inspired by local development and informed by particular notions and relationships.

And they take away for many others the possibility to proceed step by step. Yes, many people are grumbling.

This is evidently related to the currently prevailing 'zero sum game' as introduced by the quota-system. This type of omnipresent regulation implies that growth and progress for the one seems to imply inevitably reduction and backwardness for the other. As well as the growing impact it has had on rapidly expanding expert-systems, the same regulation has also had a far-reaching influence on identities.

'Hell!' you might ask me, 'why are these guys behaving in such a silly and selfish way'. To tell the truth, that is not easy to explain. I only know part of the answer. But I am afraid that it is not the complete answer. The difficulty is that the more elements I find, the more other people are saying that I am crazy. Anyway, a big difference between your time and the situation I am describing now is that in your time you and your fellow farmers could go their own way. If you were farming in a kreas *(gentle) way, people would respect you. Now, however, there is a new cast of priests. They are everywhere.*

My Italian colleague Benvenuti (1985) had already referred to this phenomenon in the 1980s. This can be found in his now widely accepted theory (see e.g. Long, 2001) with a special emphasis on the role of expert systems (i.e. the *priests* the other Jan Douwe is referring to) and the language they use, in the subsumption and standardisation of seemingly 'free' agricultural entrepreneurs. Maybe it is coincidental, but Benvenuti was also very much a 'travelling man', who caused surprises and concepts to travel all over the place.

And they use many disguises. Sometimes it seems to be the tongue of science, at another moments it is the voice of law, industry, or even more flabbergasting, the echo of nature. I learned from you about birds and flowers, and how nests had to be removed carefully before mowing started. It was your neighbour, you remember, the one on the left who was so bloody proud of the owls in his barn. It is strange. When we moved later to the city I encountered a duck with its feet frozen into the ice one winter. I did what I learnt from you. I grabbed the poor thing and wrung its neck. The city people, though, were upset, they admonished me for torturing the poor bird. It is the words, feelings and people of the cities and of science that nowadays prescribe what is to be done in the countryside. They have a point of course, a lot is going wrong. But it is precisely those farmers who have joined the story as dictated by government, science and the city, that are doing things in rûge *[that is: rough, as opposed to gentle] ways. This makes for all kinds of new rules and ceremonies and the strange thing is that the result of all this is that it is the gentle ones who become victimised in the end.*
We used to have such a fine language, it was precise, everything had a name. Now both words and story telling have become rough, sometimes very rough. As a consequence, practices are getting rough as well. You would feel ashamed, I am sure, to be mentioned and identified in the same breath as those who pose themselves as 'the real entrepreneurs'. You would feel uncomfortable with their 'programme',

their claims that everything and everybody should make way for them. And so many
people indeed feel uncomfortable about this. They are not really entrepreneurs, they
are peasants, which precisely the reason they have been able to make solid and
beautiful farms - farms they are proud off. Farms that are their skonken under it gat.
But nobody addresses them as such. They are addressed as entrepreneurs and then
the priests tell them that they also have to act *and to* behave *as such! That makes*
many people feel lost. They feel non-existent. They do exist and they made their
farms themselves, but it is as if the others do not want to see them....
At the same time you would be comforted again if you were to just wander around in
the countryside like I did, just watching and talking to the people.
You would probably just observe their cows and their fields initially, perhaps asking
a few questions. And then you would realise that there are still many people going
their own way and making farming into what it is, just the way you did. But would
also realise that, these days at least, these people are invisible people.

Here again a remarkable association is evoked. In Peruvian storytelling, painting
and literature (see especially Manuel Scorza, 1977) the theme of invisibility is
omnipresent and very telling: peasants tend to become invisible in the world
governed by state, capital, *caciques* and priests. Equally, in today's descriptions
of Dutch agriculture the reality of peasants and the way in which they construct
multi-functionality at grass-root level (meeting thereby a range of new demands
and expectations of society at large) is completely neglected i.e. made invisible.
This goes to the extreme that farmers having an exceptional record on the
sustainability dimension are sent anyway to court (remember the beginning of
Kneppelfreed), because they do not use the holy and sacrosanct tokens prescribed
by the current priests. The encounter that occurred on the *Zaailand* could soon
repeat itself. Equally interesting in the last phrase is the underlying social
constructivism. "Let me observe your cows and I will tell you who you are".
Interestingly enough, in rural sociology such an approach has been considerably
developed recently (see e.g. Groen et al, 1994).

The stories that the omnipresent priests tell do not allow anymore for their existence.
It makes me sad, it makes me feel sick, to think that you and all these peasants that
have been made invisible. I'm sure you would feel the same, the peasants too. We all
feel as if we are trapped in their lunatic asylum, but if we say so, they look at us as if
were we crazy.
Dear Pake, I hope that the land you loved so much rests softly upon you,

You're loving grandson, Jan Douwe

Post script: on travelling concepts

The story from the other Jan Douwe, as it emerges in a fragmentary way from
the letter to his grandfather, entails some intriguing references to the
interrelations between concepts and the empirical world. The other Jan Douwe
has always been fascinated by a story that his father, the botanist, had told him. It
was about a particular plant, the description of which was lost somewhere in the
late 19th century. From then on the plant was neither mentioned nor found by
botanists again. During the 50's of the 20th century, the description and the
corresponding name were reintroduced into the world of Dutch botanists - this

was due to increasing international contacts. From then on, that is when the plant name became available again, Dutch botanists began to encounter and describe the particular plant by the dozens. It is everywhere. The moral of the story is that you only see, find and experience what you know.

What the other Jan Douwe knew, and here we enter in the second story line, was remarkably influenced by his experiences elsewhere. It was through his experiences in Peru that he began to appreciate the notion of peasantry and it was only after the concept had 'travelled' with him to the Netherlands, that the notion (and the associated concepts discussed in this paper) became explicit. It is precisely here that the strategic relevance of the discussions with his grandfather resides. They sharpened his views and he rediscovered the basic features, continuities and changes apparent in Dutch agriculture. Unfortunately, those controlling the official schemes of classification (the *Lineaus* type of thing) were not particularly amused by the modifications he proposed. They still had a large stock of floras to be sold and making public that these 'accumulated bodies of knowledge' entailed considerable flaws was not the best argument for further sales. This is how the other Jan Douwe became increasingly lost. He now fills his days reading Jollivet (2001), Goddard (2001), Speerstra (2001) and that kind of work, which seems are better option than fooling around in the countryside and confusing people with his ill conceived ideas.

Poor other Jan Douwe. But let's look at it from another, brighter side as well. Ironically, Franeker (the lunatic asylum town) is the place where one of the first universities of the Netherlands was located; the other Jan Douwe is probably far better of there than in what is currently called the Wageningen University and Research Centre. That you may spend your remaining time, dear other Jan Douwe, in blessed isolation!

We should neither forget the other important element highlighted by his whereabouts (and somehow condensed in his letter). Yes, *context* (or more generally speaking: structural setting) is damn relevant. But what if, as they said in Peru, *el mundo se vuelve loco?* What if context increasingly represents *organised irresponsibility* (Van der Ploeg, 1999), *institutional thrift* (Jacobs, 1999), *ignorance* (Hobart, 1993) and/or *incapability* (Roep, 2000)? Then, I would say, a situation is emerging that requires a drastic revision of theories on actor-structure relations and in which, remaining *uncaptured* (just as Hyden's peasantry, 1980) i.e. *being at odds with context,* is probably the most logical and rational stance.

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Part II:

Broadening the research agenda

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7

Experiencing the modern world: individuality, planning and the state

Alberto Arce[1]

> *'In many ways we are like Goethe's apprentice in the magic arts, who when his master left the house, conjured up the spirits of the underworld with his secret formula, and when they appeared cried out in terror: "The phantoms I have summoned will not go!".'*(K. Mannheim, Man and Society in an Age of Reconstruction, 1948: 239)

Introduction

Over the past five decades, the field of Development Studies has consolidated around a theoretical body of knowledge characterised by the Modernisation, Dependency/World System and actor-oriented approach schools of thought. These three interpretations of the world emerged from within different historical contexts and have been influenced by various economic, sociological, anthropological and historical traditions and interpretations. They have shaped different empirical studies with the presentation of a variety of ontological assumptions about development 'realities'.

These theoretical positions offer alternatives for understanding development issues and suggest varying interpretations of the modern world. Despite their differences, each position has engaged in debates that have established technology, capital and the human factor as starting points for conceptualising instrumental rationality within the constitution of modernity. The integration of technology, capital and human factors within theories of development is what Kuhn (1962) has designated to be a common frame of reference for a scientific discipline, and can be seen as establishing a paradigm in the field of development studies. This common frame of reference links three domains of human existence: work, symbolic interaction and power.

In this paper, I want to discuss the contribution of the actor-oriented approach to the development field. Specifically, I want to focus on the intellectual contribution of Norman Long, whose work at Wageningen University has helped expand the fields of Rural Sociology and Anthropology. The work he has carried

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out, both alone and with the group of researchers he has been associated with, has become known as the 'Wageningen School' of development studies.

The actor-oriented approach is a good methodological device for exploring modernity. As such, the Approach has stood uneasily with policies that attempt to bring modernisation techniques and practices to people's lives. In the same vein, the actor-oriented Perspective has systematically deconstructed and criticised modernisation policies as comprehensive packages of technical and institutional measures. According to Long this was done as:

> '(1) a concern for the ways in which different social actors manage and interpret new elements in their life-world; without (2) an analysis of how particular groups or individuals attempt to create space for themselves in order to carry out their own 'projects' that may run parallel to, or perhaps challenge government programmes or the interests of other intervening parties; and without (3) an attempt to show how these organisational, strategic and interpretative processes can influence (and themselves be influenced by) the broader context of power and social action' (Long, 1992: 33-34).

The position taken by the actor-oriented approach has given rise to several criticisms from more pragmatic approaches. These criticisms have focused on the inability of actor-oriented studies to engage with 'relevant policy issues' and have accused the actor-oriented approach of avoiding engagement with the search for policy solutions to 'real' problems. However, deliberate avoidance of tackling 'real relevant policy issues' or of the search for policy solutions is justifiable in certain situations. Namely, wherever analyses or solutions lack an understanding of the social processes through which policy interventions enter the life-worlds of individuals and groups. In these situations, it is first necessary to understand these social processes, and this is what the actor-oriented approach seeks to do.

Technical policy solutions come to form part of the resources of and constraints on policy beneficiaries' strategies and are quite often interpreted differently by different beneficiaries. The actor-oriented approach contributes to an understanding of the divergence between the social, technical, political and practical aspects of policy, planning and projects. The Approach seeks to overcome the apparent naivety of policy experts and development practitioners by taking as its explicit focus of research the critical and conflictive social encounters that arise in any situation involving planned intervention. These conflicts rarely come to the attention of development experts because of their preoccupation with 'real relevant policy issues' or with finding policy solutions to 'real' problems.

Another strand of criticism has targeted the unmistakably local orientation of the methodology taken by researchers working from an actor-oriented perspective. This has led critics to question the validity and significance of descriptions and findings that have emerged as expressions of 'localism'. In the actor-oriented approach, this local orientation is perceived as a crucial locus for describing and analysing policy relations in a given social situation. By orienting research towards this locus, studies can probe and question the universal validity and significance of planning interventions designed by development experts. This view implies that the apparently universal validity of policies tells us nothing about how local processes influence and are themselves influenced by policies. From this perspective, the universal validity and significance of a policy

only represents the views of the experts and policy makers. Analyses of this kind represent little more than a general description of the actual conditions under which a policy or a project arises. In other words, the actor-oriented approach, unlike other approaches, is not merely aimed at exploring the interaction between state and civil society. It also seeks to particularise its scope and the extent of the validity and relevance of state policy towards the domains of human existence: work, symbolic interaction and power.

It is to the fear of state intervention that the Mannheim quotation of Goethe at the beginning of this paper refers. This is Mannheim's cautionary note to the social technique of planning. It seems particularly apt for an approach that has sought to deconstruct the meaning and consequences of planning interventions in different contexts.

Therefore, I would contend that these criticisms of the actor-oriented approach are missing the point. Of course, everyone has a right to an opinion and as criticisms they are relevant if based on the claim that the main function of social science is to bring clarity to problems and solutions to the social conditions people live in around the world. However, the main point is that under the modern condition, clarity and pragmatism are not supported by a common understanding concerning what should be good development policy practice.

Clarity of development objectives and pragmatism is based on the apparently unproblematic assumptions of development practitioners. These assumptions are underpinned by the idea that expert control over the techniques of planned intervention is justified because it can lead to solutions to the problems of poverty and underdevelopment. In effect, the assumptions and expertise on which such development objectives are based homogenise development situations and poverty reduction processes. One could argue that to homogenise peoples' experiences and the character of poverty and underdevelopment is something akin to a justification for avoiding the need to trace social processes to the very basis of peoples' experiences.

The enlightenment that a scientific project installs into the imaginations of clear-thinking modern men and women is the search for symbolic homogeneity. However, the homogeneity with which understandings of poverty and underdevelopment become imbued is not a convincing enough argument for us to ignore people's experiences. Symbolic homogeneity can also deny people of their political position for communicating contrasting visions about democratically shared values: values that should be incorporated into the scientific and expert projects meant to bring modernity into society. These values concern the respect for individual experience, everywhere and under every condition, in understanding and judging the meaning and relevance of the ongoing transformation of the existing human condition.

This chapter argues that the actor-oriented approach has contributed to the study of localised modernities. This has meant the need to come to grips with a theoretical and methodological tradition in sociology and has generated a set of concepts that have practical implications for research and practice in development studies.

The paradigm in anthropology and development

The intellectual origins of Long's work can be traced back to the Gluckman School in Manchester, where a concern to represent the reality of African people in the post-colonial world was seen as of paramount intellectual and political importance. The work of the Manchester School succeeded in creating a cultural paradigm that broke with an older intellectual tradition in British anthropology. This paradigm sought to encompass social transformation in a rapidly changing world. At its core was a concern with the encroachment of the market, western values and the legacy of colonial rule in the shaping of modern African societies. Despite the groundbreaking nature of this work, scholars like Gluckman (1964) and Turner (1964) were unable to distance themselves from a model of social equilibrium and thus failed to provide a satisfactory analysis of social transformation and discrepancies in cultural values (see Arce and Long, 2000).

In the 1960s, Long drew on this intellectual tradition to undertake research in Zambia, where he dealt with the role of the individual in shaping the outcomes of social change. This work contributed to an understanding of how social processes - like the arrival of new Christian groups, entrepreneurial activities, and technical transformations in agriculture - affected everyday life and, through people's experiences, laid the basis for differential responses to social transformations. His research produced an ethnography whose strength lay in Long's ability to realise and convey the importance of understanding the role of daily routine in affecting the practices adopted by people when confronted by the arrival of modernity.

In Long's research in Zambia (1968), it is the analysis of conflict in everyday life that was central in breaking with the British functionalist tradition, providing a new basis for an anthropological understanding of social change and development. Thus conflicts which arose at funerals, which broke out when immigrants returned to the community, or emerged around kinship idioms and new Christian beliefs, were signs that highlighted the way in which social processes spurred by modernity became embedded in people's everyday interactions. This research agenda, initiated in Zambia, fuelled a longer fascination with the study of small-scale entrepreneurs in processes of development and their contribution to social change, prompting Long to carry out joint research with Roberts in Peru.[2]

Long's critical view of Modernisation Theory, because of its treatment of tradition as a set of self-contained and mutually exclusive social practices antagonistic to modernity, motivated him to reassess people's capacity to bridge social and cultural discontinuities (see Long, 1977). From this focus, traditional traits such as religion and kinship relations were perceived as intermingling with external influences emanating from urbanisation and migration processes associated with modernity. This intermingling shows the capacity of people to experience modernity as a coexisting process of social relationships that continue some aspects of the past while establishing new relations with confidence, juxtaposing and interrelating different materialities and types of agencies.

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[2] The research project has the title 'Regional Structure and Entrepreneurial Activity in the Mantaro Valley in Peru' and was carried out between 1970 and 1972 by Long and Roberts. Two books were published from this research project (Long and Roberts, 1978 and 1984).

This focus allowed Long to study how individuals mobilise the resources necessary to carry out entrepreneurial activity under circumstances of scarcity and extreme economic conditions (see Long, 1978, 1979, 1984). In effect, Long was reintroducing the importance of local capacity but extracting it from the context of traditional or modern cultural systems in the study of social change. This made it possible for him to approach the social actor in a way that aimed at the very heart of contemporary issues in development studies. He repositioned social anthropology as a relevant discipline, while avoiding the simplistic dichotomies of the Modernisation School. The actor-oriented approach has formed the basis of the critical position that Long has taken, enabling him to problematise concepts and themes concerning the question of how to study and analyse the contemporary dimension of social life in development situations.

During the late 1970s, criticism of the Modernisation School led Long to adopt a structural dependency perspective. His temporary enchantment with this theory focused on the national-international linkages of dependency, creating hierarchical patterns within Third World economies through which metropolitan centres extracted economic surplus from and imposed political control over underdeveloped areas (see Frank, 1967). However, he soon realised that

'...a major difficulty with the dependency model is that it paints a broad canvas and concentrates upon viewing change from the metropolitan centre. It therefore allows little room for local actors' view of change or for variations in organisations and response within a dependency structure' (Long, 1984: 7).

Long's intellectual distancing from both the Modernisation and Dependency schools left him searching for an approach that could combine a structural analysis of political and economic processes with an understanding of how specific individuals and social classes responded to processes of intervention. The issue of individuality and heterogeneity became implicit in refracting the conditions and characteristics of instrumental rationality and the institutional development of the modern state.

The actor-oriented approach

Long's encounter with the Dependency school led him back to Marx, especially in the reinforcement of his view that the issue of individuality was a significant area of intellectual concern in the study of social change. It is quite clear that, for Durkheim and even for Marx, individuality was of little importance, and if present at all, existed only as an indicator of the transition from pre-modern to modern societies (see Sayer, 1991).

The lineal and progressive view of technology and institutions has typically led to conceptualisations of modern society as a homogeneous totality: a world where exchange value imbues objects with a distinctive quality that differentiates them from one another by the product of labour they embody. Marx presents this process as the result of social relations that only arises when the labour of isolated individuals can be freely exchanged in modern society. The perspective of political economy accepts that we need to give attention to the constitution of the actor's individuality and the individual's adoption, rejection or modification of 'modern' ideas and methods in Western industrialised societies. However, the

same view has denied or ignored the issue of individuality in developing societies.

Individuality is a process that sees the actor's sense of competitiveness and co-ordination as something more than simply interrelated to the process of social differentiation. The social structures that researchers need to describe and analyse, as part of the process of modernity, should therefore not be used to determine the meaning that actors attribute to the organisation of their life worlds. Actors may be dysfunctional to the expansion of some modern elements but nevertheless incorporate others into their everyday discourses and practices at the same time. Individuality then is a theoretical concept that does not see actors as normatively determined entities of the differentiation process affecting their social environment. As Cohen has pointed out, Louis Dumont probably was one of the scholars responsible for perpetuating the myth that the individual and the concept of individuality are only Western concerns (Cohen, 1994: 14).

Long's efforts to understand and explain the significance of individual action (individuality) took him to Peru to explore the relationship between individuals and the social construction of physical regions and life-styles in Latin America (see Long and Roberts, 1978, 1984). Long's intellectual uncertainty with the Dependency School provided him with a problem and object of study. Namely, the examination of the relevance of economic, cultural and social processes in the shaping of local development. These processes included migration, the circulation of commodities, the local organisation of the labour force and, finally, the consequences of the penetration of capital in people's lives.

One area of research - the significance of entrepreneurship as understood by the person in terms of his or her own life history - was particularly important for rethinking the notion of regional development. Contrary to his previous work in Africa, Long problematised the existence of structural social processes and gave relevance to the way in which actors organised their resources and constructed their different life styles.

Long's recognition that actors were able to create their own project of society led him to question the social position of apparently progressive actors in society. In doing so, he explained that the individuality of different actors in development situations was much more complex than simply stating that modern influences had turned people into rational 'cash registers' or logical entities when it came to taking decisions. Long explored the issue of individuality, looking at the wider cultural context in order to understand how individuals make sense of local struggles and contradictions. Their experiences in these struggles and contradictions constitute the roots of difference between how different people organise and give shape to their life-worlds according to their understanding of existing possibilities and constraints. According to Long, these differences constitute the individual's knowledgeability and capability, the two main elements of human agency and, I would add, of their individuality. Researchers, therefore, need to translate these two conceptual elements (that constitute agency) culturally in order to make sense of them. In effect, this argument has repositioned the importance of studying local culture as a medium that people use to orient their action in situations of change.

At Wageningen University, the sociology of Long has led him to stress the significance of human action in social change. At the same time, his sociological stance has addressed the issue of how actors moulded social spaces in diverse

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political environments (see Long, 1984, 1984b). Central concerns here were how researchers could characterise and define the social action of actors. This was a different and perhaps more critical view than the traditional functional perspective on social change. It cannot be considered as a totally new viewpoint in the long-duree of sociology but very few sociologists have been able to organise an intellectual project around it in the way Long has done at Wageningen (perhaps Goffman during the 1950s in America is one exception).

Long's position challenged existing sociological representations in the field of development studies. Firstly, he presented a different conceptual language that avoided treating tradition and modernity as a set of mutually exclusive concepts. Secondly, he presented new ethnographic materials. Long started a new research agenda, giving attention to the importance of local capacities such as kinship relationships and fiestas for development. Processes of local development mingle tradition and modernity. Long promoted a focus on in-depth case studies against a high level of abstractions. These were organised on a comparative basis to explore why the same policy generated different responses among rural policy beneficiaries.

The research focus was re-oriented in order to come to a greater understanding of conflicts and of the expert's ideological social techniques of intervention. At the same time, a critical view of Dependency Theory, because of its all purpose and highly abstract level of explanation, caused Long to appreciate that deductive approaches need to be criticised. This was especially relevant because dependency studies were used to conform to what was politically expected of dependency theory.[3] In fact, one of the main emerging factors that had contributed to Long's rupture with dependency studies is that dependency had been presented as a universal phenomenon leaving little room or interest for an analysis of local social actors.

This issue was central to his understanding of how to advance the theory of actor perspective into empirical research. In this respect, Long problematises the imposition of Western external conditions on Third Word development. Over-emphasis on external conditions has neglected the content and meaning of the local dynamic of transformations. Theoretically, this has led to a situation where peoples' practices and actions against regional political alliances and the national state have been ignored. The issue of individuality and all its conflicts and struggles at the centre of capitalism and modernity had been too long absent from a social science concerned with developing societies. This prompted Long to write in Battlefields of Knowledge:

'A principal reason why it has been difficult to integrate structural and actors perspectives is that they entail opposing (or at least diverging) theoretical and epistemological assumptions, similar to Kuhn's paradigms that are incompatible until a 'scientific revolution' confirms the paramountacy of one of them' (Long, 1992: 18).

The above statement epitomises the questions that are at the centre of Long's actor-oriented project. According to him, a theory of social change has to capture the experiences of social actors in all their ephemeral, fugitive and contingent

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[3] See also the critical view developed by David Booth. His article in World Development (1985) and his subsequently edited book from 1994 both deal with the issue of the impasse in development sociology. Norman Long shared Booth's criticism of political economy.

dimensions. This is something more than just the elaboration of categories and concepts for a systematic examination in empirical studies of different modes of dependency and exploitation of people and resources. Long argues that we need an explanation of how modes of dependency and independence are concretely embodied in the life experiences of actors and their interpretations of local social and cultural life. Such a theory must be historical and at the same time able to describe how actors experience what Sayer has called, the quality of *'contemporaneity or presentness'* (1991: 9). In other words, to speak of modernity we need to focus our attention on the actor's availability and capacity to be aware of modernity as a context[4]. This is central to the description and analysis of the actor's social repositioning and to an understanding of the re-organisation of everyday meanings and practices.

According to Sayer, this notion of modernity was the one used by Baudelaire in his essay 'The Painter of Modern Life' written in 1859-60. This essay spelt out the elements that can make a work of art endure in a given context.[5] According to Sayer, Baudelaire was referring to the artist's ability to capture 'the stamp that time imprints upon our perceptions' in order to 'extract the eternal from the ephemeral' (Sayer, 1991: 9). Following this line of interpretation, we can make a parallel with what makes case studies enduring pieces of work in social science. In this vein, Long writes:

'It is here that new types of theorisation and field methodologies based upon an actor-oriented approach can, we believe, make an important contribution, though we must avoid setting ourselves up as the new 'gurus' of intervention with yet more prefabricated solutions to the problem of development. The neo-Marxist theoretical bubble may now have burst, but we must guard against replacing it with a search for similar generic models of change. The essence of an actor-oriented approach is that its concepts are grounded in the everyday life experiences and understanding of men and women, be they poor, peasants, entrepreneurs, government bureaucrats or researchers' (Long, 1992: 5).

Thus, an enduring case study dealing with modernity needs to capture the quality of 'contemporaneity or presentness' that imprints in our experience the multiple realities and diverse practices of various social actors. The researcher working methodologically through the thick forest of information and symbols needs to make sense of the capacity of actors to understand unpredictable interventions and linkages of multiple realities within the context of modernity. How actors experience surrealist situations creates a social field of different and often incompatible worlds, which carry modernity itself. As Grillo succinctly puts it:

'The Wageningen approach - not surprisingly, given Long's intellectual heritage - met Marcus's demand for 'strategically situated ethnography' (Marcus, 1986: 172), which would integrate 'political economy and interpretative concerns' (ibid: 84). As Marcus and Fischer (1986: 39) put it: "Ethnography must be able to capture more accurately the historic context of its subjects, and to register the constitutive working

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[4]See the work of Schutz, in which social action orientation to organise contexts, actor's awareness and self-reflection as part of the setting to which the individual may perceive and qualify as exploitative, dependent or emancipated. In this sense, modernity is not view as an external world nor for that matter tradition.

[5] Sayer uses in his text the following phrase 'all enduring works of art' (Sayer, 1991: 9). I have kept the verb endure in my text, because I think it is one of the few verbs that conveys the notion of keeping alive the feeling of individual experience through the long 'duree' notion of time that constitutes a notion of history either as an act of suffering or enjoyment.

of impersonal international political and economic systems on the local level where fieldwork usually takes place". Marcus found this in the so-called Manchester School of British Social Anthropology (Marcus and Fischer 1986: 56 ff.) with which Long had been associated' (Grillo, 1997: 3).

To grasp the importance of Long's actor-oriented approach, we need to stress the importance of examining people's experiences. Especially the way in which Long focuses on the interplay between individual experiences of local processes (the constitution of individuality) and the centralising tendencies of modern economic and political development. We can discern how he strategically situates ethnography and how he has substantively developed a research programme for critically understanding individuality under modern conditions.

Individuals are not just able and capable, but to some extent, obliged to construct their own strategies for organising their lives. These strategies are not created in an empty space but in interaction with the social techniques that are developed in the name of the nation-state. Here too the actor-oriented approach is important and continues a long sociological tradition. In the next section, I want to briefly explore some of the elements of this tradition and situate Long's contribution to the understanding of how modern institutions like the state present themselves as objects of enquiry. In doing this, I will draw on what Mannheim understood to be the social techniques (planning) of the modern state and the impact they have on people's living conditions.

Modernity: people and planning

At the time Karl Mannheim was writing *Man and Society in an Age of Reconstruction* in 1948, centralised planning ideas about the future of modern society were already widely current among national states in Europe. Authoritarian as well as democratic states were confronted with the challenge of becoming a modern state. The political contingencies of the time initiated an intellectual debate on the significance of individual freedom, democracy and the functions that should assume the control of sovereignty by the state. These topics are as relevant today as they were in the European political context of the 1930's and 1940's, when European states were becoming increasingly totalitarian.

Mannheim shared then the view that a number of significant modern transformations were taking place in society. One of these was affecting the old conception of property that dated back to Roman Law. He was quite clearly aware that '*taxation and compulsory charity*' could re-orient the unrestricted 'enjoyment of income and interest, that is, the right of individuals to dispose their capital'. He referred to this as the exercising and guiding direction of the state on consumerism through credit control mechanisms.

Mannheim observed planning as a social technique that could transform the original form of capitalism without abolishing claims of private property. According to Mannheim, forms of rational adjustment could remove certain functions of the ownership of capital from the competence of capitalists without creating significant social and political contradictions. He wrote:
  'the entrepreneur may still retain his organising function, have a relatively higher income, and keep his social prestige, but he will be deprived of his power just as the

feudal lord was deprived of his political power at Louis XIV's court' (Mannheim, 1948: 350-351).

Mannheim's incisive understanding of his time and the nature of the changes taking place in Europe, critically converged over the question of the ideological differences between liberal democracies and totalitarian states. He pointed out their similarities; perhaps he did this in a theoretical continuation with the pessimism of Weber about the growth of scientific rationality. However, unlike Weber, Mannheim argued that planning as an outgrowth of scientific rationality should not simply be conceptualised as intrinsic to totalitarian political regimes.

In close approximation to Marx's understanding of the expansion of scientific rationality in the modern world, Mannheim perceived planning as an administrative and regulating force distinct from liberal conceptions of government. Nonetheless, he located it as very much part of what can be conceptualised as the constitution of the modern state. He argued that the state was becoming a service (welfare) state. *'the state no longer confines its attention to the three spheres of legislation, administration, and jurisdiction, but is changing into a social service state. This change is being rapidly accelerated by the universal preparations for war'* (Mannheim, 1948: 336). However, the main challenge for Mannheim was how to prevent the social technique of planning from degenerating into a dictatorship. The main problem then was to figure out how *'to combine democratic responsibility with rational planning'* (Mannheim, 1948: 336).

What are important in Mannheim's perspective on modernity and the state are his observations. Firstly, on the passing away of the liberal conception of government in Western democracies and secondly, on the arrival of the notion of government as essentially welfarist in character. What's interesting in Mannheim's analysis is his critical ideological ambiguity. Mannheim indicated the political danger of centralised planning and democracy. At the same time his clarity in perceiving the challenges of modern society led him to argue that as a technique of governance, planning is the only form to organise and carry out increasingly complex social programmes. According to him, state planning is needed to regulate people and resources. This is the only form of governance able to co-ordinate social production on the required scale, with the necessary technology to achieve social reproduction and political survival.

The modern state then is the result of a discontinuity with parliamentary democracy. One of the most obvious characteristics of the modern state for Mannheim is that it becomes not just a mere canalisation of forces of social change, but an active regulator of the current of these forces. He illustrates the new characteristics of the modern state with reference to the strategic importance of the trade cycle in contemporary society. According to him, this cannot be left to the manipulation of the economic and social processes that brought change to society. The new complexities of the trade cycle pose new problems i.e. to confront these complexities involves an attitude, which should attempt what Mannheim refers to as a form of modern management (see; Mannheim, 1948: 337). One could paraphrase Giddens (1984, 1991) at this point and suggest that Mannheim falls short of formulating the significance of an expert technical system. However, both authors can be seen to coincide in the understanding that planning as a social technique is probably an institutional response to the fear of insecurity affecting individuals and groups in a modern society.

Perhaps it is at this point that we need to remember that people living in non industrialised countries have been generally unprotected from the effects of colonial rule and policies. This sense of insecurity has not diminished with the struggle for national independence in Africa, Asia and parts of Latin America. Problems with national bureaucracies, internal political contradictions, and the national boundaries left behind by the colonial legacy have generated social and institutional dynamics where risk and lack of trust is an everyday reality. In this context, people and their institutions are constantly re-assembling and re-organising those elements, which they consider to be part of modern social life in non-industrialised Western countries.

It is this understanding that, according to Hall and Midgley, directed researchers towards the study of developing societies, specifically *'about the processes that might transform the predominantly agrarian economies of the colonised world into economically self-sufficient industrial societies'* (Hall and Midgley, 1988: 1). What is more interesting is that these authors argue that the social science knowledge and understanding of these transformations of agrarian economies *'could be applied to assist the governments of the newly emergent states to plan the modernisation of their economies and the transformation of their social structures'* (Hall and Midgley, 1988:1). According to these authors, planning and administration were believed to defeat the twin ugly sisters of the modern world - *'backwardness and dependency'*.

I have tried to show the roots of the continuity between the passing away of the liberal conception of government, the development of the social technique of planning and the constitution of the modern state. As presented here, these rhizomes have established the modern state.

The technique of social planning is not just an intrinsic feature of developed or developing countries, but also a characteristic of the modern world. *'The tradition of non-intervention in the Liberal sense was abandoned when the state undertook social reforms, and indirectly, through taxation, tried to bring about a growing equality in income and to transfer property from the rich to the poor'* (Mannheim, 1948: 336). As far as the technology of planning as a necessity of the modern state is concerned, the issue of individuality acquires a theoretical importance for the interpretation of modern social relations that are created within the state's unitarian order. However, this unitarian order must be critically de-constructed and analysed to understand how precisely such relations carry forward or resist experts and policy makers projects of modernity.

The ghost of the actor in state planning: agency or structure?

Long has examined the role of state planning in agrarian development from the distinctive sociological perspective of the actor-oriented approach. It is to this that I want to turn my attention to now.

Long's interest in state intervention can be detected in his early publications, such as his 1977 book: *An Introduction to the Sociology of Rural Development* (see Chapter 6). Nevertheless, it was not until 1985 that he first seriously attempted to integrate his considerations about state intervention with his more general actor-oriented position. Two main models of state intervention were dominant at the time. Namely, the state as an instrument for resolving the crisis

of capital accumulation and the institutional incorporation model[6]. Long criticised both positions and in so doing upheld the position that none of the approaches '*shows [an] interest in or sensitivity towards the ways in which the representatives [of the state] interpret their mandates and define their work tasks vis-à-vis the farming population*' (Long, 1985: 118). According to Long, approaches like this directed researchers to simplifying assumptions of the relationship between bureaucrats and people in society, favouring the development of coherent and clear models. Focusing more precisely on the importance of studying and explaining differences within a farming population and between contrasting agrarian situations, Long then turned to the implications of what he identified as '*the sets of relationships that evolve between intervening agencies and local groups, and [he asks researchers] to make this a point of theorisation*' (Long, 1985: 118).

Long's contribution to state intervention marks a critical moment in sociology with the formulation of the actor-oriented approach in development studies. He challenged the kernel of the no-longer-clear theoretical illusion that the disembodied structures of the logic of capital and institutional incorporation could pass over issues of differentiation and actor's experiences in processes of social change. Long's unequivocal defence of the idea of studying differential social responses to changing circumstances is a clear manifestation of the significance he attributes to the process of individualisation in social change. This is the focus that prompted the analysis of how different social categories within a population develop complex interactions, such as competition and co-operation, with '*the dynamics of the larger politico-economic structures*'. This led Long to write:

'*Farmers are not simply to be seen as passive recipients, but as actively strategising and interacting with outside institutions and personnel. The understanding of agrarian change is therefore complex and requires working from the very beginning with the concept of heterogeneity. Farmers and other local actors shape the outcomes of change. Change is not simply imposed upon them*' (Long, 1985: 119).

Long's conclusion, which drew on the critical understanding of widely discussed and accepted state intervention models, reversed the more traditional and conservative application of other actor-oriented perspectives. His criticism was also based on the understanding that even if it was possible to isolate a central tendency within an agrarian structure or population, it was important to examine the '*minority patterns*' as well. According to him, these patterns should not be understood as dependent on the central tendency, but on '*the factors specific to scale, social composition of the farm or household and to the objectives and values of the farmers in question*' (Long, 1985: 120).

Without taking sides in favour of agency or structure, Long tries to combine an understanding of the actor's individualisation processes with political and economic analysis to explain differential responses to structurally similar circumstances. In doing this he has stressed the drawbacks of structural analysis in exposing the contradictions of the state for resolving crisis and capital accumulation or institutional integration. Criticising these positions, Long focuses on how these elegant intellectual interpretations, despite acknowledging

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[6] See the work of De Janvry (1981) for his position on political economy and Benvenuti (1975) for his position on institutional incorporation.

social actor's interactions and negotiation capacities in shaping the outcomes of social processes, tend to transcend the experience of actor's discourses, beliefs and their functions.

Long, in my view correctly, perceives this as analytically reducing peasantry and bureaucracy into passivity. Instead, he suggests conserving, rescuing and recalling the experience of actors for an understanding of modern society. It is in the life experience and the projects of peasantry and bureaucracy where we can find the content of the modern world. In my view, we could designate the actor-oriented approach as one that has contributed to a theory of every day experience rather than to a theory of consciousness.

Concluding remarks

This chapter has discussed the contribution of the actor-oriented approach to development studies. In particular we have focused on the work of Normal Long and his research on state centralised planning.

The connections drawn between the work of Karl Mannheim and that of Norman Long may come as a surprise, most of all to Long himself. However, both Mannheim and Long have sought to interpret how people experience the modern world. Their invisible intellectual relationship is based on a theoretical concern to question and interpret rational tendencies in modern life, with both authors presenting rationality as a contested process.

In the case of Mannheim, the notion of Western democracy is deconstructed, signalling the end of liberal democracy in Europe. In contrast, Long is concerned with the intrusion of centralised development planning into people actions, shaping and constraining their options. Both, Mannheim and Long are concerned with issues of freedom and human rights in processes of social change. For Mannheim the victory sought is that over National Socialism, while for Long it is victory over poverty and dependency. Although these goals are different, both interpretations grapple with the issue of power, as the main differential factor that generates changes between and among individuals and the orientation of their interactions. Both are concern with the way institutions, such as the nation state, take over the representation of civil society and the orientation of what people want from processes of development. Mannheim and Long are both aware that social change is not simply a functional response to political circumstances or an adaptation to the good intentions of development professionals and politicians. Social change is not simply the technical task it is sometimes represented to be by experts.

There are nevertheless large differences between the work of Mannheim and that of Long; indeed any attempt to reconcile them at an epistemological level would be futile. Mannheim's confrontation with planning at the verge of the Second World War sought to redefine notions of democracy and governability in Europe. In contrast, Long's actor-oriented approach moved away from a political economy bias of understanding modern reality, as a class warfare epic of developing societies. However, these views of modernity are complementary in their understandings of modern society. In spite of their epistemological incompatibility, both representations involve a shift of understanding towards the

heterogeneity and complexity of modern institutions, agency, technical devices, and peoples' actions.

In the actor-oriented approach, case studies open up windows of enquiry upon the allegory of actor's experiences of modernity as something other than moral resistance to state institutions or rational strength from the selfish individual against the faceless society. In the actor-oriented approach, the study of the differential attribution of agency to institutions and to a diversity of social actors connects symbolically the different ontologies presented by Mannheim and Long. Their understanding of social action, the organising practices of society, and the lifeworld of actors forms a trilogy which registers people's experiences as exploitation and suffering, but also as happiness. In this respect, people's negotiating practices make their own history, interacting and providing meaning to the institutions they are embedded within, serving to shape the condition of their own livelihoods.

In Mannheim's concept of society and Long's conception of people's everyday lives, it is in the connections between sociology and anthropology that we are able to capture people's experiences and routines, as important domains within modern structures and state power. Social actors' own identity and modern individuality become interpretative points of reference for the organising capacity and the use of knowledge in all its ability to incarnate itself within social practices, taking a position and making claims, vis-à-vis contradictions in the modern world. In Mannheim's and Long's intellectual contributions, actors operate and reinterpret instrumental rationality within their life worlds in order to work out the predicament and tribulations of the modern idea of emancipation. In this vein, experiencing the modern world means to deal with different ontologies and their complementary sense of history has to be combined within a supplementary connection of the sociological and anthropological relevance to actors seeking to make sense of a multiplicity of interconnected life worlds.

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8

Maize and socio-technical regimes

Paul Hebinck[1]

Introduction

This chapter explores the practices and dynamics of the development of technologies in the field of agriculture. The theoretical entry point is heterogeneity and knowledge encounters, which are important themes that run through Norman Long's long academic career. Long understands heterogeneity as the co-existence of various social forms at any one point in time. This is apparent in the conceptualisation of agricultural development as being:

> *'many sided, complex and often contradictory in nature. It involves different sets of social forces originating from international, national and local arenas. The interplay of these forces generates specific forms, directions and rhythms of agricultural change'* (Long and van der Ploeg, 1988: 37).

Heterogeneity is thus *'a structural feature of agrarian development. It does not emerge casually nor can it be easily engineered'* (Long, 2001: 39). Scientific and local bodies of knowledge constitute an important and dynamic driving force that continuously produces and reproduces heterogeneity, particularly in situations when these two bodies encounter each other, for example in planned technology interventions. This positions Long's work vis-à-vis the belief that agriculture can be moulded through processes of planned intervention that are firmly rooted in development agencies (see also Hebinck and van der Ploeg, 1997). Unpacking planned intervention has been one of his favourite pastimes given the number of publications on this topic, either alone or together with others. The inability of externally designed interventions that work with standardised (technological) solutions to build upon local knowledge is intrinsic to planned interventions. Long concludes that they possess very little mastery over highly diversified local situations. Clashes and friction between scientific knowledge and various local bodies of knowledge are logical outcomes of planned interventions.

This chapter explores these issues and will do so with reference to a recently developed framework to analyse the dynamics of technology development and design: socio-technical regimes (Rip and Kemp, 1998). This concept evolved from the work of academics at technical universities in their attempt to understand technological change from a social science perspective. The

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usefulness of this concept will be probed with reference to maize and maize breeding. Empirically, the analysis is more specifically situated in Kenya, as are the political, technical and cultural choices actors make concerning which varieties to breed and produce.

Technology-related issues have attracted my interest for a long time (Hebinck, 1990, 1995, 1997; 1999; Hebinck and van der Ploeg, 1997; Hebinck and Mango, forthcoming), but this interest has so far only focused on issues of the redesigning of technologies that have been disseminated through research and extension. This chapter will attempt to move beyond this narrow focus and incorporate the 'meso' or 'landscape' level for which the concept of socio-technical regimes seems appropriate.

Towards socio-technical regimes

Technology has been studied from a variety of disciplines and perspectives ranging from technological determinism and the (neo-classical) economic view on technology development to the social-constructivist school and actor network theory. I will not attempt to present a complete overview of the merits and critical issues of these perspectives[2] here, but I will explore the intellectual roots of the concept of socio-technical regime. The point of entry for this part of the chapter is the quest for a perspective that is capable of handling, at the same time, the artefacts, the designers as well as the so-called 'end users' of technology, as well as the social interactions between them. I argue that this perspective fits the actor oriented approach as elaborated by Long in his recent book (Long, 2001). Understanding the dynamics of technological change requires a notion of agency. Agency, in the final analysis, can not only be attributed to the experts designing technologies, but also to policymakers and farmers who use but also design and redesign technologies. Technology experts, techno-scientists, politicians, state institutions and farmers are network builders that shape, through processes of enrolment, the dynamics and directions of technological change.

Technological determinism and the neo-classical economic view on technology development

In the past, technology was considered as an exogenous factor and perceived to develop autonomously - implying that it is self-generating – and to be universally applicable – which means that it is culturally neutral. Implied in this view is a strong faith in progress (i.e. modernisation) and the normative wish that people will eventually adapt to new technologies designed outside their relevant action-context. This position can be regarded as the backbone of the early modernisation theories that emerged in the social sciences after the Second World War. These views were fiercely criticised by many academics. Long, being one of them, argued strongly against the assumption of the cultural

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[2] Van Lente (1993) and Wiskerke (1997) provide an excellent overview of most of the perspectives elaborated in this chapter. An unpublished manuscript of Henk van den Belt from the Philosophy Group at Wageningen University also inspired this section. We discuss these issues with students in the course 'Social Science, Knowledge and Practice' that we (partly) give together.

neutrality of technology with reference to the huge variation in cultural repertoires and localised processes of social and technological transformations. Furthermore, he argued that technology was being treated as something exogenous that denies farmers' agency and makes them invisible.

Hayami and Ruttan (1985) refined this exogenous view of technology within the parameters of neo-classical economy. They considered technology as an endogenous factor that was 'induced' by agricultural society or the sector itself. Hence their paradigm is referred to as induced technological change. Within their framework, technology development is not perceived as homogenous, but rather as heterogeneous, as different technological trajectories emerge over time. Hayami and Ruttan explain these trajectories by the relative factor prices of capital, land and labour (i.e. the most import production factors in agriculture in the many strands of economics). Labour-saving technology development, they argued, occurred in countries where labour is scarce (e.g. the United States, Australia, hence the 'American model'), while land-saving technology development took place in regions were land is a scarce production factor (e.g. Japan, the Netherlands, hence the 'Japanese model'). In the first case, mechanical technology was developed. In the latter, conditions that stimulated technology development centred on bio-chemical innovations thus increasing the productivity of land and labour were developed. The model maintained that in regions where land and labour were not really scarce, technological change took a direction characterised by a mix of both trends. Europe, in the eyes of Hayami and Ruttan, was an example of such a case and stood for the 'European model'. The so-called 'Third World model', in contrast, was considered to have a 'low' level of technology development.

The neo-classical paradigm of technological change presented by Hayami and Ruttan has been criticised for its economic determinism – equating economic growth with development - and for not taking into account issues of power and diverging interests (Beckford, 1984). Their position that technological change is endogenous and progresses in different ways is indeed a step forward but the explanatory model remains rather narrow. Van der Ploeg (1990, 1999), argues that differences or variations within, for example, the 'European model' cannot be explained with reference to relative price factors only. Cultural repertoires play an equally important role in shaping farming technology (see also Hebinck and van der Ploeg 1997). Likewise, the analysis of my own data on maize farming in Nandi district, Kenya, collected during the mid 1980s, shows quite a variety of development patterns if the scale and intensity of farming are taken into account. The region was characterised at that time by fixed, state-controlled prices for produce and physical inputs such as seed, fertiliser and pesticides. Labour was sufficiently available for work on the farmer's own fields or on others and wages were found to be fairly similar within the region. Although land had a price, a land market did not really exist at the time. Yet within the context of rather homogenous price factors, an enormous diversity in maize farming was found - ranging from land and labour intensive to land and labour extensive – something that could not be explained by the relative price factors only. These two extreme but different patterns are closely associated with strategies based on *protecting the means of production and consumption* and with the *expansion of production and accumulation of capital* (Hebinck, 1990, 1995). Other factors, then, are obviously at play, such as social identities and

livelihood trajectories that also shape the choices people make with regard to farming and the use of new technologies.

Social constructivist perspective
The social constructivist perspective on technology emerged in the 1980's as a response to such deterministic interpretations. This perspective postulates that technology development is a reflection of society and its different interests. Hence technologies are not neutral artefacts, but social constructs. For example, interests of corporate groups such as seed companies, combined with advances in agrarian science (notably Mendelian plant breeding), have shaped the outcome of plant-breeding technologies (Kloppenburg, 1980). Hybrid maize is a paradigm case. It has the characteristic of higher yields because of its hybrid vigour arrived at through the selection of 4 grandparents and 2 parents. Breeding continues with the successful inbred lines. The outcome of this kind of breeding, however, is a product that is sterile in economic terms: the early hybrid maize plant breeders and their contemporaries constructed the maize seed in such a way that farmers needed to buy fresh seed every year. If farmers would adopt such 'induced' innovation, it would render the seed companies with a huge market and profits for years to come. Kloppenburg argues that this economic sterility was not an unintended side effect but that the early maize breeders purposefully built economic sterility into the seed. This decision was taken in the early 20th century, when maize breeders stood at the crossroads between two distinct ways of breeding. Apart from hybrid selection and breeding, there existed another way of improving landraces or local varieties of maize that naturally occurred in the environment (the so-called Vavilov centres, which for maize is Central America) or that had been introduced in regions where maize was not indigenous (such as Africa) through a variety of networks (Hebinck and Mango, forthcoming). This is referred to as *recurrent selection* which is a breeding process based on the crossbreeding of 10 or more different parents and thus based on capturing (and maintaining) genetic diversity rather than homogeneity as with the hybrid varieties. Nowadays these are called *Open Pollinated Varieties* (OPVs), which have as a major advantage the fact that farmers can recycle or reproduce seed from the previous harvest for at least four to five years. Kloppenburg argues that the hybrid maize breeders sympathised with the seed companies whose interests are not served by producing and supplying farmers with OPVs. With reference to guaranteeing the profitability of the private seed sector, Kloppenburg argues that the publicly funded breeders choose for the 'hybrid school'. Wiskerke (1997) underpins a social constructivist perspective when he explains the difference between The Netherlands and the United States in wheat breeding. The choice to hybridise wheat in the United States is made in the context of relatively limited protection of breeder's rights. This is in contrast with the Netherlands where these have been well protected by law since 1941.

While Kloppenburg and Wiskerke situate their examples in the early and mid 1900s in Europe and the United States, the argument of choice is still relevant today and for Africa. The government of Zimbabwe prohibited Seed Company of Zimbabwe and other companies to multiply OPVs (the date is not exactly given but is must have been between 1983 and the early 1990's; see Rusike, 1998: 311-312). Another example comes from Kenya, where the former parastatal Kenya

Seed Company (KSC) was privatised in 1997 and multiplication of OPV was immediately abolished. KSC today produces only hybrids (Managing Director KSC, June 1998, *pers. comm.*).

The 'hybrid school' is still predominant in maize breeding, although the beacons are slowly being reset and giving rise to the emergence of new or other socio-technological regimes, as we will see later in the chapter. The hybrid maize school expanded into international centres for agricultural research, with Norman Borlaug as the founding father of the publicly and donor funded International Centre for the Improvement of Maize and Wheat (CIMMYT), subsequently leading to the 'Green Revolution' of the 1960's. From that time onwards, the 'hybrid school' progressively spread to South Africa, Zimbabwe and Kenya and resulted in the establishment of seed companies producing hybrid seed *'for the nation'* and *'to feed Africa'*. These seed companies were initially parastatals or co-operatives, but after the waves of deregulation and privatisation they have now become private companies that have to satisfy their shareholders. Breeding and multiplying hybrids is apparently good business, and these companies have since sold maize in neighbouring countries, successfully competing with multinational companies such as Pioneer Hi-Bred and Cargill.

Actor networks
A more recent entry in the field of technology studies is the so-called actor-network theory. Latour, Callon and others criticise the social-constructionist perspective because of its propensity to predict and explain technology with reference to the way society is constituted, as Kloppenburg and others do. In addition, they argue that the end-users and their influence on technological changes are not apparent in the social constructivists' explanatory scheme. Instead, Latour *c.s.* argues that events such as the ones described above cannot be predicted or explained with reference to a particular pattern of social relationships. They propose to reject *a priori* distinctions, such as nature-society, micro-macro, global-local, nature-culture, and more importantly the distinction between humans and non-humans (Latour, 1994). It is argued that such distinctions are not pre-given, but can only be the outcome of interactions between actors involved in the construction of technology and knowledge. This is an interesting element of the actor network theory, as it would imply that a specific maize variety could be attributed with the capacity to act - just as the breeder or the farmer (*actant* is the word used in Latour's terminology).

This position has met severe criticism from social constructionists whom in their response to Latour c.s. defend the special place of human actors as well as their agency and knowledge in their explanatory schemes.[3] It is argued that: *'these distinctions are so deep-seated and so much part of our cultural heritage that the attempt to do away with them would make the resulting analysis utterly incomprehensible for its intended audiences'* (van de Belt, 2000, endnote 30). In the light of this it is probably more fruitful to emphasise how nature and society evolve together (hence *co-production* or *co-evolution*, see van der Ploeg 1999; Hebinck and van der Ploeg, 2001), how the micro-meso-macro interrelate

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[3] For this debate, see Callon and Latour (1992), Verschoor (1997, this book) and Collins and Yearly (1992a, 1992b).

(Hebinck and van der Ploeg, 1997), and how the global and local join in everyday life (Arce and Long, 2000; Long, 2001).

A constructive element in the actor-network theory of Latour *c.s.* is that it in one way or another builds upon the idea that there is no distinction between scientists, technologists or farmers: they all are craftsmen in their own ways. They all construct facts, artefacts, and commodities, and the fate of their uses are in the hands of later users. Once accepted by the latter, these become part of their lifeworlds, but not without modification and thus accompanied by what Latour c.s. labels as 'translation'. To counteract translation, innovations are presented to users in the form of a 'black box' (Rip and Kemp, 1998:329). For this purpose allies (both human and non-human) are enrolled to create networks that aim to prevent modification. If innovations are not applied according to design principles – unpacking the black box as it were (Hebinck, 1995) – end-user's actions will be sanctioned (Benvenutti, 1982, 1985) to maintain the configuration of the several elements that constitute the box. In actor-network theory the notion of 'script' is used to postulate that artefacts shape actor actions as well as structure the form and contents of their practices:

> *'When technologists define the characteristics of their objects, they necessarily make hypotheses about the entities that make up the world into which the object is to be inserted. (...) A large part of the work of innovators is that of 'inscribing' this vision of (or prediction about) the world in the technical content of the new object. (...) The technical realisation of the innovator's beliefs about the relationships between an object and its surrounding actors is thus an attempt to predetermine the settings that users are asked to imagine for a particular piece of technology and the pre-scriptions (...) that accompany it'* (Akrich, 1992: 207-208).

Let me explain some of this with an example. The 'Green Revolution' represents the processes of enrolment and networking with the 'hybrid maize school' and Norman Borlaug c.s. as builders of a network of institutions, both from the private and public domain. These networks present the miracle seed hybrid maize to farmers in the form of a package that consists of seed and at least fertiliser together with a whole series of other technical recommendations on how to plough and plant. The package is accompanied by a necessary set of institutional arrangements such as advice (or extension) to secure adoption of the innovation, and markets for seed, fertiliser, output, capital and machinery. If the end-user (the farmer) reads the 'script' or unpacks the black box, thus altering the set of prescriptions – by for example not buying fresh seed every year but recycling from previous harvest – yields will drop dramatically (by up to 70%). In such circumstances the miracle seed is thus not 'a configuration that works' (Rip and Kemp, 1998: 330; Hebinck, 1995). This institutional environment – once conceptualised by Benvenutti (1982) as the Technico-Administrative Task Environment (TATE) - also sanctions those who re-open the black box by labelling farmers that do not comply with the prescriptions as 'laggards' (see also Röling *et al.*, 1973; Röling and Leeuwis, this book). In turn it may be argued that the institutional environment for agriculture is also certified. If, like in most parts of Africa, such institutional arrangements collapse, the so-called 'agrarian crisis' will be on the doorstep, messing up the adoption of technologies and stimulating processes of distancing rather than interlocking.[4]

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[4] The set of institutions and arrangements has been criticised again by representatives of new institutional economics of failure, and of being inefficient and ineffective. Structural adjustments and

Synthesis: socio-technological regimes
It may be clear from the above that the early rather deterministic perspectives on technology development and change are inadequate in that they cannot not properly handle the position and influence of the so-called end-users. The same can be said about Kloppenburg's social constructivist explanatory scheme that seemingly only incorporates the technologists and their interests per se. The advantage of the actor network theory is that artefacts and end-users, given their emphasis on processes of translation, come to play a central role in explaining technological change).

Despite the criticism on the actor-network theory (van den Belt, unpublished; Rip and Kemp, 1998), I propose a synthesis of the two schools of thought. Van den Belt (*ibid*: 11) wishes to enrich the social constructivist perspective '*with the insight from the actor network theory that scientists and technologists often act as agents of social change, without giving up the possibility of providing 'social explanations' for their actions*'. This puts network builders and their interests, networks, institutions and social relationships at the forefront of understanding technology and change. The discourses of the network builders are then essential elements in a strategy to market the innovations and to ensure uptake by the 'end-users'. Rip and Kemp (1998) warn against viewing technological change through technology, technologists or artefact alone and propose to incorporate the social environment with its own dynamics that have already shaped opportunities and ideas about new technologies. They therefore formulated the twin concepts of (socio-) technological regimes and landscape. The landscape forms the broader socio-technical and institutional context for the regime(s). It involves policy discourses of the state such as technological progress and modernisation that target the further development of specific technology trajectories and that fit the vanguard farm in the Netherlands (van der Ploeg, 1999) or the estate or telephone farmers in Kenya (Hebinck, 1990).

A socio-technological regime is defined as '*the rule-set or grammar embedded in a complex of engineering practices, production process technologies, product characteristics, skills and procedures, ways of handling relevant artefacts and persons, ways of defining problems – all of them embedded in institutions and infrastructures.*' (Rip and Kemp, *ibid*: 338). Regimes structure or guide the search activities of engineers, and incorporate farmers and their specific ways of handling the technology - be it adoption, adaptation, or redesigning - into the field of agriculture: '*Regimes are outcomes of earlier changes, and they structure subsequent change. Novelty (or innovations) evolves within existing regimes starting at the level of local practices (e.g. the micro level). It spreads over time, partly by accommodating to existing regimes; eventually it may irreversibly transform the socio-technical landscape*' (*ibid*: 338).

Socio-technical regimes should in fact be conceptualised as multiple or heterogeneous regimes (Geels and Kemp, 2000: 17). I will argue in this chapter that such definition is essential for understanding technological change. Technological change occurs both '*from within*' as well as '*from below*'. The

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institutional reforms such as deregulation of state controlled markets are required to get 'development' going and to 'get the prices right'. An argument exists for abolishing state controlled markets as these have been rather inefficient and tend to favour certain groups in society. In my understanding, however, the deregulation of the Kenyan food and export crop markets has created more chaos then ever, particularly for agriculturists that specialise in one or two commodities.

example of OPV maize breeding referred to earlier is, in a technical sense, clearly an example of change 'from within'. The currently increasing emphasis on OPVs echoes the changes in scenario that have been occurring in technology development since the early days of the Green Revolution, and not only within NGO-like networks, but also within CYMMIT. CYMMIT, once the temple of the hybrid High Priests now progressively allocates core funding to breeding OPVs (CIMMYT, 1999, 2001). Furthermore, a CIMMYT maize breeder in Harare argued in an interview that the context particularly in Africa has dramatically changed. '*Solving problems requires investment*', but '*world-wide agricultural research funding is decreasing*' (August 2001, *pers.com*). Furthermore, due to free trade, the deregulation of seed market and privatisation, the seed market is markedly different from what it was during the early days of the Green Revolution. The explanation that is offered is that '*new contexts that we need to adjust to*'. The change of CIMMYT is not only due to the 'internal' adjustments, whereby the position of Director General is very important. Things may have changed considerably but '*the old guys are still there*'. Reference was specifically made to the founding father of the Green Revolution and Nobel Price winner Norman Borlaug. 'External' pressure also played an enormous important role. '*In the past we were not challenged by the social, economic and political environment.*'

A clear illustration of CIMMYT strategic changes, now more than ever before, is the development of linkage programmes and networking. CIMMYT clearly looks for strategic alliances with farmers, the public sector, private seed companies, other elements from the private sector such as distributors and retailers to select, breed and distribute maize seed. The '*Mother-Baby*' trials in Zimbabwe and the leaflet '*Farmer Voices Heard*' is an expression of this.

Technological change 'from below', that is from the perspective of the farmer, his wife, the family, the farm, and/or the field(s) befalls at what Rip and Kemp (1998) and Geels and Kemp (2000) call the 'niche'. The niche may very well be the level where alternative technologies are developed, some of them giving rise to the emergence of new regimes that co-exist with the predominant regime. These niches may challenge the predominant regime (pressure 'from below') which is rather static, inert and entrenched. Geels and Kemp (*ibid:* 17) argue that an important difference between regimes and niches is that different social processes are involved. The regime is characterised by relatively stable networks, which manage to constantly reproduce themselves. Within these networks, the direction of technological processes and progress is relatively clear cut and beyond dispute. The niches, on the other hand, are formed by less stable networks in which a variety of experiments are carried out that enforce debates and negotiations. In niches, the learning processes are open-ended and less obvious, progress is made through trial and error, and there is no dominant design. Furthermore, the development of niches depends on the willingness to exchange experiences.

The concept of the socio-technical regime has several advantages above earlier frameworks and provides the dynamic optic on processes of (technological) change that Long has been arguing for. Firstly, the concept links and connects technology with society: technology is socially embedded and evolves in a social context, hence *co-evolution* or *co-production* (Hebinck and van der Ploeg, 2001). It thus captures both the technologist and the end-user, allowing for an analysis

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of their relationships and struggles, and thus the encounters between the various bodies of knowledge actors refer to when designing and evaluating technological innovations. Secondly, it provides insights into how technological change proceeds. Technological change does not follow certain trajectories predetermined by the technologists (as Kloppenburg wants us to believe) but can, and often does, chaotically follow different trajectories. In earlier publications (Hebinck, 1990, 1995), I elaborated on this by emphasising that farmers (always) redesign technological innovations which in turn gives rise to differentiated patterns of agricultural development that may provide a seedbed for changes to regimes 'from within' or 'from below'. This is in line with Long's view that agricultural *'development is many sided, complex and often contradictory in nature'* (Long and van der Ploeg, 1988: 37) and that *'no single ordering principle prevails'* (Long, 2001: 241). This *'definitive adieu to structure as explanans'* (Long and van der Ploeg, 1994: 80) is important for an understanding of technological change, its continuities and discontinuities, and the co-existence of socio-technological regimes and niches that sometimes interact and sometimes don't. Thirdly, the concept of the socio-technical regime builds upon notions like networks and their builders, and processes of enrolment. Network interactions and institutional configurations sustain and reproduce technological regimes (and niches as well). Networks are perceived as fluid, dynamic, and constituted by multiple actors. Hence, the use of the notion socio-technical networks as a useful tool for the analysis of the generation and spread of innovations (see Hebinck and Mango, forthcoming). This also implies that innovations or novelties are not stemming from laboratories and research stations only. Fourthly, the notion of socio-technical regime specifically includes the cultural dimensions of technological change and positions culture analytically as part of a complex set of social relations of production that shapes agricultural practices (Hebinck and van der Ploeg, 1997). Cultural repertoires - or grammar as Rip and Kemp (1998) put it – of designers and end-users form an essential component of regimes and niches. In this way, culturally embedded norms and values occupy a central place in the analysis of technological change.

The maize landscape in Kenya

This section will investigate the concrete shape the Kenyan maize landscape has assumed. What one might expect is the co-existence of various regimes, and that the predominant regime is increasingly evolving into different trajectories. The various maize breeding strategies are, next to the institutional configurations, important dimensions to consider. The predominant maize regime is, for the time being, labelled as 'modern' or 'formal' and based on hybrid maize breeding and selection, and the other regime is referred to as the niche or 'informal' one, which is based on the selection and breeding of local or landraces of maize varieties. Both will shortly be characterised with a focus on the dynamics of network configurations and the network builders. In the concluding section we will come back to heterogeneity, social interactions and the knowledge encounters.

The modern hybrid maize regime in Kenya

The current hybrid maize regime is an outcome of earlier breeding programmes that took place in Kenya during the colonial era. Maize breeding goes back to the early 1930s and gained momentum after 1955 (Ogada, 1969) when according to KARI, sources from 'local' germplasm collected from around Kitale formed the *Kitale Station Maize.* Ogada (1969) and Harrison (1970) refer to this as the Kenya Flat White. The origin of these so-called local varieties is traced back to South Africa, where they were introduced before the Boer War from Mexico via the United States. Collections were also made from the highlands of Central and South America for crossing with Kenyan local varieties. A cross between Kitale Synthetic II and Ecuador 573 varieties produced the first varietal cross hybrid H611 released in 1964. The release of the first hybrid signalled the beginning of a major transformation of the socio-technical regime that has evolved to constitute a complex network of seed companies and agricultural research institutions. This network runs on the insights and advances of agrarian science - and in particular - plant breeding, credit agencies, extension, foreign aid agencies, a quality control institute, numerous input suppliers and output traders, and farmers that have adopted the new hybrids. In the literature it is often referred to as the Green Revolution, which according to the World Bank, is a success story for Kenya and Africa (Douglas, 1980). Important network builders were maize breeders such as Michael Harrison - the 'father' of hybrid maize in Kenya - and the Dutchman Cees van den Burg who was the first managing director of the then state owned Kenya Seed Company that was established in 1956 in Kitale, the 'capital' of the White Highlands. KSC played a crucial role in the breeding, multiplication and commercialisation of hybrid maize.

In the early days of regime formation the state was also a contributing network builders and provided the regime with important legal, policy and political support frameworks. The development of the seed industry required a clear and enabling legal framework. The state enacted the Seed Ordinance in 1962, which was a copy of British law. When it appeared that this act did not address the development of the Kenyan seed industry, various revisions were made in 1972 - the Kenya Seed Legislation (1972), in 1991 - the Seed Regulations, and in 1994 – the Plant Breeder's Rights Regulations. The recent liberalisation of the seed market (during the mid-1990s) and the subsequent privatisation of the Kenya Seed Company called for clear regulations to facilitate orderly operations of seed certification and control as well as the registration of breeders' rights. The Seed and Plant Variety Act was gazetted in 1991 and revised and enacted in 1998.

One factor that played a crucial role was that around 1963, Kenya's estate producers yielded in excess of the domestic demand for maize. World market prices were, however, low at the time and considerable losses were faced. The area under maize cultivation in the estate sector fell by 50% and smallholder deliveries to the Maize and Produce Board fell by 60%. A government commission advised the production of maize solely for the home market until the widespread use of improved seeds and better husbandry practices could bring down costs and close the gap between the producer and international prices. The following year, the introduction of a new, improved and higher yielding seed variety would begin to bring these recommendations about (Government of Kenya, 1965: 46; Gerhart, 1976: 47; Leys, 1975: 106). Supported politically by agricultural and food policies to attain food security for the nation, the state

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mustered backing for the reorganisation (or modernisation) of the older, preceding maize regime. Previously existing state institutions created during the colonial era - notably since the implementation of the Swynnerton Plan of the mid 1950's - were geared towards increasing the participation of African producers in the commodity economy, something which they had been denied before. The Swynnerton Plan proclaimed an agrarian revolution, finally destroying all elements of former colonial agricultural policies. More importantly, perhaps, the Swynnerton Plan provided the state with the legal means to realise the development of a technological-administrative structure upon which commodity production could expand. The majority of institutions that formed the core of the technological regime were mainly concentrated within the state apparatus. This not only resulted in the envisaged expansion of commodity production by small-scale African producers through the privatisation of land tenure, the extension of capital loans, extension services and provision of inputs. It also, very significantly, resulted in the political integration of these producers and an extension of state control into areas, which had previously had very little contact with commoditisation processes. The hybridisation of maize in particular signals, in a way, a further transformation of the existing technological regime based on the Swynnerton Plan into one that commoditised food production, particularly maize.

Foreign aid has played an essential role in the formation and further development of the maize regime in Kenya. Various donors like the Government of the Netherlands have provided support for the modernisation of some of the components of the technological regime. Dutch foreign aid was (until recently) channelled to Kenya almost immediately after Independence in 1963 to shape the maize seed industry - both the legal and seed control and certification components - in such a way that it would operate effectively and efficiently (see Klaassens, et al., 2001). USAID and CYMMIT have also channelled a lot of support to maize breeding in Kenya since Independence. This kind of support has assisted the formation of intensive networks linking both international and national institutions in (maize) breeding with Kenyan partners such as KSC, Kenya Agricultural Research Institute (formed in 1986) and its various regional research centres, and the Kenya Plant Health Inspectorate Services.

The Kenyan State has also performed an important role in other ways. General agricultural policies and national food policies, revised and refocused many times since Independence, have provided the policy frameworks for the maize regime. Policy mechanisms and instruments to achieve the stated objectives and budget allocations to research and extension have had political backing, both at the level of state institutions and the bureaucracy, as well as from Kenya's ruling elite. State control over the agricultural economy - a heritage from the colonial period - was omnipotent and even further extended. State control has covered domains like marketing through statutory boards (like the National Cereals and Produce Board), input provision (through the Kenya Farmer Union and other co-operatives that politically controlled by the state) and controls of inputs and farm gate prices. While it may be argued that state control was (with some exceptions) rather effective in the early days of regime formation, it collapsed almost completely in the 1990s. State administered social change through the co-operative movement and the Co-operative Act, which by many was perceived as repressive, took away decisions in the running of co-operatives from its members

into the hands of civil servants appointed to implement the act. Co-operative marketing structures in coffee and milk and the administering of agricultural credits weakened considerably. Some of these co-operative structures virtually ceased to exist, and services were not rendered any longer. Currently, the role of the state is reduced enormously after donor imposed Structural Adjustment Policies to rationalise its operations and due to economic liberalisation. Donor support has dwindled because of corruption and nepotism with the result that budget support and foreign aid relations in the field of research and extensions have been terminated. The outcome of this is that agricultural extension (almost entirely funded by the World Bank through its Training and Visit programme) and credit supply has almost collapsed. KSC no longer enjoys a monopoly in the seed industry and now has competitors.

An essential component and trait of the modern maize regime is the combination of agrarian sciences and its contributions to the design of the new maize technology. The result of the advances in scientific plant breeding, agronomy and soil sciences in Kenya culminated into a package. This can be considered as the most visible outcome of the modern maize regime. The package per se, including the image that hybrid maize is an economical crop to grow for farmers as it supposedly augments the returns to labour, is increasingly prescribing and shaping agricultural practices in such a way that it progressively operates within the domain spanned by markets and technology supply (Hebinck and Van der Ploeg, 1997). A major characteristic of the hybrid maize regime is that maize production is embedded in - and presupposes - the expansion of commodity relations, and more particularly the commoditisation of the objects of labour. The externalisation and institutionalisation of farm related tasks in specific institutions such as seed companies, financial institutions, extension services and advice, marketing bodies, seed quality control, and input distributors is imperative for this regime. The technology associated with the high-yielding maize varieties is not merely a package of physical inputs, it also incorporates a package of new agricultural practices. The new technology follows a new crop calendar, given the longer maturing period of the new maize varieties, the advice not to inter-crop with other food crops such as beans, and the associated changes in cropping patterns and crop rotation. Each of the 'new' inputs is associated with a new set of agricultural practices and recommendations. Farmers are now required to know how much seed to plant, when and how much fertiliser to apply on which type of soil and in what proportion of nitrogen, phosphorus, and potash. Similarly, the farmer must understand which type of seed is vulnerable to which type of pest, and what the various options of pest control are with varying implications for timing in the use of chemicals, human labour, crop pattern and rotations. Maintaining relationships with research and extension and other advice agencies thus plays an important role in the production of hybrid maize and the efficient operation of the maize technological regime.

Regime changes 'from within': recurrent selection of Open pollinated varieties
The discourse of modernisation - the only available option to increase food production via an increase of crop yields through the development and adoption of a capital intensive package consisting of hybrid maize, fertiliser and pesticides

– has gained substantial (if not predominant) ground in Kenya. Claims from farmers that local maize varieties do better and even out-perform hybrid maize varieties are met with suspicion and often rejected without serious investigation. Scientific knowledge is perceived as superior to local knowledge. While this is still the dominant thought, the maize landscape and the discourse has evolved and changed over the last 10 years in Kenya. Increasingly, OPVs are in pre-lease and/or waiting for release pending the approval of KEPHIS and the outcomes of the National Performance Trials that are compulsory by Kenyan law (KEPHIS, 1999:9-12). Recently, some NGO-like institutions such as CARE-Kenya and Lagrotech have started breeding programmes that are quite different from the ones linked to the formal research and breeding networks in the country or elsewhere in the world.

A group of plant breeders in West Kenya launched a seed company, Lagrotech, and set out to develop a composite variety of maize that is high yielding but requires little inputs. Starting from local land races such as the *Hamisi Double Cobber* - a farmer improved local variety from the Vihiga District in West Kenya - Lagrotech developed the *Maseno Double Cobber* (MDC) and released it in 1996. The MDC is high yielding and produces two cobs with little commoditised inputs. Lagrotech recommends the use of inorganic fertilisers as well. Farmers can regenerate seeds up to the third filial generation beyond which yield starts to decline. This is a major difference and advantage compared with hybrids, particular in areas where access to money is problematic. The MDC and other OPVs are the outcome of the motivation that a *'researcher' task is to solve problems'* as a CYMMIT maize breeder in Zimbabwe coined it *(pers. com.* August 2001). The principal breeder of Lagrotech: *'researchers who claim that their work is relevant for improvement of agriculture in the tropics should (...) put them in practice. It is on this basis that Lagrotech tries to come up with a maize variety that will be acceptable to my people.'*

Maize breeders of KARI regional centres, i.e. Kitale, Kakamega and Katumani particularly are currently more engaged than ever before in recurrent selection of OPVs. Breeders increasingly engage now in on-farm trials and testing, and taking on board farmer preferences. This change within KARI was set in motion since the early 1990s and is partly the result of 'internal' changes pushed by a younger generation of scientists. It is also partly due to donor funded programmes specifically aimed to move KARI from on-station to on-farm and adaptive research. However, it must be recalled that in the early 1970s farming systems research was periodically carried out together with foreign donor funded programmes (see Klaassens, *et al.* 2001).

The MDC is Lagrotech's response to the phenomena that hybrid maize is no longer widely grown in the region. Lagrotech packages the MDC in 2-kg polythene packets and sells it to farmers at much lower prices than the hybrid varieties. Between 1996 and 1998, farmers in Luo land were very enthusiastic about this maize variety. Later they came to learn that its yield declines as they continue to reproduce it. Farmers, on the other hand, feel that it is a better option than the normal hybrid, as it requires little inputs, but they continue to look for more stable local varieties whose yields do not decline over time.

Most of the OPVs are early maturing, resistant to maize streak virus, suitable for green maize production, and flinty grain types. Hybrids generally do not have

such characteristics. Evaluations of the OPVs have shown that the economic returns, particularly when grown in harsh environments, therefore match that of the more expensive hybrid seed (ref. CYMMIT leaflet *New Maize offer better livelihoods for poor farmers*, 2001 announcing the release of OPVs for the Southern African region). Breeding, and above all, the multiplication and marketing of OPVs does come without problems though. Private seed companies are not interested (or are prohibited to engage) in multiplying OPVs. One of the challenges is to set up a proper system of seed production, distribution, marketing, retailing and quality control. These ideas centre on setting up small seed businesses and/or community based organisations. It must be noted that the experiences with community based seed programmes shows that these issues are not easy to solve. Stability and reliability is what hampers organisations of this type and corresponds with the interpretation of niches by Geels and Kemp (1998). Another important issue is that OPV breeding is based on genetic variation, through cross-pollination and recycling. Maintaining genetic variation and accessing genetic material is hence crucial. One of the problems for Africa may be that maize is a recent crop, which implies that naturally present variation (as in the Vavilov centres of Central America) is somewhat limited. It may be argued that the OPV programme is meant to supplement or improve the lack of genetic variation in Africa. In the next section we will elaborate on this as farmers in Luo land argue otherwise.

One important trait of the OPV breeders is the strong belief in the superiority of scientific breeding principles. It is maintained that OPVs yield approx. 30% - 50% more than 'traditional' varieties (or landraces), particularly under drought conditions and low soil fertility, e.g. '*two of the factors that commonly keep farmers in a cycle of poverty*' (CIMMYT leaflet). Interviews with various maize breeders support this predominant view. Reference is made to the inability of farmers to identify superior genotypes from the phenotypic appearance of maize cobs.

Recurrent mass selection[5]

Maize is a typical open pollinated crop (this is one of the reasons that multiplication of hybrid maize needs to take place in 'clean' environments). In an open field, each plant has a different genetic composition with different individual characteristics. In practice, a farmer chooses seed from desirable individual plants or cobs. The seed from these different plants are shelled, mixed, stored and planted *en mass* to produce the next generation. This is done by practically all of the farmers who select their own seeds for the next season. Through mass selection, other farmers produce their own local maize seeds, some of which have proved to perform better with minimal physical inputs than hybrid maize. Farmers generally select and breed maize seed that matures early, can be grown under conditions of unstable rainfall, is pest resistant, has an ability to yield when cultivated even without inorganic fertilisers, and agrees with specific end uses such as taste and palatability.

The yearly mass selection of seeds from the previous year's harvest means that landraces or local maize varieties are in a process of continuous change. The

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[5] This section is partly based on Hebinck and Mango (forthcoming).

actual selection of seeds for the coming season begins in the field and the selected cobs are partially dehusked and then hung in the kitchen above the fireplace. This selection is based on *phenotypic* characteristics of the maize stalk and the cobs. Only the large regular cobs are selected for seeds, and only the seeds from the middle part of the spindle are used for sowing. Mass selection is effective in increasing gene frequencies for easily measurable characteristics such as plant type, maturity, grain characteristics, disease tolerance, tolerance to drought and strength of the stalk. It is therefore relatively easy for farmers to select for traits like large cobs, early maturity and other easily recognisable characteristics such as colour, taste and palatability.

James Otieno Okatch, from Nyamninia village in the Luo region east of Lake Victoria, is one such farmer who generates his own maize seeds. West Kenya is known for its local maize varieties. The story of Otieno and his *zero-type* is rather telling in that it shows the dynamics and particularities of a niche co-existing with the predominant socio-technical regime, which is based on mass selecting and breeding of maize seeds. After his mothers' death in 1989, his wife remained at home to continue with the farming activities that his mother had been carrying out. It was in this year that they planted hybrid maize for the first time. He is the eldest son among three brothers, so it was imperative that he had to *golo kodhi* (this is the principle that the eldest family member in the compound - usually a male - sows first) before the families of the other brothers. In accordance with the principle of *golo kodhi*, he had to use family seed and was therefore obliged to use the old seed his mother had been keeping. He was lucky to find them hanging above the fireplace in his mother's kitchen and he used them along side of the hybrid maize. Since he owns many African *zebu* cattle he had enough manure to not have to buy fertiliser. After planting and settling his wife at home, he decided to report back to his work in Nairobi. The performance of the family seed that they got from their mother's kitchen compared to the hybrid maize they had planted was astonishing. Since nobody knew exactly what type of maize variety it was, Otieno gave it a name, *zero-type*. Nelson Mango and I visited Otieno's homestead in 1997 during one our maize variety collection tours in the region. While pointing at the samples of maize that we held in our hand, he gave us one of his zero-type cobs and said *'look here. See for yourself. This cob is much bigger than the hybrid you have in your hand. So what is your judgement?'*

In 1991 Otieno retired and returned to his homestead. He is very proud of his zero-type maize, and shows it to everyone who visits him or is interested in farming. This maize does very well with organic manure alone and *striga* is virtually absent. Most villagers buy these seeds from him and try them out. However the majority of them lost their zero-type seed during the so-called hunger period when much of it was consumed instead of stored. His brother Erasto Muga is not part of the exchange. He kept seed received from Otieno but like the other farmers, lost them through consumption. Otieno was no longer willing to give his brother more seed because he thought Erasto was lazy. Erasto died in 1998 and Erasto's wives now plant local yellow maize instead.

Otieno generates these seeds through mass selection, which begins in the field. First he looks at the stem, which should be big and strong. Then he looks for stems and leaves that should be big and healthy. The cobs of the maize should be drooping downwards after attaining physiological maturity (after the grains have

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reached dough stage). This, says Otieno, ensures that water cannot get into the cob when the maize is left in the field to dry. The cob should not be opened to expose the grains to pest attack and no water should get inside. The maize stalk should have prop roots up to the third node above the ground to resist lodging. Finally, the spindle of the maize should not have less than twelve lines and should be well filled with grain. Otieno learned these selection techniques from his parents. He does not know much about hybrids prefers sticking to the family seed. Through yearly mass selection, Otieno has managed to maintain the zero type successfully. Like many other farmers, Otieno does not preserve the seed with chemicals but rather ash burnt from dry cattle dung or from sedges, which grow in swampy places down the river.

Farmers like Otieno compare their local varieties - at least 20 varieties exist in the region (Hebinck and Mango, forthcoming) – each with different names and different traits, including hybrids. Apart from yield and yield stability, the farmers narrate that hybrid maize lodges more than local varieties of maize, that the cobs from hybrids open easily resulting in cob rot and bird damage, that they are less resistant to weeds, pests, diseases and suddenly changing weather conditions. They also argue that hybrid maize is too long maturing. Local maize is preferred because of all of the above-mentioned characteristics. Besides, it tastes much better.

The virtues of the zero-type are explained by the villagers with reference to Otieno's late mother. The villagers keep on telling Otieno that this superior seed was a blessing from his late mother because he fed his visitors well during the funeral. There was enough beer and food. The elders were pleased with Otieno, as '*he did not tie money to his pockets.*' Before drinking beer they poured a little portion of it on the ground to honour Otieno's ancestors. This, according to them, had obviously had a good effect on the family seed that Otieno had been using since then. The elders in their explanations would keep referring to the importance of upholding the *golo kodhi* principle. *Golo kodhi* does not only guarantee a good yield, but also strengthens the authority of the elders over the younger generation.

Conclusions

The maize landscape in Kenya has evolved around different social processes, repertoires, experiences and commitments, and represents different bodies of knowledge as is apparent in the varying ways in which maize is selected, bred, multiplied and exchanged. Whereas hybrids and OPVs progressed from the application of agrarian sciences, albeit in different ways, the local maize is embedded in local knowledge passed on from one generation to another and shaped by local cultural repertoires such as *Golo Kodhi*. The 'modern' regime is typified by relatively stable and global networks, which manage to constantly reproduce themselves. The direction of technological processes and progress is relatively clear-cut, contained in scripts, and relatively beyond dispute in agrarian sciences. This goes for both the hybrid and the OPV way of breeding: both are embedded in the principles of agrarian sciences. OPV breeders, though, increasingly challenge the hybrid maize breeders, giving rise to changes in regimes 'from within'.

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The direction of the mass selection and breeding practices, on the other hand, is less clear and more open ended. The networks are localised, based on experimentation and a dominant design and script is absent. Its development in the long run depends most probably on the willingness to exchange experiences. In contrast to the 'modern' regime, the dynamics of the niche are such that a mass of options have emerged over time, which are part and parcel of the cultural, social, institutional and environmental context in which it evolves. The 'modern' hybrid maize regime in contrast offers limited choices.

Typical for the regimes and niches is that the network builders - be they Borlaug, Harrison, Lagrotech breeders or James Otieno - claim their success and work to be relevant for the 'nation' and its people. Most interesting is that local knowledge repertoires clearly question *and* contest scientific knowledge. Claims made by experts that their products are higher yielding are immediately counter-claimed by local farmers such as Otieno arguing that local maize tastes better, has nicer colours and out yields hybrids. The mass selection and breeding of local maize has the advantage above OPVs and hybrids that technology development corresponds with the contexts of the users. Farmers certainly mention this as important if they compare local varieties with hybrids and OPVs. These issues point at knowledge encounters that are embedded in practices such as breeding, selection and cultural repertoires.

These encounters also take another specific form. The claims made remain largely assumed and there is very little effort in Kenya to scrutinise them individually. Farmers like Otieno are actually the only individuals who can rightfully claim to have tested a wide range of maize varieties over the years. This suggests that the various regimes and niches rarely interact, or as Long would formulate it: the knowledge encounters or knowledge interfaces involve *discontinuities* rather than *linkages*. This is apparent in the way hybrid maize proponents have always claimed success in Kenya despite empirical research which shows that it never managed to replace the local varieties, varieties that have been viewed as inferior to hybrids. Successes, measured only in terms of adoption rate, vary per region: in the Luo region it was still below 20% in 1973, while in the same year districts like Trans Nzoia, Kakamega and Nandi had reached an adoption rate of almost 100% (Gerhart 1976: 27; Hebinck, 1990). Recent research in the Luo region (Hebinck and Mango, forthcoming; Mango, 2002), however, indicates a sharp decline in the use of hybrids. Interestingly enough, an employee from KEPHIS in Kitale narrated in an interview I had in 1998 that the hybrid success story '*was based on forging data about adoption rates. The World Bank badly needed a success*', he said. '*Kenya was to be that good example and happily went along with it*'.

The different bodies of knowledge with regard to maize breeding that have emerged in Kenya over the years underpins Long's argument that processes of social transformation involve knowledge encounters and the co-existence of social forms such as socio-technical regimes. Heterogeneity is continuously produced and reproduced, providing (at least theoretically) a breeding ground for continuing experimentation and the enrichment of knowledge. Empirically, however, this may not be the case. Earlier in this chapter, reference was made to niches as social spaces where alternative technologies emerge and are developed: some of them, such as mass selection, may give rise to the emergence of new regimes that co-exist with and challenge the predominant regime. Despite being

a largely localised phenomenon, mass selection certainly has its dynamics and definitely has a role to play in solving issues of food security alongside the modern regimes of hybrids and OPVs. At a more abstract level, if its discourse is taken seriously, the experiences and dynamics of mass selection and breeding of local varieties will broaden the horizon of technology development. Geels and Kemp (2000: 55) refer to this as 'strategic niche management'. Given the discontinuities between this particular niche and the 'modern' regime, strategic management for the time being will have to remain with the localities themselves.

The particular niche discussed here also represents a critical phenomena of processes of social change taking place in the rural areas of Africa: processes that evolve around distancing from 'externally' driven socio-technical regimes, which have been established over the years. Distancing is part and parcel of the formation of 'new' or the re-continuation of socio-technical regimes. The conceptualisation of socio-technological regimes captures both stability (of the predominant regime) and changes (the dominant regime being challenged by others). This chapter attempted to explain this with reference to the various network configurations and the claims made. Notions like regimes and socio-technological change build upon heterogeneity: the co-existence of social forms of social, cultural, economic and technological evolution at any one point in time. The debate on the relationship between the actor and structure in social sciences can consequently be 'solved' with a conceptualisation of structure as being '*an extremely fluid set of emergent properties, which, on the one hand, results from interlocking, transformation and/or distantiation of various actor' projects while on the other hand, it functions as an important point of reference for further elaboration, negotiation and confrontation of actor projects*' (Long and Van der Ploeg, 1994: 81).

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9

Organisation and development: a practice perspective

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Introduction

In this chapter it is argued that the study of organisation in the development debate should be on the agenda for rethinking. Long's work offers a good starting-point for a new approach given its emphasis on forms of organising that emerge 'from below', in other words, forms of organising that develop when individuals or social groups set out to deal with everyday problems or changing circumstances in their life-worlds. This chapter puts forward a practice approach to organisation that is based on the premises of the Wageningen actor-oriented perspective. It sets out to enrich this approach with insights from organisation theory. Before presenting this analytical framework, however, the flaws in the current debate on organisation and development are discussed.

Local organisation and the development debate

The image of the rural poor as 'victims' of exploitation who lack organisational capacities is pervasive in much development literature. The same applies to the high expectation that new collective forms of organisation can improve the situation of the poor. Literature such as this depicts poor villagers and peasants as 'traditional', 'unmotivated', 'apathetic' or, conversely, as 'victims' of the pervasive and 'corrupt' bureaucratic apparatus. At best they are viewed as 'opportunistic' and highly 'self-interested' people unable to align themselves with a wider socio-political project. The pursuit of this line of thought arrives at the argument that development workers can 'empower the poor' by helping them to develop better forms of organisation (Harris, 1988; Curtis, 1991, Uphoff, 1992, Uphoff, Esman and Krishna, 1998). Today local communities and local organisations are also given a special role in natural resource management. Many approaches to sustainable development formulate solutions in terms of returning responsibility for the management of natural resources to local communities (Ghai and Vivian, 1992, Berkes, 1995, Baland and Platteau, 1996, FAO/UNDP, 1998). This emphasis on organisation is accompanied by a stress on education, participation, and consciousness raising in order to make the poor understand their own problems and encourage them to work

on possible solutions (Pretty and Chambers 1993; Pretty *et al.*, 1995; World Bank, 1996).

Although these perspectives are based on a real concern for the position of the poor, naive ideas about the working of organisations and idealistic notions about the degree of co-operation possible in community ventures still prevail in a great part of the discussion (Shepherd, 1998: 13). The point is that in much development literature, organisations and institutions are treated as instruments of social change.[1] In fact, the idea that new forms of organising can make a dramatic difference to the lives of the poor is based on the notion of social and legal engineering: the belief that by changing rules or introducing new forms of organisation one can change society. Yet, processes of organisational reform by themselves have little chance to change existing power relations and bring more prosperity to the poor. This instrumental view on organisational reform, leads to a vicious circle within which ill-functioning institutions are made the scapegoat for the bad socio-economic conditions of the poor, and against which the propagating of new institutions are used as a magic charm (adaptation of von Benda Beckmann, 1993; 1994).

As most of the literature on organisation and institution-building for development is strongly normative and prescriptive, several conceptual flaws characterise the debate. Symptomatic is the use of a social systems perspective in which organisations are seen as 'social units directed to the achievement of collective goals or the fulfilment of institutional needs for the wider society or environment of which they are a constituent part' (Reed, 1992: 75, 76). Although the systems framework in organisational analysis was widely used in the 1970s and 1980s, many other perspectives have since been developed in organisational sociology which have been largely overlooked in the development literature. And although it is true that in formal terms most organisations are defined in terms of collective goals, the various members of an organisation often have different understandings of what the organisation is about. During the last decades several new theoretical perspectives have been developed. For example, organisations have been analysed as negotiated orders, which are created, sustained and transformed through social interaction. Other approaches pay more attention to organisations as structures of power and domination and show how these are related to wider configurations of domination. This is especially important for the development debate, in which a central weakness concerns a lack of problematisation of the relation between organising and power. The multi-dimensional patterns of differentiation among the poor or rural people themselves based on economic differences, gender, age and ethnic identities are often ignored (see critique by Brohman, 1996; Leach, *et al.*, 1997: 11). Other approaches in organisational theory show to which extent organisations reproduce the ideological and political constraints in which they are embedded. Finally, a whole body of literature exists which deals with organisations as cultural artefacts, documenting the complex ways in which organisational realities are constructed, sustained and changed through processes of cultural creation and enactment. In these studies,

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[1] In the literature the terms institution and organisation are often used interchangeably. At the same time, sub-disciplines, such as organisation sociology and new institutional economics, use the concepts in very specific and different ways. In general, most works that try to distinguish organisations from institutions stress the normative aspects of institutions and the structural aspects of organisations.

much attention is paid to the ways in which values are created and ideologies, rituals and ceremonies are expressed and how this may lead to senses of participation, trust and control (see Reed, 1992 and 2001). All these approaches have been largely neglected in the development debate.

The use of a systems perspective also implies that little attention is paid to the fact that people often work in loose personal networks instead of collective projects, or operate in continuously changing constellations instead of in more enduring groups. Conventional approaches to organisations in the development debate do not aim at gaining proper understanding of existing forms of organising that don't follow ideal-typical organisational models. These forms of organisation, if they are noticed at all in the first place, are simply labelled as 'backwards', 'disorganised' and 'corrupt'. The very use of language such as 'traditional' versus 'modern' or 'corrupt' versus 'democratic' throughout these works informs the reader that they are proceeding from the baseline of a scale which serves as the unspoken framework into which other phenomena must be fitted (adaptation of Wastell, 2001: 189). The presupposition of modern formal bureaucracy as being the basis of western development allows for any number of prejudices regarding the purity and viability of other forms of organising. Alternative organising forms are measured against Western ideological constructs of organisation. Another tendency that is quite common, but equally flawed, is placing the blame for the ill functioning of organisations on the abuse of power. As the presence of powerful bosses often plays a role in the way organisations have developed, there is a strong inclination to viewing organisational failures as the result of fraudulent leadership. Although it is true that organisational processes are always related to power relations, our understanding of these processes does not increase by simply 'blaming the leaders'. The labelling of these practices in a functionalist way as disorganised or corrupt or simply accusing them of bossism and dishonest leadership withholds us from finding new ways of analysis.

Given the fact that the theme of organisation is so central to the development debate, it is important to develop a theoretical approach that is less normative and prescriptive than conventional approaches. Organisations should no longer be treated as instruments of capacity building and social change, but as complex social phenomena. To that end, I present a practice approach to organisation. As will be explained, this means first of all, that organisation is studied as a verb, as a process. The concept of organising practices refers to the analysis of different forms of organising in relation to the life-worlds of social actors and the broader socio-political context in which they operate. So, the focus shifts from the organisation as an entity towards the various ways in which matters are organised within wider fields of influence. The practice approach is especially useful for the analysis of forms of organisation that do not seem to work according to the official rules: forms of organisation regarded as operating in line with clientelistic or political logics and where bribery is common. Situations, in other words, in which one knows that much is settled 'behind the scenes'. Instead of labelling these practices in normative ways, this approach provides a framework for their analysis.

Examples are used from the La Canoa *ejido*, in the valley of Autlán in Western Mexico.[2] The *ejido* is a form of peasant community, which was introduced after the Mexican Revolution at the beginning of this century. The La Canoa *ejido* was established in 1938 and owns approximately 450 hectares of arable land and 1800 hectares of land in the mountains. The arable land is divided into individual plots, while the mountainous common lands are used for the herding of cattle.[3] The *ejido* system in Mexico has been heavily criticised for high incidences of corruption and disorganisation. For example, although agrarian law has prohibited the selling of *ejido* plots, this has nevertheless become a common practice throughout Mexico. Another common phenomenon is that decisions are not arrived at during the monthly *ejido* meetings. Instead, the head of the executive committee (the *ejido* commissioner) takes decisions on his own, without rendering accounts to the *ejido* assembly (the highest authority at the local level). It is common to hear government officials complain about disorganisation within the *ejido*, adding that the *ejidatarios* should be educated in their tasks as community members and have to be made conscious of their tasks as a group with collective resources and interests. It is claimed that *ejidatarios* lack certain skills and should be helped to organise themselves better. For this reason, several government programs were introduced in the nineties directed at the improvement of the local *ejido* management.[4] In this chapter, it is argued that the organising practices approach provides a totally different vision of the working of the *ejido*. It also sheds a completely different light on central themes in the organisation debate, such as accountability, legal security, leadership and management.

Towards a practice approach of organisation

Long has made important contributions to the approach of organising practices. One of his starting points is that individuals and groups do not operate in clearly defined institutional frameworks: instead, they tend to construct fields of action which often crosscut organisation boundaries (Long, 1989: 252). This means that emergent forms of organisation develop that are made up of formal and informal elements and which are not in the control of one agency. According to Long, using the notion of practices allows one to focus on these emergent forms of organisation and on the interaction, procedures, practical strategies and types of discourses present in specific contexts (Long, 1990: 16). This strongly resembles Wolf's position that we should get away from viewing organisation as a product or outcome, and move towards an understanding of organisation as a process. Wolf suggests that we could make a start by looking at the 'flow of action', to ask what is going on, why it is going on, who engages in it, with whom, when, and how often (Wolf, 1990: 591).

As mentioned before, when using the term organising practices, I refer to the manifold forms of organising and their rationale in specific socio-political contexts. In many situations, organising practices become structured or patterned

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[2] Research was conducted in different periods from 1991 to 1995. For the sake of anonymity, the name of the *ejido* has been changed.

[3] Half of the arable ejido land has been placed under irrigation since the 1960s. Today the village of La Canoa has 837 inhabitants and the La Canoa ejido has 97 members.

[4] For a study of the implementation of this program see Nuijten, (2002).

in unexpected and often invisible ways. This means that organising practices can also be distinguished in the apparently 'disordered' and 'corrupt'. For example, the fact that people know what language and arguments they have to use in encounters with state officials and how much they will have to pay for certain services, is an indication of a certain patterning within the practice of bribing. Following Bourdieu (1992), we can argue that organising practices develop in a field with its own logic, rules and regularities. These actions are not explicit and this makes such organising practices resemble the playing of games.

However, finding the action, regularities and 'rules of the game', is not a straightforward endeavour. If we decide to study the 'fields of action that people construct' (Long 1989), or to follow 'the flow of action' (Wolf, 1990), the question becomes one of where to focus on. For example, where does one start the research of a co-operative when the meetings are seldom held, minutes not taken, attendance is poor and where hardly any matters are discussed on such occasions anyway? In these situations we often do not know where to start or what to look for. We might even begin to wonder whether the co-operative is of any importance for the people involved or worth studying at all. It can be quite complicated to come to grips with the central issues at stake when interests are involved that have nothing to do with the formal objectives of the organisation. This can cause the researcher to have the feeling of being a detective who tries to find out what is going on but without knowing exactly what it is that one is trying to discover. The fact that important information circulates in small undefined circles and that there is a lot of organising taking place in unclear and changing settings can give the researcher the anxiety of trying to be in the right place at the right time, and the feeling that wherever one happens to be, the action is not (Law, 1994a: 45- 46). It is clear that this approach asks for special methodological instruments. Here Long's work offers valuable contributions, showing that instead of starting from the formal objectives or organisational model, we are better off studying the organising processes around specific projects, areas of contestation, and critical events' One should choose projects that throw the most light on the themes one is interested in. Specific case studies (Mitchell, 1983, Walton, 1992) and situational analyses (van Velsen, 1967, Long, 1968) can then be elaborated.

Organising practices in the ejido *La Canoa*
As mentioned before, the Mexican *ejido* is criticised for being a highly ineffective form of organisation. With this in mind, I decided to focus on the *ejido*'s central resource: its land. The fact that the official *ejido* rules are not followed and that meetings are not regularly held does not give us much information about what finally happened with the land. So, I decided to make a genealogy of land plots and an inventory of land transfers that had taken place since the beginning of the 1940s. This study of the distribution and transfer of *ejido* plots over the last fifty years, showed considerable ordering (Nuijten, 1998). In fact, land possession had turned into a form of private property with considerable legal security for the *ejidatarios*. Although most *ejidatarios* did not approve of land sales, they considered this the responsibility of the individual *ejidatario* and for that reason did not hinder illegal land sales. No accurate registration of *ejido* plots and land transactions existed at the Ministry of Agrarian Reform, but the *ejidatarios* nevertheless knew how plots were

divided among themselves and whom they should recognise as owners. These organising practices around land plots obviously went against the spirit and letter of the agrarian law that prohibited the individual ownership and sale of *ejido* plots. This situation also explains why *ejido* meetings are not held regularly and why hardly any decisions are taken at these public gatherings: much is arranged outside the formal channels. In summary then, we should not talk about a 'lack of organisation', or 'disorganisation' at the local level but rather about different forms of ordering with their own rationale. The official rules and procedures, however, continue to play a certain role. The following example illustrates how the formal structure can become important again in land conflicts.

Conflicts and procedures

Conflictual situations in the *ejido* may linger on for many years as the 'resolution' of conflicts tends to be accompanied by fights, family quarrels, and violence. A famous local struggle in La Canoa has been the conflict of '*las Malvinas*'. This concerned a tract of land within the urban zone of the *ejido*, near the commons. Since nobody had used this land in former times, the *ejido* once gave Elías Romero, one of the richest *ejidatarios*, permission to use it for the cultivation of maize. However, the land was lent to him on the condition that it would be returned to the community when more land was needed for the construction of houses. According to the *ejidatarios*, an agreement was drawn up which was guarded in the *ejido* archive. Elías used this land for many years. When he passed away, his wife Petra and their sons continued to use this land. However, the pressure of the population on the urban zone was growing and in the seventies the *ejido* decided to ask Petra for the land back.

Petra, however, maintained that the *ejido* had given this land to her husband and she refused to return it. Petra and her sons tried to keep the land by all possible means. The agreement, in which Elías declared that he would return the land when the *ejido* would ask him for it, had disappeared from the *ejido* archive. At that time, the war between England and Argentina over the Falkland Islands (*las Malvinas* in Spanish) was taking place, so the *ejidatarios* started referring to this part of the village as *las Malvinas*, a name it still retains today.

The conflict dragged on for many years and Petra refused to give in. Finally, Franciso Romero became *ejido* commissioner and decided to make a more determined effort to recover the land. Besides lodging an official complaint at the Ministry of Agrarian Reform, he hired a lawyer. The majority of *ejidatarios* supported Francisco. Francisco and several *ejidatarios* had to go on many trips to the offices of the Ministry of Agrarian Reform in Guadalajara and Mexico City. Petra and her sons also hired a lawyer and tried to get several *ejidatarios* on their side. However, apart from some close relatives of Petra, all the *ejidatarios* supported the commissioner in his efforts.

During this period, the *ejido* meetings were well attended. Although the majority of *ejidatarios* supported Francisco, this fight was not a pleasant one for him personally. He was threatened by Petra's brother and was once put in jail, accused of illegally invading Petra's terrain. The *ejidatarios* reacted immediately and got him out of prison on the same day. Rumours were heard that one of Petra's sons intended to kill Francisco. Finally, after many incidents and much tension in the village, the Ministry of Agrarian Reform reached a decision in

favour of the *ejido*. The conflict was formally won by the *ejido*, and the *ejidatarios* took the land back into their possession. The recovered land was immediately divided into *lotes* for the construction of houses. As the *ejido* had spent a lot of money on lawyers, trips to the cities and on officials, the people who received a *lote* had to pay an amount of money to cover these costs. Petra was offered two *lotes* for her sons, but she refused them on principle. Many villagers stopped ceased to Petra and her sons for years.

The foregoing example shows different aspects of organisation and practices of control in the *ejido*. It shows that the costs that are involved in the resolution of conflicts and in 're-taking control' over certain *ejido* matters may be very high in personal and social terms. Re-taking control often means quarrels, tensions and fights. This is precisely the reason why people are reluctant to interfere in *ejido* matters. At the same time, it illustrates that formalities become important again when conflicts are fought out. During conflicts, people attend the meetings, acts are drawn and the higher bureaucracy becomes involved. This does not mean that the official rules are strictly applied. Normally it is the playing of the 'official game' in combination with informal ways of exercising pressure that determines the final outcome in a conflict.

Hence a socio-historical study of the ways in which land has been distributed in the *ejido* and transferred between different persons over the years shows the ordering and patterning in practices that are generally labelled as 'disorganised' and 'illegal'. Studies of conflicts and areas of contestation are important as they reveal other dimensions of organising practices. They show how in certain situations matters are settled by the combination of formal procedures and informal personal-political networks.

How to make sense of official representations

We have just discussed the importance of studying 'the flow of action' and 'the flow of resources' as opposed to sticking to the formal organisation model. However, the official representations of organisations may also offer valuable information, though often not in ways we expect them to. Everybody acquainted with organisational issues in development contexts knows the frustrating or surprising experiences this can give rise to. Sometimes, organisations appear to exist only on paper. Many people who follow official organigrams are confronted with the fact that whole divisions do not exist, or that people within the organisation do not have a clue about the official structure. It is also quite common to hear people give totally different views on what the formal structure is.

Even in situations where official procedures seem to be completely disregarded, it can be important to study the formal part of organisations. Likewise, it can be interesting to study official letters, even though they give a biased presentation of what is going on. It can also be important to study the list of official members, even though half of the people that appear on the list are dead. Official meetings may be enlightening, even though decisions have already been taken in informal gatherings before the meeting. It is important that we refrain from analysing these phenomena in terms of a 'dysfunction' (messy organisation) or a 'lack of organisational capacities'. Instead, we should find

ways to analyse these phenomena in new non-functionalist ways. For instance, if no official list of organisation members exists, but the head of the organisation knows all the members by name, the amounts of money each member owes the organisation and the numbers of animals they possess, then surely this is an indication of strong forms of social ordering.

The various roles of meetings

In a similar way, official meetings may give very little insight into central negotiations and decision-making processes, but can be illuminating in other respects. By listening to the ironic remarks, and conversations and discussions at the back of the room, one might get an idea of what is happening 'backstage'. Meetings can also be analysed as dramas in which different actors play different roles. As such, the drama can also be used to explore the relationship between language and action that constitutes social life (Czarniawska, 1997: 31). These meetings can also show how informally arranged affairs are formally presented, challenged, and negotiated and in this way give an indication of the most powerful political discourses (Parkin, 1984). Hence, there are innumerable ways in which one can study formal parts of an organisation in a non-functionalist way. It only means postponing analytical closure and searching for other modes of interpretation and explanation.

In my own research in Mexico, I found that *ejido* meetings did not play a role in the public rendering of accounts or arriving at collective decisions but rather had become arenas of quarrelling and confrontation. Meetings were characterised by people talking and quarrelling at the same time. There was seldom a central discussion and when there was, it soon dissolved into side-discussions in which old fights were recalled and often the same people began criticising each other again. Minutes were hardly ever kept and acts were rarely drawn up during these meetings. Although they were held to discuss important matters, collective decisions were never taken and voting never took place. Different people expressed their opinion and that was it. When accounts of income and revenue were presented they were always quickly passed. Certainly, there were always people complaining about these accounts, but the commissioner was never obliged to give a public explanation. Numerous side remarks were made during the meetings e.g. things should be different, more people should attend the meetings, people should learn to listen to each other, the rules should be followed, and so on. When they thought they had heard enough, people would leave the meeting. Others would wander in and out of the building while the meeting was in progress and outside, small groups would be discussing what was going on inside. The only things that became clear during these gatherings were the critical areas of contestation. The same conflicts about land always came up and without exception, *ejidatarios* accused each other of the things that had gone wrong. However, these were loose accusations, in the sense that no central discussion would follow in which attempts were made to resolve these issues. At first, it was very difficult to make any sense of these meetings at all.

Although Bailey (1969) describes a very different situation in the village of Bisipara, India, there are some similarities in the meetings he gives accounts of. Bailey nicely depicts how in the village council, people would publicly accuse each other of failing to contribute to common tasks, of embezzling village funds,

and other matters. This always led to heated debates but decisions were never reached on these issues, and after these open confrontations the affair would slip back to the more covert competition of gossip and backbiting. 'Then sooner or later, there would be another confrontation of just the same kind, followed by another period of gossip and slander' (Bailey, 1969: 89). The interesting similarity is that in Bailey's study, as in La Canoa, public meetings have become an arena of 'bickering and indecisive confrontation' and not of decision-making and resolution (*ibid.*: 90). In La Canoa, the meetings give *ejidatarios* the opportunity of expressing their opinions and feelings, and stressing the differences and tensions within the *ejido*.

This dynamic is well illustrated by the following example. In La Canoa a great part of the commons has been distributed over the years among *ejidatarios* and the sons of *ejidatarios*. Although officially, the *ejido* assembly should take these decisions, the custom is that people ask permission from the *ejido* commissioner who then decides alone. Once in an *ejido* meeting, however, the son of an ejidatario wanted to ask formal permission of the assembly to take a plot of land in the commons. The man, a lawyer who no longer lives in the village, wanted to follow what according to him were correct formal procedures. He had already come to several other *ejido* meetings but these had all been cancelled because of low attendance. This time the *ejido* meeting had not been cancelled and the man could finally present his formal request to the *ejido* assembly. This proved to be a rather awkward situation. The *ejidatarios* are not used to being formally asked permission to use a part of the commons during *ejido* meetings. Now that the lawyer had defied custom by formally asking for permission to take a plot, many of the *ejidatarios* used it as an opportunity to complain about the fact that everybody had taken land in the commons, that there was no land available anymore, and that the land administration was a total mess and should be regulated. In the end, no decision was taken during the meeting and the man did not obtain the formal permission he was after. However, it was not prohibited either. The lawyer was annoyed by the whole affair and remarked that he would be better off just taking the land without asking permission from anybody.

These examples show that formal parts of the organisation may acquire roles that are different from their official functions. As Barth puts it, 'I am in no way arguing that formal organisation is irrelevant to what is happening - only that formal organisation is not *what* is happening' (Barth,, 1993: 157). This does not automatically mean that meetings, minutes, official documents etc. are insignificant, but only that they may acquire meanings that have little to do with their official role. Thus, the study of the formal aspects of organisations can be interesting, fruitful and important, and can show us many things, once we realise that they do not necessarily stand for their official function.

Reflective talk and organisational discourses

Continuous critical reflections by human agents, their theorising, and their story-telling can reveal much about the dynamics of organising practices. In several organisation theories it is argued that the creation and re-creation of stories are a way of ordering the world around us and are central to the organising process (Reed, 1992, Czarniawska, 1997). Law (1994a, 1994b) talks in this respect about the many

organisational narratives that can be found in every organisation. He shows how participants in an organisation may present very different and contradictory narratives about what the organisation is about and/or should be about. These narratives can be contrasting and inconsistent as they deal in different ways with conceptions of agency, self-interest, opportunism, and performance. According to Law, these manifold narratives of organisation show the decentered nature of organisations, since no narrative can completely capture the dynamic of the organising processes. All narratives are true and incomplete at the same time. In this approach, the forms of discourse available to and used by social actors in assessing their organisational situation are a central object of study.

Yet, I would take this position a step further. In my view, different views or images of the organising process do not only show different sides of the same organisation, they also reflect areas of tension and conflict. As Tsing argues, 'shifting, multi-stranded conversations in which there never is full agreement' may show important areas of contestation and struggle (1993: 8). She points out that we should situate commentaries within wider spheres of negotiation of meaning and power, recognising at the same time the local stakes and specificities (*ibid.*: 9). Hence, the study of organisational stories and discourses and the manifold contrasting views we may find, should be used for the analysis of organising practices in relation to the broader setting.

Local reflections on organising practices

In La Canoa the *ejidatarios* often reflect on the organisational characteristics of their *ejido* and struggle with the contradictory nature of their own reflections. Discussions of this kind, about the organisational characteristics of the *ejido* occur at the *ejido* meetings but also in private circles. To a certain extent outsiders induce this dialogue. Officials always say to the *ejidatarios* that they should accept their responsibilities, follow the formal rules, and organise themselves better. This places the *ejidatarios* in a dialogue between their 'practical knowledge' and a 'modernist organisation discourse'. For example, many *ejidatarios* say that they know that it is their duty to attend the *ejido* meetings but at the same time they can explain to you why they often prefer not to go. They argue that important decisions are not taken at the meetings anyway. This illustrates that they are in a critical, reflective dialogue with the world in which they live, with themselves and with government officials (see Pigg, 1996).

Since the *ejidatarios* themselves are struggling with ideas about how the *ejido* should work, we find contrasting discourses at the local level. To begin with, we find the 'accountability discourse', which presents the way in which the *ejido* should function as a modern bureaucratic organisation. According to this discursive model, every ejidatario should assume a position in the executive committee and take responsibilities if he or she is asked to do so. The executive committee should organise meetings and the *ejidatarios* should all attend these meetings. At the meetings, decisions should be taken about the important affairs in the *ejido* and the implementation of decisions should be open to inspection. The executive committee should render accounts of their actions at the *ejido* assembly and defend the interests of the entire *ejido* at the different institutions. *Ejidatarios* who do not follow the official rules should be punished, fined, or even deprived of certain rights. This accountability discourse is especially used

by the *ejidatarios* when things are happening in the *ejido* that they do not agree with. In situations like this, some *ejidatarios* would prefer the *ejido* to re-take control. However, most of the time the *ejidatarios* do not mind the lack of management and control. Nor do they care that outsiders view their *ejido* as 'disorganised'. The fact that the *ejido* does not function according to the official model gives them a lot of freedom in their operations and means that nobody interferes with their illegal land transactions. Furthermore, they have considerable security of land tenure. So, most of the time there is no reason for the *ejidatarios* to want the *ejido* administration to work differently or in a so-called modern, democratic, accountable way.

Another discourse, which is very strong in the *ejido*, could be called the 'personal politics discourse' of organisation. According to this discourse, people in official functions always use their position to favour themselves and friends. It is argued that there is always a lot of *favoritismo* (favouritism) and politics in the organisation and that in the end, everything is determined by money and relations. The people with the most money or with the most influential relations will always come out on top. Within this dialogue, it is said that personal enrichment is the main reason for people to take an official post. This discourse is an illustration of the fact that politics and organisation are seen as intricately related. The 'personal politics discourse' of organisation is above all used when people want to express their frustration about the outcome of specific conflicts. It is also used as a general critique about how things work in the *ejido*, the government bureaucracy and society at large. It is also often used as a justification for not taking initiatives to change situations or for not assuming formal responsibilities. The *ejidatarios* have a double attitude towards this image of organisations as being determined by personal politics. They may complain about favouritism in the *ejido* management but at the same time will acknowledge that they themselves make use of these mechanisms when they need their own affairs to be settled. They may explain that this is a weakness in themselves, and say: 'as Mexicans, we ourselves are to blame for it' or 'it is hard to change these things as they form part of our life, of the way we are'. At the same time they are proud of the fact that they as Mexicans know how to support friends and relatives when necessary.

The model of organisation, which is presented in the personal politics discourse, is more an imagery of power and politics than an accurate representation of organising practices. Although organising processes in the *ejido* are definitely influenced by power relations, these are not the only or even the most important factors. For example, although the *ejido* commissioner takes many decisions on his own, he has very little room to operate in. Little scope exists for abrupt changes of established routines. He can decide on minor issues without informing the assembly and he may take some advantage of his position, but he cannot decide to evict somebody from an individual *ejido* plot. *Ejidatarios* have several ways to fight abuses and effective forms of accountability exist outside the formal channels. If a commissioner goes too far in his abuses or damages of the interests of certain people, they will let him know and if necessary he will be stopped. He is not stopped so much by people speaking up at a meeting, but by their talking to him in private, their use of regional political networks, gossip and the exclusion of his relatives from other village activities. The politics of honour also plays an important role in the room commissioners create for themselves and in the

way others judge them. In fact, the 'accountability discourse', as well as the 'personal politics discourse' of organisation present images of organising which do not exist in reality. Yet, they do express different, partial dimensions of the same organisation and are used in conflicts and struggles in the *ejido*.

Conclusion: re-thinking organisation

In the development debate, a widespread belief exists in the capacities of 'modern' and 'accountable' forms of organisation to improve the situation of the poor. The propagation of organisations as a magic potion for progress is accompanied by the proliferation of manuals for building local organisations, participating in learning approaches and training for consciousness raising. In this chapter, it was argued that within this debate organisations are mainly seen as instruments of social change. Most of the time, an implicit social systems approach of organisation is employed in which organisations are defined as units directed to the realisation of collective goals. Interesting forms of organisational analysis in the social sciences that have been developed in recent decades are completely ignored in the development debate. This has several detrimental effects. First of all, existing forms of organising in development contexts, which do not correspond to the mythical model of the 'modern', 'accountable', 'democratic' organisation are not taken into account. Secondly, what we see happening is the tendency to replace political discussion with a 'neutral' focus on organisations that are supposed to bring development, depoliticising relationships that are in fact fraught with conflict (see Strathern 2000 and Pels 2000 for similar arguments, Ferguson, 1990).

In this chapter, an organising practices approach was presented that draws on recent insights from organisation theory. Within this approach, one studies the ways in which people organise themselves around certain resources, projects, events, or conflicts. The ordering or patterning of these practices is analysed in relation to the wider socio-political field. This approach was illustrated with examples from the Mexican *ejido*. In Mexico, ejidatario smallholders are depicted by government officials as uneducated, uncooperative, backwards and disorganised. Programs for the *ejido* sector draw heavily on discourses that stress the need for consciousness raising, education and local organisation. Here, it was shown that this view overlooks existing organising practices in the *ejido* and the ways in which these have become firmly established and ordered over the years. These regularities are reflected in the manifold implicit 'rules of the game' in everyday forms of organising. Although the official rules are not applied in the *ejido*, accurate registration does not exist and meetings seem a chaotic mess, mechanisms have developed over the years that give individual *ejidatarios* considerable security in land tenure. In addition, effective forms of accountability exist outside of the official arena. In this context, I stressed the importance of reflective talk and discourse for organisational analysis. In the 'field', it is common to come across different, contrasting and seemingly inconsistent images of the same organisation. On the one hand, these contrasting stories capture different dimensions of the same organisation or, in other words, the 'multiple realities' of the actors involved (Long, 1992). On the other hand, these contrasting and multi-stranded views reflect areas of contestation and struggle and are an

indication of the configuration of forces in the wider socio-political field. Only by taking distance from the systems perspective of organisation, and by taking existing forms of organising seriously, can we have meaningful discussions on the role of organisation in development.

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10
Rural entrepreneurs in context

Sarah Southwold-Llewellyn

Introduction

The aim of this article is to discuss rural entrepreneurs in different contexts. One context is the theoretical and methodological framework of the 'Manchester School' which has been the underpinning of Norman Long's work, as well as my own. The other context is the one in which our informants operate. Both contexts are influenced by diachronic processes that affect the constructs of the academics and the constructs of our informants for understanding their behaviour. This article is a comparison of a few aspects of both contexts, and a look at how they have evolved over a twenty-five year period.

The academic context begins when I arrived at Manchester University in 1968, as a postgraduate student from the United States. The Department of Social Anthropology was still in its heyday under the leadership of Max Gluckman. Emrys Peters, Kingsley Garbett, Bruce Kapferer, Norman Long, Basil Sansom, Martin Southwold, and Dick Werbner were all staff members at the time. It was a dynamic, stimulating environment for students, as well as staff. Ideas were debated, challenged and developed. Complementary influence came from members of the Sociology Department – I mention particularly Peter Worsley, Clyde Mitchell and Bryan Roberts, who have all influenced Norman Long's work.

Norman was at that time a young and enthusiastic lecturer. His enthusiasm was expressed in the eclectic approaches he used in *Social Change and the Individual* (Long, 1968) where he experimented with different theoretical and methodological approaches to analyse his data. I was fortunate to be among one of the first groups of post-graduate students supervised by Norman. For all of us, he stimulated our interest in problems of development – an unfashionable topic for Anthropologists, then. Among his students, Caroline Moser and Carlos Samaniego stimulated his interest in Latin America, especially Peru, where he later set up a research project with Bryan Roberts, which included studying trader networks.

As many of his succeeding students can testify, Norman was an unusually supportive supervisor, both intellectually and personally. He encouraged several of us to persevere when we might otherwise have given up. Most importantly, he engaged with his students – you felt that you were stimulated and stimulating to him – that there was real exchange between teacher and student. It was not until I

was writing my own thesis in the mid 1980's, that I realised how much our common background in Manchester, and more specifically, Norman's approach had influenced my worldview.

Topics of research

The initial topic of my research in Sri Lanka in 1974-5 was the impact of the new agricultural technologies stimulated by government policies. Spurred by wanting to understand the low adoption of these technologies, I studied the heterogeneity of rural household livelihoods. One third of the Sri Lanka households had a member who was or who had been engaged in trading. Subsequently, I focused on credit relations with regard to trading and household livelihood strategies.

My own research led me to a number of topics that Norman had researched. Among these were the characteristics that identified successful traders as a group, the impacts of changing government policies, international prices for agricultural products, environmental conditions and the heterogeneous and multiple livelihood strategies pursued by individual members of households. These topics led to researching networks, particularly with regard to credit relationships and trust. As I will explain later in this article, these topics did not provide sufficient answers as to why some traders were more successful than others: they only gave partial answers. What really identified the successful traders were their strategies. This led me to the differences in the capabilities of individuals, which seemed to be totally inadequate as a sociological explanation.

Grappling with the problem of individual action versus structural context, I read Long's Professorial Inaugural Address at Wageningen University (Long, 1984). What struck me was that we had started with a similar conceptual framework and fifteen years later we were grappling with the same issues: how to explain differential responses to similar conditions, and more fundamentally, what is the role of an actor-oriented approach for sociological analysis (Long, 1984: 2-3)? The questions we posed seemed inevitable given the Manchester approach, plus the influence of mainstream sociological approaches we had both encountered: Long through his work with Bryan Roberts and mine with applied policy-oriented research for strategic planning and health services.

Our mutual conceptual framework is grounded in the Manchester approach, and an awareness of its limitations. Central to this framework was to study situations[1] in which the interplay between social, cultural, political and economic elements of social action are articulated. To augment this approach, Long has developed a number of key concepts which have been central to my own work: actor and agency, room for manoeuvre, interface, actor-oriented approach, as well as differential responses to 'structural' change. More central to this is our methodological orientation which has focused on extended case histories of individuals and how their personal histories and characteristics affect their responses to changing contexts. There is, however, a difference in balance.

Long is more concerned with the normative, which underpins his notion of social actor (e.g. 1997: 3, footnote 3). This is partly due to his interest in a comparative perspective at the level of global theory. Progressively, he has

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[1] Long has refined the concept to include the notions of arena, domain, critical events (c.f. 1997: 6ff.) and fields (c.f. 2000:13).

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become interested in locally situated practices, but only as they relate to responses to global phenomena. This is clearly illustrated in the Introduction he and Alberto Arce have written for *Anthropology, Development and Modernities* (Arce and Long, 2000: 1, 2, 8, 12 ff.), in which they contrast the concepts of modernisation and modernity.

Long tends to use individuals as role figures (social actors or social units). His actor-oriented approach is not about individuals but rather how individuals represent a type at different levels of analysis: local, regional, national, and global. One example of using a larger unit of analysis is that this framework leads him to stress the advantages of social capital, especially with regard to networks: my work has stressed its disadvantages as well.

Likewise, there is a difference in emphasis on how we view the problem of conflict and change. Following the early Manchester approach, Long focuses '...*upon the critical points of intersection between different levels of social order where conflicts of value and social interest are most likely to occur*' (Long, 1984: 10). He uses a methodology that stresses constructions of social actors and other collective units (Long, 1997:9-10). In contrast, I have focused on the individual as the unit of analysis in an attempt to highlight complexity and ambiguity. I have stressed how the individual behaves differently in different contexts. I am interested in the conflicts or inconsistencies in the constructions individuals make to explain their behaviour, in a series of situations. This also has led me to compare their constructions with wider sources of evidence.

In addition to his early influence, I have used Long's actor-oriented approach extensively in research among the Yusufzai Pukhtun in the Kana Valley, Northwest Frontier Province, Pakistan. The actor-oriented approach is particularly useful for understanding dispute settlements at different levels of attempted resolution. The concept of room for manoeuvre is useful for understanding power relations of those in structurally weaker positions, especially in intra-household relations. Furthermore, the heterogeneity of household livelihoods, which combine agro-pastoralism with seasonal migration, conflicts with culturally prescribed ideals about inter- and intra-extended household relations. In this chapter, I will concentrate on my earlier research on entrepreneurs[2] in Sri Lanka, in which a comparison will be drawn with the circumstances in the same community in 2001.

Sri Lankan research[3]

With regard to trading enterprises, the short-term and long-term credit strategies of traders, both as borrowers and lenders, in the operation of different types of

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[2] 'Entrepreneur' is another term that may be used as synonymous with 'trader'. An entrepreneur is a '...person in effective control of a commercial undertaking; contractor acting as an intermediary' (The Concise Oxford Dictionary: 5th Edition, 1971). However, in much of the literature on development, the term 'entrepreneur' is used in a specialised way to mean an innovator (e.g. Schumpeter, 1934: 66ff. Belshaw, 1955:148; Barth, 1963; 5-6ff.; Long, 1977: 128; Schwartz, 1979: vii.). In Polgama, most entrepreneurs i.e. innovators, are traders but not all traders are entrepreneurs. For simplicity, I will use the terms inter-changeably in this article.

[3] The major locale of the research was Polgama (a pseudonym), a village 10 kilometres north of Kurunegala, Sri Lanka, where fieldwork was done in 1974-75 for 15 months. Polgama and its adjacent village of Gonnawa (pseudonym) form a center for commerce and services in the vicinity.

businesses were explored (Southwold, 1987). It was shown that the dichotomy between shopkeepers and copra[4] merchants was important for understanding how traders operate their businesses because the two types operated with different structural constraints. There were basic differences in the way they organised their businesses with regard to their management and access to credit. Shopkeepers advanced goods in anticipation of future repayment in cash: copra merchants advanced cash in anticipation of being repaid in coconuts. Both were strategies for securing a clientele. Case studies were presented to illustrate the different structural constraints of the different types of businesses. Seen as life histories, these case studies represented a continuum of changing strategies and changing types of businesses through time. Starting as shopkeepers, those who were successful in balancing their credit resources would be able to develop their enterprises. Those who were the most successful became copra merchants. It was shown that the manipulation of credit relations illustrated the mutual interdependency based on co-operation and competition, and consequently, that this could not be understood without an understanding of the social context of any particular relationship, both with other traders and with their clientele.

Central to this approach was the view that traders were not a homogeneous group, in terms of class, caste, or area of origin. It was shown that traders, considered collectively, have neither homogeneous social characteristics nor a unitary set of interests. Their relations to the means of production are variable, and in individual terms, they are often in competition. Furthermore, their individual positions in social and in other economic contexts may crosscut their business interests. More crucially, their individual career histories illustrated different strategies and aims as their career proceeded. As this article will illustrate, there are no core characteristics that identify them either in terms of being a separate social group or as having core attributes.[5]

Traders are not homogeneous in a further sense. At any given time, a particular trader and/or his household members may have several income sources. And often, traders have several types of businesses at one time. All these income sources were viewed as resources, particularly in terms of giving access to different avenues of credit and investment. With regard to the career histories of individual traders, their individual positions in the structural hierarchy of credit relations were constantly changing, although the overall patterns remained similar.

However, a few years before the 1974-75 research, changes had occurred in the pattern of credit relations because of the government's policies towards traders. They could no longer sell paddy and rice. In addition, imports were restricted which drastically curtailed goods in the shops. Other changes had occurred because of a drought, which affected paddy production. Consequently, as the only major crop, coconut became a rural currency that bound coconut traders and those with coconut to sell into a relationship of mutual dependence. The value of coconut was and is tied to its consumption and commercial commodity value. More significant is its value as a means for securing long-term credit relationships, which is embedded in social, as well as economic, relations.

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[4] Copra is coconut that has been dried either in a kiln or in the sun. Primarily, it is processed into coconut oil.
[5] c.f. Nireka Weeratunga (2001) where she discusses the core attributes ascribed to the person of the entrepreneur.

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Conflicting principles in management of credit

There were a number of conflicting principles that were juxtaposed in the management of credit. In the case of coconut-copra merchants, securing clientele entailed advancing funds to suppliers so that they would be obliged to sell their nuts to the trader. But their indebtedness was the trader's indebtedness as well. It involved the trader in obligations to the supplier to supply ongoing credit for consumption and larger sums for emergencies. Furthermore, as the larger traders were among the few with large enough incomes to pay income tax, they were expected to be a co-signee for bank loans.

There were additional conflicts in the relations between copra merchants and other traders in less capital-intensive businesses. The copra merchants had to advance money to secure coconut and copra supplies; but by advancing this money they were strengthening the ability of these smaller merchants to compete with them for customers.

It was argued that the explanation for the differential success of traders must take into account a number of conflicting, yet interdependent, factors. With regard to social characteristics, I showed that those traders who were most likely to succeed tended to use the construction of being an outsider, thus, making it easier to disentangle multiplex relations and to decide which aspects of these relations to foster. However, analysis of their actual area of origin showed that they were not, in fact, outsiders. On the other hand, the construction of being an insider, especially with regard to using kinship networks, was useful at the beginning stages in the development of a business (Southwold-Llewellyn, 1994).

The interplay between rational credit strategies and values influenced investment choices in the development of a trader's business career. These are both determined by and determine the structure of his business. Throughout my thesis, I assumed an actor-oriented, decision-making approach based on a model of the rational man. Echoing the formalist-substantivist debate, Keyes points out: '(...) a rational actor theory is, at best, only a partial theory'. Keyes further argues that '(...) self-interested motivations are everywhere constrained by cultural solutions to problems inherent in the fact that people live together in societies' (Keyes, 1983: 755).

We need both the model of the rational man and the model of the moral peasant to understand trader-farmer relations. One could argue that 'traditional values' are in conflict with those necessary for successful economic ventures. And hence those who are in situations 'outside' the kinship network of obligations are more likely to succeed. However, traders cannot be deviant from the norms because they could not stay in business if they were. Traders cannot be outside the community of shared values. They need to be able to legitimise their practices in order to stay in business.

Long suggested an approach to this problem:

'(...) successful entrepreneurs will probably need to experiment with different organisational forms and different normative frame-works at different stages in their business careers. In order to develop an analysis of such aspects, it will be necessary to examine entrepreneurial behaviour from both the transactional and normative points of view. While exchange and decision-making models offer ways of analysing the transactions which take place between an entrepreneur and his social universe, giving attention to the assessment of the rewards and costs associated with particular strategies, the crucial question remains that of analysing the mechanisms involved in the management of interpersonal relationships. Adequate treatment of this problem demands that we look closely at the process by which these*

relationships are defined by the parties concerned in terms of the benefits, obligations, and expectations associated with them' (Long, 1977: 176).

What this approach could not explain was the differential responses of different traders with similar resources to the same circumstances. Long's use of the concepts of networks and trust gave some clues.

Networks
My research highlighted some of the positive and negative aspects of networks. For example, kinsmen and friends can be helpful in securing resources to start a business: allowing a kinsmen and friends to set up a shop on his land which was along the main road, helping him to build the premises on his land, and assisting in the shop. There were many instances, however, which reflect the development of animosities, especially when the shop was going well, e.g. taking away the shop premises or giving them to a competitor.

Credit relations illustrated the interface of conflicting principles between the moral obligations to give credit and the economic principles of not advancing credit to those who might not repay. Giving credit could not be explained solely by the economic rationale of securing customers. Traders had moral obligations to give credit for consumption to those in need, particularly if they were regular customers, friends, kinsmen, or destitute strangers. Juxtaposed to business and ideological reasons for giving credit was a growing rationale for ignoring these obligations. The changing context in which they were operating (e.g. government legislation, national and local economic situation, the structure of the community) provided a framework for these traders to conceptualise and legitimise divergent changes in attitude and behaviour.

With regard to kinsmen, changes in the economic situation were used to explain attitudes that did not honour ideal relations with kinsmen. These attitudes were presented as being different from those held in the past. Whether or not they actually were different is academic. What was significant was that the economic situation was seen to legitimise an evasion of meeting the expectations of kinsmen for credit.

In their minds, there was a conflict between the principles to give to kinsmen and the economic principle to withhold credit to likely defaulters. Shopkeepers felt ambivalent about their relatives. On the one hand, '*How can you say, 'no', to relatives?*' On the other hand, '*Relatives are always jealous*'. Because of the '*bad state of the economy*', shopkeepers said they would not give credit more than a couple of times without repayment. Yet, '*If a person explains his difficulties, I will give him money, even if I know he will not repay*'.

Those who succeeded were able to control, or limit, the demands of kinsmen and others in their close social networks. Disentangling their economic networks from their social networks enabled them to invest in more capital-intensive enterprises, particularly copra production. Their trading networks for securing goods and credit at the local, regional, national and international levels were based on personal relationships. These networks were based on the gradual development of a relationship based on experience of trust, not group membership or other social characteristics.

Trust

In contrast, Long's Jehovah's Witnesses disentangled themselves from their kinship networks and consolidated their social networks by forming a group. The notion of enforceable trust[6] is apt for Long's reference to the Jehovah Witnesses:

> *'(...) those groups or networks of individuals that possess the capacity for making rules and enforcing compliance on their members are usually better able to handle external interventions and to use them to their own advantage, sometimes by incorporating them into their own existing social arrangements'*. (Long, 1984: 6).

Among traders in Polgama, what was most significant was that in both types of advance, i.e. goods or cash, credit was given *before* a relationship of trust had developed. Although the amount of credit was influenced by the development of trust, credit had to be given as a prerequisite for establishing a long-term relationship. Rutherford notes that trust is not a commodity but a verb based on action (Rutherford, 1999: 40).

Polgama in 2001

By 2001, there had been dramatic changes in the standard of living. In 1975, most houses were wattle and daub with cadjan[7] roofs. There was no running water or electricity. The buses ran twice a day, there were two cars in the entire village and a bicycle was a luxury. Today, the old style houses are a rare sight. This is because of the government loans for house building and increased prices for agricultural crops and employment opportunities. The traffic along the roads is continuous: buses, lorries, cars, motor bikes, three-wheel taxis, etc. The houses are filled with consumer durables. In 1975, the shops were virtually empty: now, they are bursting with goods. This is partly due to a change in economic policy since 1977 when markets were opened to exports. More significantly, rising incomes are due to government policies, which stimulate new, small scale enterprises such as oil mills, tailoring shops, mechanical and electrical repair shops, etc. through supporting training programmes and capital loans. Furthermore, government policies have encouraged the growth of industry, especially in textiles, by both foreign and domestic investors, which has expanded employment opportunities.

Better road and transport infrastructure enables larger numbers to commute to jobs in larger cities. Only ten kilometres from Kurunegala, the population of Polgama has grown dramatically[8]; land formerly planted with coconut is being sold off for housing development. Government policies in other sectors have improved the quality of life in areas such as health, agriculture and education. Tragically, the civil war has also improved local incomes: the poorest send their sons into the army; and if they are killed, the family receives a monthly pension of 6000 Rupees.

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[6] Portes (1995: 14). For a more detailed discussion on the concept of trust see Granovetter (1993) and Misztal (1996).

[7] Cadjan is made by weaving coconut palms.

[8] As an indication, the former local government divisions have been redrawn into three divisions. The new village of Polgama has 307 households, while in 1974, there were 143 households.

Consequently, I expected radical changes in livelihoods. Instead, I was surprised by how little had changed. On the visible surface, the standard of living for the vast majority had improved dramatically. Many of the poorer families now had children with high educational qualifications and good jobs. However, in the villages off the main roads, visible poverty remains high. As I spoke with many of those I had known in 1975, I realised that the economic miracle had passed many of them by. In fact, according to the Samurdhi Development Officer[9], over one third of the households in Polgama, one of the wealthier areas, is eligible for a monthly government subsidy by the criterion of a joint household incomes of less than Rupees1000 per month ($11).

Likewise, I anticipated finding dramatic changes in the business strategies of the traders I had studied. Previously, I had compared the business strategies of three traders over twenty years, from 1955 to 1975. In 2001, I was able to compare how their businesses developed over an additional 25 years.

Comparative case studies of three traders: 1975-2001

In 1975, all these traders were atypical because they had endured for more than 10 years. By contrast, 50% of new trading businesses in 1974-75 had not survived the first year. To have been in business for almost 20 years or longer was truly exceptional. In 1956, at the beginning of the period, they all had similar resources. All of their businesses were in good locations. All had no land resources in 1956 and virtually identical capital resources of about 100 Rupees. All started business in 1956 with past experience; and all had had ups and downs in their past enterprises. All had similar networks with regard to their potential for credit resources. All had multiple businesses simultaneously throughout their trading careers; and all had responded to external factors such as government restrictions on the sale of paddy and international prices by changing the types of products traded.

By 1975, David Pieris had become relatively successful, although there were others in the area who were more successful. Mutubanda had had, by the late 1960's, a modicum of success in trading; but his business had since declined, although he earned enough to keep his family moderately comfortable with supplementation from other sources. Punchibanda had never in his 40 years of business been even moderately successful.

Punchibanda
With reference to his business in 1975, Punchibanda had the least precise idea about his profits. His family lived at subsistence level; and without the good will of his creditors, I doubted if he could continue. He was never able to expand his credit resources. His past attempts in different types of marginal businesses had failed. Hence, during the period of 1955 to 1975, he had limited himself to his teashop business. With the increasing economic depression in the area at that time, he had followed a strategy based on constriction of goods sold and of credit given. Others had branched out in response to the decline of one avenue. This

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[9] Samurdhi means prosperity. These local level officials administer the government's poverty alleviation programme.

had not been Punchibanda's strategy. In part, his strategy of constriction must have been due to his outstanding debts and the subsequent alienation of those sources of credit he might otherwise have been able to use to branch out.

Punchibanda continued in his cadjan teashop until a few months before he died in 1990. He always sold the same things and never expanded his range of stock: rope, brooms, cigarettes sold singly, tea, rice and curry. His widow told me that he saved his money, and did not drink or smoke; but '(...) *my husband was never successful in business*'. The increasing prosperity of the following years had no impact on his business, except perhaps, that he was able to survive in business for fifty-five years.

Mutubanda

In 2001, Mutubanda's shop was bursting with goods, just like those of all the other grocery shopkeepers. He seemed to have the same standard of living as he had had in 1975. In striking comparison to others, his house and furnishings looked the same. We talked at length about his credit relations with his customers, which had changed little. He still has problems with defaulters and trying to limit the amount of goods he advances. He has remained an active supporter of the Sri Lankan Freedom Party, which was in power in 1975 and 2001. Through his political contacts, he has been able to help his son get a government job as the Samurdhi Development Officer. Similar to his own role in 1975, his son is able to distribute central government resources to villagers in need. As a strategy, it has had many disadvantages. Many others, especially his kinsmen, resented his role in 1975.

Mutubanda has remained a risk minimiser. He has expanded his business ventures slowly. He used and is using his grocery business clientele as the major source of coconuts. He would not take the risk of borrowing capital to buy more nuts. His copra business in 1975 was never big enough to roll money, nor were his profits great enough to either buy land or invest capital in other ventures. His strategy as a risk minimiser also helped to explain why he did not use his political influence as Secretary of the Sri Lankan Freedom Party to get goods for his shop or more agricultural loans. More significantly, Mutubanda's strategies also have not changed with the changing economic situation.

David Pieris

Not surprisingly, in 2001, David Pieris has become one of the wealthiest businessmen in the area. Typically, he had a clear vision of what contributed to the development of his business. According to Pieris, the open economy which began in 1977 is the main reason for his prosperity since 1975. The second reason was the price of nuts. In 1975, the average price of nuts was 21 cents. The open economy enabled the export of coconuts and copra and coupled with a drought that lowered production meant that the price rose from 70 cents to 3 Rupees per nut in 1977. In 2001, it had risen to 7 Rupees, and the price has been even higher in recent years.[10]

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[10] In July, 2001, the Sri Lankan Rupee was worth approximately 90 Rupees to 1 U.S. Dollar.

A third reason was the racial riots in 1983. The coconut oil mills in Colombo were burnt down with the consequence that the price of copra increased two and a half times. With these profits he was able to buy 20 acres of land planted with coconut, giving him a total of 32 acres. This land was the fourth reason which has contributed to his success because it gave him access to bank loans which enabled him to expand the number of nuts he could buy and process, reducing his dependency on his buyers.

In 1975, he was not interested in investing in land because it tied up capital that could be more profitably used to buy nuts. Since 1991, he has bought another 73 acres of land planted with coconut. In total, he now has 103 acres of land planted with coconut, and 12 acres of land for paddy cultivation. All have been bought from coconut estates, with good water supplies, which he continues to improve and maintain to an excellent standard.

He claims that, because of the free economy, the price of nuts rose and that land has subsequently become a good investment. Another reason for him investing in land was that the copra business had reached its limit. The market for oil is limited, and in terms of the family business management strategy, one person (now his eldest son) cannot manage more than the present size. Land also gives easy access to credit from the banks and it forms a good source of income for his children (the land has been placed in their names). If his children get a government jobs, they will receive a maximum of 15,000 Rupees p.m. and their income from the land will supplement this. Finally, it gives him status as a landed proprietor (*Idamhimi Wevilikaru*). Earlier, people knew him as a copra *mudalali*. The term *mudalali* denotes traders who can roll large sums of money; hence, it connoted a relatively high status in comparison with other traders in the vicinity.

According to Pieris, his business in 1975 was based on trust: trust his customers had in him and his trust he had in his buyers. There was a circle of distribution based on interdependent credit relations and trust (*visvasaya*). He says that credit is an investment to improve business. '*If you want to earn money, you have to spend money. When you sow, you reap*'.

He told me that his business continued to work in the same way until he handed it over to his son in 1995. According to Pieris, '*My son does not believe in giving credit. He runs the business completely differently than I did.*' Until his son took over, he gave advances to all his suppliers. In 1975, small producers, (i.e. with 2-10 acres of land planted with coconut, often supplying only 200 nuts per harvest) were the backbone of his business. They were often given small advances several times a month. Credit is still given to them; but David Pieris says that they often come to him first to ask for credit since his son is less willing to give it. They know that he will be more sympathetic because he understands the problems of being poor. In 2001, the small growers supplied less than 10% of the total volume. By contrast, some of his larger suppliers were advanced 200,000 Rupees if his son thought he would be repaid over several harvests.

There were changes in sources of credit, however, before his son took over. In 1975, an important part of his business was acting as a merchant for smaller copra producers in the area. He stopped buying copra in 1992 because many began oil mills. This meant that the small copra producers began selling directly to mills in the vicinity and no longer to him. Now, the business only sells self-produced copra. He stopped borrowing advances from oil mills to buy nuts

because they made him wait a month or more to pay him for copra he supplied them. He has been receiving loans from the banks since about 1993 and has a standing overdraft of around 1 million Rupees, which is enough to purchase only one quarter of the nuts the business handles.

He repeatedly said that he gave the business to his son in 1995 because his horoscope had predicted that this would be a bad time for him to do business. He remains adamant in his belief in the horoscope, despite the efforts of his wife and children to dissuade him.

Today, Pieris takes care of the land and his son takes care of the business. '*I have become a farmer*', he told us on several occasions. He works hard at inter-cropping, selling a small amount of produce for private ventures. Pieris says, '*I am a simple, ordinary man*'. He dresses in a sarong and shirt, and is often in bare-feet. He has always worked hard with his labourers, and now he works just as hard planting and harvesting. He is proud that he acquired his second-hand van so cheaply and that it is still running after six years. This contrasts with his pride in no longer being a *mudalali* (trader), but a landed proprietor.

Pieris thinks that the real fortune he and his wife have is their children. Their eldest daughter is a medical doctor. The second daughter is a university graduate of business studies, specialising in information technologies and the eldest son has taken over the coconut-copra business. The second son is studying aeronautical engineering in Australia, and the third son is studying at a good secondary school. Pieris repeatedly said he had been very fortunate. He believes his wealth is a gift from God.

The second generation

Pieris handed over the family business to his eldest son when he was 19 years old, in 1994-95. It was a critical point in their copra business since there was little market for Sri Lankan coconut oil. Previously there had been a 35% tax on imported oil. Pieris' son claims that 75% of the oil mills in the area closed when the government reduced the import tax to 5%.

Young, inexperienced and dealing with a new situation, the son turned to additional sources for expertise. Their copra broker told him that there was a market for exporting higher grades of copra to Pakistan and Bangladesh. This quality of copra is sold at auction. So he learnt how the auction worked and how to produce white copra from the Coconut Development Authority. This required remodelling their copra kilns and careful monitoring of the drying. He describes his copra broker as a *yaaluwa* (friend). He has not only helped him with advice; he has also helped get his brother to Australia. He arranged the visa and the flight ticket and gave them an advance on their copra. The copra broker sells their copra at auction for a 1% commission. At three-week intervals throughout the year, Pieris supplies him with 15,000 kg of first grade and 25,000 kg of second grade copra. Approximately, 6,000 kg of third grade copra is sold to various mills every two weeks.

Another *yaaluwa* is their coconut broker, to whom Pieris supplies 60,000 fresh coconuts per week to his desiccated coconut-processing factory. Pieris' son says he uses the term *yaaluwa* because he is older. Later, he mentioned that he thought of him as a father. In fact, the coconut broker is one of the biggest

entrepreneurs in Sri Lanka. The desiccated coconut mill is only a small part of his empire. The coconut broker's father had started the desiccated coconut factory and Pieris had been selling coconut to the factory for over 30 years. The current broker (the son) also gave them an advance for his brother. Normally, the coconut broker would never do this, nor would the son ask him for an advance. Although there is a generational aspect to the relationship between the two fathers and their two sons, the business relationship has changed, and a social relationship has developed between the two sons.

The coconut broker's son extends special privileges to Pieris' son that were not extended to his father or other suppliers. For example, he pays within 3 days of delivery, while others must wait the full 14 days period.

Pieris is a major supplier, but the son is of the opinion that the entrepreneur feels kindly towards him. He believes he helps him because he is the youngest businessman trading in coconut with him.

Every month, Pieris' son handles between 500,000 and 800,000 nuts. 240,000 of these are sold as fresh nuts while the rest are processed into copra. He has a lot of problems buying this amount of coconuts and solves his cash-flow problem in several ways. If he buys 75,000 nuts from a government owned estate, it must be paid immediately, in which case he often borrows the money from the copra broker. If he gets coconut from large, private plantations, the bills for this are paid after their nuts have been processed into copra and auctioned. Pieris' son maintains that the nuts are given to him on *visvasaya* (trust). No documents are ever signed and some of the owners have never even met him. He believes that the good name of his business is an advantage. (His father had the same advantage due to his father's reputation). Although he sees these arrangements as a matter of trust, when prompted, he also admits that he pays the largest suppliers an extra 10 to 24 cents per nut for delayed payments.

A third way that he manages his cash-flow problem is through the bank. In the name of his parents, he has access to a permanent overdraft facility of one million Rupees at 21% p.a. If he borrows more than one million, he has to pay 32%. Last year, he had an overdraft of 11 million rupees that has since been repaid. The banks are currently advising him not to have large overdrafts because they believe there will be a general slump, which may affect how he manages his cash-flow problem.

There is no one in the local area that he can ask for financial help. In 1975, his father rolled money with many of the local brokers. Today, there is no business as large as theirs is in the area. The coconut broker will not lend money; and the loans of the copra broker are limited.

Relations with suppliers
One of his suppliers is just as important to his business as are the two brokers to whom he sells. Again, the relationship began with the supplier's parents: the supplier's father had sold occasionally to David Pieris. After the death of the supplier's father in 1995 (the same year Pieris's son took over the business), he began to sell all his nuts from his 250 acre plantation to Pieris junior (between 100,000 and 160,000 nuts every two months). This forms about 10% of his total volume. The supplier is willing to wait for 3 months for payment and is given 25 cents per nut more (3-4% higher price) for this. They have developed a close

personal relationship. The supplier, a doctor in Colombo, comes to his estate about once a week and always drops in to chat. Pieris's son advises him about how to improve the productivity of his estate. To maintain the plantation, the supplier needs to spend about 10,000 Rupees per week. Pieris supplies the supplier's estate manager with fertiliser and the cash needed to pay the estate's workers. In return, these expenses are deducted from the supplier's account. Pieris describes their relationship as based on friendship and trust, but there is also an element of mutual dependence involved.

An interview about his credit relations with suppliers reveals the ambiguities and contradictions between his ideas about running the business and actual practice. Initially, he told me that he does not believe in giving advances as a business strategy. Most customers are paid in cash or by dated cheque upon delivery. In contrast to this, he also said that if he buys from traders who collect from small suppliers, he gives them advances to buy the nuts and balances their accounts, just as his father did 25 years ago. Furthermore, if a person can supply 10,000 nuts within 6 or 8 weeks, he will advance him a maximum of 25,000 Rupees. With prompting, he said that if someone asked for Rupees 100,000 and could supply 50,000 nuts, he would advance them more but to a maximum of Rupees 50,000. Contradictorily, he said he could not take tough decisions because he may lose his suppliers. Nor, could he say what he would do if someone could not repay him in 8 or more months because they had a sick child.

Before our interview began, I observed two of his father's old, small suppliers receiving money from him. I asked him if the two men from Polgama had received an advance from him. He said they had but qualified it by saying that he does not give advances like his father and only gives them on Saturdays. When I pointed out that it was Tuesday, he then told me that he didn't want to hurt their feelings by turning them away. Having made that admission, he went on to confess *'Everybody borrows money from me'*.

Small suppliers, i.e. those who supply around 200 nuts, come to him several times a month for small advances. He says he cannot stop this practise because these customers have come to expect it since his father's time. Today, those with less than 10 acres account for no more than 5-10% of the total volume of nuts. He keeps these customers as part of the *'lineage'*. It enhances his reputation to keep them. He likes it that they look up to him. They look after him. His father started with small suppliers, so he should keep this in mind.

He gives advances *'out of good will'* (*honda hithin*). He does not think of it as credit, or a loan, or an advance. *'They do not want to think of me as their creditor and I do not want that label. I want to be recognised as a fair dealer (sadarana velenda)'*. He went on to explain that by fair dealing he continues to consolidate the business.

The Future

Like his father, he too is a consolidator. He also believes, as his father did, that he cannot delegate his business responsibilities. All decision-making must be made by him or his father. The business is so complex that only one person can make decisions. Another reason is that he cannot be sure that an assistant would be honest. It is ironic that the entire business is built on trust, yet neither he nor

his father trusts their employees. This is more perplexing given that they both have pursued strategies to build loyalty with their workers.

Symbolically, he works throughout the day with the labourers as his father did: husking, breaking nuts, stoking the fires etc. He is has been dealing with the labourers for 15 years. He does not want to shout at them like his father. He believes he must keep them happy or they will endanger the business. His policy is to treat them well: good housing conditions for their families, wages above the local rates, clothes and school books.

Asked if he wanted people to think that he was rich, he replied that he likes to be seen as a fair dealer, and that means a rich man. He does not like the *mudalali* concept because *mudalali* are doing the same old things over and over again. In contrast, he would rather be thought of as an entrepreneur, who diversifies and starts new businesses. However, he does not want to make any changes until he is confident of the best thing to do.

Pieris junior is nevertheless concerned about his limited education, and his limited understanding of balancing funds. He believes he should have known more before he took over the business. He is currently trying to acquire more knowledge: on his one day a week off, he attends courses at the National Institute of Business Management. For the next year at least, he is not planning any new changes. At the end of the interview, he told me that his motto is '*I can*'.

A generational comparison

There are ambiguities and generational differences in the images David Pieris and his son wish to present to the local community and how they perceive their business strategies. These ambiguities are reflected in their constructions about managing their credit relations. Both Pieris and his son told me that the son does not believe in giving credit to suppliers. However, with probing and comparing sources of evidence, this construction was seen not to hold.

Processing coconut into copra transforms its financial and symbolic value. To be able to buy enough coconut to process it into copra commercially, means that the producer is able to roll enough money to buy larger quantities of nuts. It symbolises his networks of credit relations and his place in the trading hierarchy.

The chains of supply of coconut and copra are reinforced by credit interdependency. In 1975, this chain linked virtually everyone from those who sell their subsistence to those brokers selling to the international market. Today, the chains have been modified. The smallest suppliers continue to sell to shopkeepers, who in turn tend to sell to local, petty oil mills, or produce a few litres of oil for their own use. The small suppliers are no longer the backbone of Pieris' business. His credit chains are limited and interposed by formal relations with banks. However, in some ways, the business today is to a greater extent dependent on a few informal trading links based on trust and personal knowledge than it was in previous times.

In 1975, David Pieris had elaborate rules for giving credit, and liked to project an image of the tough businessman, unhampered by social obligations. He told me that it was important to stick to these rules in order to maintain his business. I studied his account books with his suppliers (as well as the suppliers' copies).

When I pointed out that he was advancing credit to people who could not possibly repay during the time frame he said he required, he replied, *'how can I say no? If I do not give an advance to someone who is in need (e.g. an emergency through death or illness), I will lose my other customers. They need to know that they can count on me.'* In 2001, Pieris told me that he thought that giving credit was an essential business strategy. Suggesting a change in the way he sees himself in the community, he told me that small suppliers come to him first, and then he asks his son to give them an advance, because he understands the needs of a poor man.

Similar ambiguities were evident with regard to his son's credit strategies, although he claimed that they were different from his father's. Initially, he too said that he did not give credit but later admitted that he was advancing credit to many of his suppliers. In fact, he gives credit to uphold his father's 'lineage' (i.e. to uphold the family's reputation in the community).

Although there are generational differences and ambiguities, both generations have pursued a business strategy of consolidation of their coconut-copra enterprise, which both believe has reached the limits of potential growth. They have not branched out into new enterprises but substantial investment has been made in land and this has strengthened the assets of the business, and gained credit through the bank. However, both symbolically and strategically, both father and son have limited their credit networks to those based on personal trust. They do not pursue the symbolic capital of the national, entrepreneurial elite. Nor have they developed wider networks at the national economic and political levels, which might enable them to expand.

There are, however, generational differences in their information resources. David Pieris used his experience and his analysis of the history of his father's bankruptcy as his basic source of knowledge. His son is more dependent on the knowledge and information networks with one copra broker, but he also seeks formal expertise through the coconut Development Board and the course he follows in Business Management.

Investments in symbolic capital reflect many of the ambiguities of Pieris' business strategies. He is a generous benefactor to both the Catholic Church and the Buddhist Temple (his wife is a devout Buddhist). In 1975, he was proud to be considered a copra *mudalali*, and that his customers thought of him as being like a bank, often coming to him several times a week for small advances on their coconut crop to meet consumption needs. He and his wife have invested in their children's education and he proudly announced *'my daughter is a doctor'* upon our arrival. Today, he no longer thinks of himself as a *mudalali* but as a landed proprietor. On the other hand, he says he can identify with the needs of the poor. His way of dress and mode of transport as well as his hard physical work inter-cropping vegetables marks him as a person who neither sees himself nor wants to be seen as a person with as much wealth as he actually has.

His son also works hard with their labourers as part of their management strategy. He also no longer wants to be identified as a *mudalali*; but as a fair dealer. He seeks new avenues for information and has formed social networks with younger entrepreneurs in other parts of the country with whom he identifies. Yet, he realises that his father's reputation is a major contribution to the business's continued success. And further, that continuing his father's way of doing business with small suppliers contributes to his standing in the community.

Conclusions

The cases of Punchibanda, Mutubanda, and Pieris illustrate both the continuity and change (modifications) in business strategies. The divergent images of David Pieris and his son illustrate identity-constructing processes inherent in the pursuit of livelihoods (Long, 1997: 11). This framework helps us to understand the personal strategies of individual traders. Their business strategies cannot be understood either by structural constraints or the idealised constructs of behaviour and images of entrepreneurs. Rather, it helps us to understand some of the factors that create the partial connections that account for their differential responses to changing contexts.

Furthermore, these traders do not fit either the stereotypes of policy makers or those of academics who have studied the entrepreneurial-political elite of Sri Lanka. (Two recent examples of additions to this discussion are Moore (1997) and Jayawardena (2000). These cases illustrate the limitations of trying to understand entrepreneurs as a group, which has implications for academic theory that tends to assume that networks and trust can be linked to group attributes, rather than individual attributes. Similarly, the contradictory discourses about traders have had a number of policy implications. Governments have pursued policies to curtail the economic power of traders throughout the colonial period and during the first thirty years of independence. Since 1977, the neo-liberal policies introduced by the United National Party favoured the role that traders could play in development. Further policies have stimulated industrial and micro-enterprises. Both policies are based on contradictory assumptions about traders as a group and neither policy has proved successful in terms of achieving its aims.

The ambiguities of the divergent and often contradictory constructions of my informants raise both methodological and theoretical issues about the research process and the unit of analysis. The academic context of Norman Long's work has contributed to my analysis of the difference in the capabilities of individuals. His use of the concepts of networks and trust for differentiating groups is less insightful in this Sri Lankan case than these concepts are in their application to individual entrepreneurs. Coupled with comparative sources of evidence, the real potential of his actor-oriented approach is in highlighting the inconsistencies in the constructions made by individual actors, and by those who study them.

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11

Long live dangerous thinking: or, becoming infected by the *'thinginess'* of the social

'There is a direct relationship between the greatness of an author and the danger of the material he handles. It is not the task of a writer to be harmless. Harmlessness only begets harmlessness, but danger gives rise to imaginative thought (...). A good writer is infected by the material he works with - there is no way around this. Thomas Mann did this, Franz Kafka, Robert Musil ... all the great writers of this century. They were all masters of dangerous thinking.' (Peter Sloterdijk, *Selbstversuch*, 1996: 121; my translation)

Gerard Verschoor

Multiform. Diversified. Inimitable. If a single word could capture the wide range of work published by Norman Long, then surely these terms would be serious contenders. For these words stand for what is probably the most central concern of his oeuvre: understanding how what he calls *heterogeneity* comes about. After over two decades at his side - both as student and colleague - it is hardly a surprise to find myself sharing this central interest with him. But we disagree on the terms in which to study diversity. Thus in this chapter I argue that Long's actor-oriented approach has misunderstood heterogeneity (that what holds the social together) for diversity (the outcome of bringing dissimilar and hitherto unrelated elements together). To make my point, I first outline the character of our disagreement and propose that this be so because, for the last decade, Long has not risked becoming *infected* by the flesh-and-blood actors who fill his books. I then go on to propose - by way of three short cases - that in becoming infected by what we work with, we can indeed say original and exiting things about variation and diversity. I close the chapter by suggesting that there is much to learn from the people we work with, as it is they who can eventually allow us to say 'dangerous' things about the object of sociology.

An epistemological disagreement and a proposal

Our world is a disordered place. It harbours a bewildering array of dissimilar elements running from the smallest molecule to the largest living organisms. Through the ages we have learned to group these elements together so as to bring about some sense of order in our universe. The Sciences have been crucial in this

quest for classification. They have done so by associating hitherto unconnected elements with one another, carving out *societies* from chaos. Thus we have societies of living and non-living organisms (as in ecology), societies of forces (as in physics), societies of stars and solar systems (as in astronomy). Heterogeneity, or that 'composed of unrelated or differing parts or elements' (Collins English Dictionary), then, is the stuff from which the Sciences are made up. But there is one exception to this: the human sciences. As the name already discloses, these sciences effectively cross-out the different classes of elements with which humans may have an affair, and make one species - Man - the centre of the universe. In so far as other elements are allowed into the picture, these do so only as repositories of human meaning, or as means to achieve desired ends.

This form of discrimination has been under fire for some 20 years now in the field of 'Science and Technology Studies' (henceforth STS). The message from STS - namely that one cannot understand Man without taking into account how he becomes entangled with the objects that surround him - has given rise to such lively debates lately that one of its main proponents, the French anthropologist Bruno Latour, has occupied the top position in the social science citation index for the last four years. Some of the ideas from STS have already been taken on board in Rural Sociology - witness the mushrooming of actor-network theory studies in this field - but, so far, the impact has not been felt in our own field of Development Sociology. Considering these events, we can do two things now. We can wait and see how the field develops (to find out, eventually, that others have overtaken us) or run the risk of saying something dangerous (an approach that rather becomes Wageningen Sociology). Protagonists of the latter would claim that the object of Development Sociology consists of the complex entanglements of people and things: in other words, the study of the *heterogenus* or of that, which, according to Webster's Collegiate Dictionary, 'consists of dissimilar or diverse ingredients or constituents.'

Reclaiming dangerous thinking

Science can be classified as being 'good' or 'bad' according to a set of agreed-upon criteria. These criteria (which are always normative) come in different forms, the best known of which are Karl Popper's (e.g. 1961). Of late other, non-Popperian criteria for 'good' or 'bad' science have been elaborated by the likes of Isabelle Stengers (1997), Michel Serres (1997), Donna Haraway (1989), Peter Sloterdijk (1996) or Bruno Latour (1993). The differences between the criteria are many, but for the purposes of this chapter I highlight the issue of just *who* is allowed to speak when we 'do' science. For Popper, it is clear that the scientist is in command, as the scientist 'still possesses the formidable privilege of raising the questions on his or her own terms' (Latour, 1999b: 7). From Popper's point of view, the theories of scientists may be falsifiable, but scientists nevertheless control the process of scientific investigation. Non-Popperian criteria for 'good' science, on the contrary, propose that scientists have to put themselves at risk by having the questions they are raising requalified by the entities put to the test (*ibid.*: 7). In other words, the issue is not one of designing questions that are most able to jeopardise a theory, but to ask oneself: 'Am I asking you the right questions? Am I sensitive to your resistance to my questions? Am I allowing you

to infect me?' In this essay I follow this non-Popperian criterion: science is 'good' when it does not 'silence' its object. More positively, it is 'good' when it accepts the risk of providing its objects a *voice* so that these acquire an important say in the definition of what is problematic and what is not.

Long and good science

Norman Long has in the past produced various pieces of 'good' science that conform to this non-Popperian criterion. An example of this dates back to the mid-1970s, when he launched the exiting idea that, in the case of Central Sierra of Peru, capitalist expansion produced substantial growth in the non-enclave sector. This growth was accompanied, he suggested, by patterns of socio-economic diversification and accumulation, especially in village-based trade and transport (Long, 1975; Long and Roberts, 1978; 1984). In addition, and contrary to views that claimed that the right tools to study these processes consisted of 'macro' concepts (such as those of institutions, organisations or nations), Long proposed that interactional networks and normative frameworks were the most appropriate instruments to gain insight into the dynamics of development (Long, 1972; 1979).

What is important in the context of my argument is that Long was able to say these things *because* he had overcome the recalcitrance of the people he interacted with *by learning to ask the right questions*. This is an extraordinary feat for, in the social sciences, it is quite usual for a scientist to ask questions, flee to the safety of the academic setting, invent a story, and get away with it without the object objecting. But Long chose to give 'voice' to those he studied: it was the actors *themselves* who allowed him to posit the dangerous and provocative claim that underdevelopment does not follow automatically from capitalist development. Little by little, and through painstaking anthropological fieldwork, Long achieved some degree of familiarity with the people he studied, and in doing so came to see the utter implausibility of stories that were being imagined, far away, from the comfort of Western academic settings. Like music and drug lovers who are 'under the influence ' (cf. Gomart and Hennion, 1999) Long let 'external forces' take possession of him. Thus 'infected' by his object, he was finally 'forced' to modify his account of entrepreneurs and 'authorised' by them to forward the interesting, original but also 'dangerous' thesis that one does not move an inch in understanding the behaviour of entrepreneurs by sticking to 'grand theories' that are out of touch with empirical reality.

Dangerous propositions kept on coming in Long's early Wageningen years. The ground breaking work on intervention situations culminating in the notion of *interface* (Long, 1989), for example, surpasses the non-Popperian criteria for good science outlined above hands down. But the times they are a-changin', as good old Dylan once put it. What was once daring may now be in dire need of overhauling. As Kuhn (1962) so convincingly showed 40 years ago, complex ideas snatch older ones, feed on them and eventually displace them to the garbage dump of history. Long's ideas – as brilliant as they were 20 years ago - have lost much of their appeal as they become re-framed by a new generation of development sociologists sensitive to the conceptual evolution and paradigmatic shifts of an increasingly fragmented field of study. Indeed, Lyotardian postmodernism, Deleuzian poststructuralism, Lacanian psychoanalysis and Latourian actor-networks have fused with world-systems analysis, regulationist

studies, globalisation theories, political ecology, and postdevelopmentalism (Buttel 2001) and have changed forever the way in which one is 'authorised' to speak about the world, the Other, or oneself.

These theoretical developments of course did not leave Long unaffected, and in fact provided the backdrop to a search for a more secure foundation for his explanations. Unfortunately, this move pushed him away from the field and into theory. As I have argued elsewhere (Verschoor, 1997), in doing so, Long chose to marry his original and fertile method with an eclectic array of ideas involving liberal and individualistic notions of *agency* à la Giddens (e.g. Long, 1992) and post-structuralist conceptualisations of *knowledge* and *power*. Embedding these three concepts in a model of strategic action that assumes humans to be selfish, rational, calculative beings who anticipate others' moves in order to pursue their advantage in conditions of scarcity (cf. Steins, 1999) led, throughout the mid 1990s, to a double impasse. Firstly, the object of study was relocated from *action* to processes going on *inside people's heads* (such as shared values and meanings). The character of the problem this involves is perhaps best illustrated by the pop musician Matt Johnson (The The): 'How can anybody know me, if I can't even know myself...' Secondly, the *actor* in the actor-oriented approach was no longer the flesh-and-blood actor who had authorised Long to say interesting things about him: he had become a *model of the actor*. In other words, Long's approach uses a discourse of 'actor-orientation' to bring a theoretical model of human behaviour into circulation - and not anymore to give 'voice' to real-life actors who are thus in effect 'silenced'. This, in my view, is a pity because of the potential of Long's unique ethnographic approach, which could (very easily and hands down!) become dangerous once more, by articulating for example with the ideas from the field of STS. To make my point, I present three abridged case studies below in which the *thinginess* of the social is shown to be all around us if we only have the eyes to see it.

Conversations in Mezquitán: learning to do more things with 'things'

Mezquitán, an *ejido* hidden in the folds of Mexico's Sierra Madre forms the backdrop for the research I carried out in 1987 for my Masters' thesis. During my fieldwork period, I had the chance to live and work, on an on-and-off basis and for a period of about six months, with Saturnino, a reserved but resolute farmer with little means and then in his mid sixties. During this period I had the opportunity of taping some of our conversations which often focused on farming. In fact, farming was Saturnino's passion. As a rule, Saturnino was either at his field (where he sometimes slept), at home, or coming and going between them. He was, however, not the average farmer: that year, he had been the only one in Mezquitán and the neighbouring *ejido* of San Francisco to obtain a full maize harvest on non-irrigated land. This made him a very proud man, as according to local cultural standards a good farmer is supposed to obtain a good harvest, provided there are no natural disasters. In what follows I present an abridged and, for the sake of clarity, edited part of these conversations. I have left out most of my questioning and in-between comments, as this is neither the place nor the time to indulge in self-reference. The purpose of presenting the material in this

way is to provide an impression of the *thinginess* of agriculture, that is, of the things that make agriculture possible.

On the timing of tasks

The most important part of farming is probably timing: when to prepare the land, when to sow, when to weed or when to harvest in such way that one works *with* and not *against* the elements. As Saturnino told me:

> *'Many things can influence the harvest. And if one is a good farmer, one ought to know these things. Listen, first of all one needs to know the state of the moon: some moons bring water, others don't. To know whether a moon has water or not one has to consult the moon calendar. For example, if it rains on the first day of the first moon of the year it will rain in the month of January. If it rains on the second day, then there will be water in February. If it rains on the fourth, it will rain in April. The important days to look for are the eighth and the ninth because they stand for August and September. If it rains on the eighth we're lucky, and we have to sow in May. If it rains on the ninth, it will rain in September and we have to sow in July... I'm interested in that calendar because it gives me life... For instance, this year's August moon was forecast to bring water, right? So I started sowing* en seco *[i.e. in May, before the rainy season proper]... When the August rains came, my maize was already producing its ears of grain... So the moon is telling you everything.'*

The moon calendar - and some specific days within it - thus sets the general parameters for the sowing date. But this remains too general. Saturnino:

> *'Of course I would like to know the exact day on which to start sowing! But that's not always possible. On the day you want to sow, you have to go to the land and see if she will receive the seed that day. If the land is willing to receive the seed, then there is no web on the soil. But if you go out there in the morning and see that there are webs on your soil, it means you can't sow that day. That's a bad day... That day the sun, and not the moon, is making contact with the earth... If I sow that day, the maize will not develop a cob. It will only develop leaves.'*

The sun and the moon, then, seemed to be important entities for they indicated the precise day that one could sow. This had implications for some of the economic decisions to be made, and even for the shape of Saturnino's network. For example, Saturnino used a tractor for deep-plowing, fallowing, harrowing and cultivating those parts of his land that were not too steep (there he would utilise a team of mares or a hoe). On those tracts of land where the tractor was used, Saturnino used to sharecrop with his neighbour Julián, who happened to own the only tractor in the direct vicinity. This amazed me because the price paid - sharecropping - was more expensive than renting a tractor when needed. When confronted with some figures, Saturnino replied:

> *'Well with renting I would be better off. Of course! But listen, the important thing is to ensure that the work is done on time... I don't gain a thing by paying somebody for a tractor and him not being around when I need him. Valgo madres! [I'd be worth nothing!]. We have to see things the way they are in life! Look, I've been to Autlán [a mid-sized city ten kilometres away] before to rent a tractor. I told the owner I wanted a tractor for sowing when then and then. He agreed, but when the day came, the son of a bitch said 'well you see, I can't come today.' So what did I gain? Nothing: I was screwed because one day means a lot when you need to sow: if I can't sow on that particular day, I can forget about the whole business. It will be too late and the maize*

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will not thrive. So I tell you it's an advantage for me to sharecrop my land with Julián. If I tell him to do this or that, he does it. I can rely on him.'

On soil fertility

Agriculture is impossible on an infertile soil. Therefore Saturnino took great care to reproduce the little fertility his poor soils were capable of carrying. Deep ploughing was essential here. In his words:

'The most important thing about deep ploughing is that it exposes the broken up earth to the sun. The sun then starts burning the earth and breaking up the clods. This is called the salvia, *which gives fertility to the soil. If you have* salvia, *you don't need a fertiliser... Many people come to me, even so-called engineers, and they say: "but, you don't use fertilisers?" No, I don't. I don't because it's not to my advantage! My land is thin, and I'm only going to impoverish it more by using chemicals. The land: beat it. I'll improve it by beating [i.e. working] it. The soil is like a woman: you have to beat her so she can produce! It just needs ploughing and leaving fallow on time. And sun. Let the land take her share of the sun. The sun has much to tell the land. I know these rules because I still have Indian blood in me. That's why one knows of these things.'*

Experience was an important asset. Having seen multinational agricultural companies come (and leave) the fertile, irrigated lands close to Mezquitán only reinforced his passionate plea to conserve fertility through organic means only:

'Commercial fertilisers are pure chemistry, and chemistry will just do for a few years. After a while the chemicals will ruin your soil. Just look at the tomato producers around here. They've been impoverishing their land with chemicals for years, and now they complain about plagues! For instance, that fly, the white fly. You have to fumigate it, no way out. It arrived some eight to ten years ago. It arrived with the chemistry I tell you! If you're giving your soil chemistry you're plaguing it. Do you follow me? And what do these tomato producers do? They apply more fertiliser! Stupidity! I tell you, this place is slowly going to hell! But they [the companies] can leave the land when it's finished. Not me! I have to stay...! I just sow what the soil will give. I don't throw anything on it... I work! For example, if there's a plague, the thing to do is to plough the land and sow beans. When the beans start flowering, it's just a matter of turning them over by ploughing once again so that the soil has a chance to make some iron. Because iron gives oxygen to the soil and the soil can breathe again.'

On plagues

Saturnino emphasised the work that was needed to keep his soil fertile. He nevertheless let his *compadre* Carlos graze his cattle on the plot occasionally (and for a nominal fee) so Carlos' twenty cows could eat the maize stalks left behind and fertilise the soil with their dung. This was not devoid of problems, though:

'The agreement is very convenient for me, because Carlos is paying me for material I don't need anymore [the stalks] and the cows are there fertilising the land. But then I need to have knowledge of how things are, right? Because, for instance, if a cow is manuring the soil, well that's manure alright, but it will only help me if I plough or leave the land fallow before sowing. Because a cow's dung contains mizticuil *[a plague that eats the roots of the maize plant]. And when a cow steps on its dung, the dung will be buried and the sun won't get a chance to kill the plague. That's another reason why I always plough or leave the land fallow - to kill the* mizticuil*!'*

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Generally Saturnino was able to control most plagues successfully. He attributed this to his careful handling of the soil. A number of crop diseases, however, could not be fully controlled. Saturnino labelled these diseases *chahuixtle*, which came in black or yellow types:

'The yellow one operates after it has rained and the maize is developing its cob. This phenomenon attaches itself to the plant, grows, eats from the cob and affects the yield ... The black chahuixtle is like falling ash. It operates when there's little or no rain. It's already working as soon as it touches the plant: it grasps the top of the cob and cooks it right there! After a while the plant turns completely black. Even if it rains there's nothing to be done as the plant is already burned!'

Here, again, the timing of tasks was crucial. As Saturnino explained:

'I've had less trouble with these plagues than others have. That's because I closely observe the first days of the moon calendar. After the eight and ninth day have told me about the rains in August and September, I know whether to expect chahuixtle *or not. If the rains are going to be poor I can expect the black* chahuixtle *to come. If good rains are predicted I need not worry about it. And if the rains are expected to be mediocre I can expect yellow* chahuixtle. *I know this because if, for instance, the morning of the eighth day of the first moon is overcast and the afternoon clear, it means it's only going to rain the first half of August. And if it rains that whole day then it will rain the whole month of August and there'll be no black* chahuixtle... *Some years I know the* chahuixtle *is coming anyway so then I better sow something other than maize!'*

On crop choice

As the last sentence suggests, crop choice may be a function of diseases expected. In cases when maize could not be planted, sorghum was often the crop of choice. But here, too, things were not always so straightforward:

'It's not too smart to have a crop of sorghum twice or thrice on the same place, because your fertility will go down and you'll need extra fertiliser. The sun will produce salvia anyway after the ploughing, but the problem is this: when you let the cattle in after the harvest, they will not produce enough manure. That's because sorghum has very short and fragile stalks and the cows will trample it and not eat it anymore. Maize is much better, because the stalks are resistant and tall so the cows will eat them all. You can never keep cattle on a sorghum plot as long as on a maize plot. With sorghum, your soil gets less manure... So maize is much better! But sometimes there is no way out and you have to sow sorghum anyway. For example, my son Pancho has his plot next to a piece of land rented out to a tomato company. So when these bloody tomato pickers come to harvest ... if they can, they will steal half your maize harvest! They are from Michoacán, Guerrero, Oaxaca. You can't trust them! Once you sow sorghum, the cutters can't steal it, because sorghum is for the cows. You can't eat it, right?'

The conversations with Saturnino clearly overflow accounts in which the main role is laid aside for human actors only, and points to the heterogenous character of what we normally call 'the social'. Let us learn from this and embrace, with both arms, what the many Saturninos we engage with urge us to do: *'design your sociology in such way that it can accommodate all elements of action'*. I return to this point in the last section of this chapter.

Tinkering with consumers: under the influence of *mezcal*

I had the dubious pleasure of carrying out some research on the Mexican liquor industry in 1994. The location was the dormant township of Tolimán, lying under the smoke of a towering volcano some 100km east of Mezquitán. One of actors who featured in my work was León, a producer of *mezcal* (distilled liquor made from the heart of the agave plant and a generic name for its more infamous cousin, *tequila*). León, like many other distillers in the region, was desperately trying to work out how to enlarge his market share. In nearby hamlets 27 fellow producers were also pondering questions such as 'what means must I employ to enlarge my clientele?' or 'how can I can out-smart the competition?'

Unfortunately - and this was at the root of the *mezcal* producer's worries - no straightforward recipe existed for enlarging market shares. This does not mean they were ploughing the dark with their minds only. All producers had, to a greater or lesser extent, a way to gauge 'what the market wants'. They were aware, for example, that the market has a topology of its own. Thus *tequila* is the undisputed king of the pile north of Guadalajara, while *mezcal* is hard to beat on its home turf to the south of the five million-plus megalopolis. Also, they knew from experience that yellowish *mezcal* aged in oak barrels does well in the nearby states of Colima and Michoacán, while white *mezcal* straight from the still is fancied in the vicinity of Guadalajara. Likewise, producers knew that sales go up in the post-harvest season (when farmers have plenty of cash) and during patron saint *fiestas* and rodeos - only to plummet in the spring and during the hot season when cold beer is highly preferred. In addition, producers were well aware of the way in which consumers classify the taste of *mezcal*. Thus the term *vino* is used to refer to cheaper, often down graded, types of *mezcal* while *tequila* refers to a *mezcal* obtained through a specific way of processing the main ingredients (and through which the end product loses its harsh, characteristic 'woody' flavour). Finally, the term *de olla* designates a *mezcal* prepared in the traditional way. The qualities of this latter type of liquor are highly appreciated, and today prices for it are in the range of USD 25-250 per litre.

In an ideal world, producers might be able to convince consumers to prefer their liquor to that of their competitors by offering their best *mezcal*, that is, *de olla* quality, for a reasonable price. In reality, however, this proves difficult because producers work for a profit and unfortunately for them, quality *mezcal* is scarce and therefore difficult to make a living from. From the perspective of the producers of Tolimán then, the closest thing to a recipe for success was to have one's *mezcal* resemble, as much as possible, 'ideal type', traditional *de olla* quality - and sell it at an affordable price. This meant that producers would advertise their premium *mezcal* as being made on the basis of mature agaves of the green or *lineño* variety, slowly cooked on wood in a traditional underground basin, fermented without any additives or artificial boosters, with an alcohol percentage of close to 50°GL and, depending on the region it was to be sold in, aged in barrels made from French oak. To corroborate this, consumers would look for specific traits. The liquor has be brownish in colour, make long-lasting bubbles when the bottle is shaken (any distilled spirits over 46° will do so), leave an 'oily' stain when in a glass, and have a slightly sweet but 'earthy' taste and a 'smoky' odour. In their desire to conform to consumer ideas on quality, producers would sometimes turn to tinkering with the ingredients. They would

use glycerine, soap, almond essence or ammonium sulphate in the different phases of the production process so that the final product resembled what was expected of it. This however is a cat-and-mouse game because consumers could get wind of it (gossip travels quickly!) and turn their backs to a brand breaking the rules. These cat-and-mouse games (I prefer to call them 'knowledge encounters') drive the *mezcal* industry. Trying to be ahead of consumers and competitors, however, means that one has to go beyond the certainty of what is already 'known' (i.e. the topology of the market, the classification of taste) and venture into the dark: 'Will consumers accept my latest ruse? Will they like the changes I have made to my product? Will they be positively *influenced* by my new offer?' It is to this type of questions that I now turn.

In 1991, for example, León ventured into unknown territory by increasing the output per unit of agave. This entailed substituting the local, 'green' variety of agave for so-called 'blue' agaves (used for the production of *tequila*) which have a much higher fermentable sugar/weight relation. The gains to be obtained were substantial: prices per kilogram of agave were almost the same, but whilst León needed 20 kilograms of 'green' agave to distil one litre of *mezcal* this same litre could be manufactured with 7-10 kilograms of the 'blue' variety. The crucial question was: Would his customers notice the somewhat 'softer' (but less appreciated) taste of the 'blue' variety? The consumers were not long in replying, punishing León by switching to other brands once they had discovered that his *mezcal* tasted like *tequila* (a 'bad' attribute for 'good' mezcal). León kept experimenting for a while with the ratio of varieties used but, after a lack of success, he aborted the strategy of increasing the input/output relation.

A full year later, and after having recovered to previous sale levels, León tried out a new stratagem to increase the input/output relation. This time around, the trick consisted of shortening the fermentation time (which usually takes between 8-10 days) by heating the fermentation tanks and increasing the temperature and speed at which the ferments converted sugars into alcohol. The new strategy however turned out to be self-defeating: as León soon realised, to decrease fermentation time in any noticeably way required a prohibitive amount of fossil fuel, thus making the final product more expensive - even though conforming to customer expectations.

Two years later León gave it another try. Shortening the cooking time of the agaves was the name of the game this time as great gains were to be achieved on this front. Normally agaves are cooked in a series of time-consuming steps. First, wood is burnt inside a large basin (*olla* in Spanish, which is where quality *mezcal* derives its name from) some three meters deep and three meters across. Once the fire is going the wood is covered with a layer of fist-sized stones that absorb the heat. Then 2-3 tons of chopped-up agaves are placed on top of the stones and covered with a layer of earth to prevent air from coming into contact with them. After some 60-72 hours of 'cooking' the sour saps of the agave plants have converted into sugars (to be fermented at a later stage). The layer of earth is then removed and, after a day of cooling off, the agaves, stones and ash are taken out. The whole process, however, can easily be shortened and producers of *tequila* have been doing so for decades. The shorter method, which had recently been taken over by some *mezcal* producers in the region, consists of steam-cooking the agaves in a so-called *autoclave* or *caldera* (a sealed chamber in

which vapour steam is injected from below). Because of the higher temperatures, the agaves only take 20-22 hours to hydrolyse.

Although the initial equipment is expensive (a steam engine has to be purchased), the investment can in principle be recovered in a matter of months. The problem with this time-saving method (and this was common knowledge) was that, in the process, the taste of the *mezcal* is influenced because it no longer comes into contact with smoke and earth, thus losing its characteristic and highly appreciated 'earthy' and 'woody' taste and odour. Since León did not want to be thrown back to square one by having his *mezcal* taste like *tequila* he opted for an alternative: an increase in efficiency through an innovation in the cooking process. The innovation itself consisted of a brick and cement chamber that could hold 6-7 tons of agaves. These are brought into the chamber through a heavy, metal door sealing the chamber from the outside. Inside, tiles capable of withstanding high temperatures shield the chamber. In effect, the chamber is akin to the *calderas* of the *tequila* producers but what is innovative is that, underneath this chamber, there is another room containing stones that spread the heat generated by burning wood located on yet a lower level. Metal grids separate the three compartments to prevent the agaves from coming into direct contact with the stones, and the stones from falling onto the burning wood. The lower compartment is below surface level, and can be accessed through a stair that connects to a tunnel and a metal door. The innovation does not diminish cooking time, but is a revolution in terms of throughput as the whole process involves only two steps (as opposed to 8 steps in the 'traditional' set-up). Most importantly, agaves are still cooked on wood for 72 hours which means that the final product retains the 'woody' taste of premium *mezcal*

As with the conversations in Mezquitán, what this condensed case makes abundantly clear is that any attempt to make sense of the knowledge encounters involving producers and consumers of *mezcal* must take into consideration the many non-human elements that are successively implicated in the story. What is referred to as the 'knowledge of the consumer' cannot be rendered precise without first understanding the role of things. I return to this issue in the last section.

Borrowing support: learning to make bananas swell

In the mid-1980's, Costa Rica's agriculture seemed to be grinding to a halt. The administration of President Arias provided a diagnosis for this in which the country's problematic situation was coupled, among other things, to high external debt, the collapse of the import-substitution model, technological backwardness, and the uncertain land ownership situation of the majority of smallholders. The administration also provided a solution to these problems by referring to a vocabulary of structural adjustment involving such disparate elements as open markets, non-traditional export crops, land-titling or eco-tourism, heralding these as potential saviours of the Costa Rica's agricultural predicament. In this scenario roles were set out for a variety of players. These included line ministries, multinational companies, non-governmental organisations as well as farmer co-operatives and growers' associations willing to grow non-traditional export crops - a good foreign currency earner.

In the short case study that follows, three of these actors come together in a project oriented towards the production of plantain bananas. The first player in the project was TAPA, the growers association located in the Atlantic Zone, close to Panama's border. The second actor was MAG (the Ministry of Agriculture an Animal Husbandry), responsible for providing extension services to the 31 members of the growers association. And finally, Del Monte, a multinational company in charge of exporting and selling plantain bananas on the U.S. market.

Initially, the goals of the three parties seemed to converge. TAPA could fetch high and stable prices for its bananas, and its members would be covered by insurance against flooding (a recurrent phenomenon in the region). MAG in turn would boast Costa Rica's first such export agreement and appoint one of its extensionists *in situ*. Del Monte, on its part, would profit from the lucrative export product without having to carry the operational risks involved. In addition to a convergence of interests, all parties coincided on the manner in which export-quality plantain bananas should be grown. Thus it was agreed that a comprehensive technological package involving drainage canals, a packing plant, biocides (i.e. nematicides, fungicides, herbicides, protective bags sprayed with insecticide), fertilisers, and so on would be gradually introduced. The parties agreed that the cost of the package would be born by the farmers themselves who in turn would be able to obtain the money to do so through a credit arrangement with the Costa Rican Development bank.

Introducing the technological package, however, proved difficult and after a few initial shipments, export-quality plantains were not produced in significant quantities. Accusations as to whom or what was responsible for the project's failure abounded. MAG blamed Del Monte (which had no experience in the production of the crop) for trying to introduce a technological package based on the assumption that plantain bananas (essentially a smallholder crop) would react as well to increased technology and crop management as their banana cousins (a plantation crop). Del Monte on its part reproached MAG for the incompetence of its extensionist who seemed to be unable to convince farmers to *properly* adopt the proposed technological package. Also, the multinational accused farmers for their ignorance and non-entrepreneurial mentality. TAPA's board of directors in turn believed that the output decline was related to a general lack of responsibility among the associates, the absence of a strong feeling of group solidarity, and insufficient use of technological expertise in crop management. At the level of the farm however these simple accusations were challenged by a murky and complicated reality. As it turned out, the plots of TAPA's Black, Amerindian, and *mestizo* associates were very dissimilar, ranging from a quarter of a hectare to over 35 hectares. Crop intensity varied from 750 to over 3,000 plants per hectare - with huge quality differentials in terms of soil composition and final output. Some associates appeared to have financial obligations with parties other than Del Monte (such as moneylenders): when in need they could not wait for the multinational's cheque to arrive and were compelled to sell their produce to local middlemen who competed with the multinational for the better banana specimens. The dynamics involving middlemen, moreover, was closely related to the initial agreement between Del Monte and TAPA, and meant that farmers would receive USD 7 for each 50lb box delivered to the multinational. Each box could hold an average of 3 bunches of export-quality plantains, but

farmers soon realised (after the first shipment) that after the deduction of overheads, freight, handling and taxes the average price they obtained was just over USD 1.30 per bunch: a figure only slightly higher than the USD 1.10 paid for by local middlemen. Since middlemen punished farmers with price reductions of up to two-thirds the normal price when quality, size or ripeness were not optimal, many associates were inclined to sell their larger bunches of quality plantains to middlemen while selling the relatively smaller bunches to their own association.

After some complex struggles and negotiations involving the three main actors as well as high-ranking politicians from the capital city of San José some major changes took place (cf. Verschoor, 1994). The multinational provided its own extensionist but now wished to have a contiguous area planted in bananas so that *sigatoka* (a fungus disease) could be controlled through aerial spraying by low-flying aircraft. This meant that more associates needed to join TAPA, and MAG helped in this through all sorts of artifices - including blackmailing. Some changes took place at the level of the association as well. For example, a new packing system was introduced by which plantains were now packed on the associates' individual plots, and no longer in a common facility. (In order to make the new system operational, new dirt roads and small packing sites were constructed with the help of a donation from the Dutch Embassy). The new system entailed that individual associates would be personally responsible for cleaning, choosing and packing only the best plantains they produced. Through increased control, associates were henceforth monitored and individually penalised for low product quality as each box of plantains carried the owner's name.

As the case suggests, the room for manoeuvre of the different actors involved changed throughout the project. Such disparate elements as plantain bananas, chemical compounds or politicians having no relationship with one another prior to the identification of the project, ended up being connected in increasingly compelling ways. In the end, some actors were able to control others. TAPA's Board, farmers and plantains could no longer close ranks with actors other than those explicitly allowed in the network assembled by MAG and Del Monte. Through a contract, farmers accepted the introduction of a technological package and a quality control system that diminished their capacity to make individual decisions. They could no longer sell to middlemen or be careless with plantain quality without risking penalties. Like the farmers, the plantains, too, were subject to export-quality demands and made to swell according to the guidelines of a multinational, which, for a time, borrowed the wills of others *without* fully owning the project. This case thus exemplifies the mobilisation of power - an issue I take up in the next section.

Becoming infected by fieldwork: a risk worth taking

The sequences of action portrayed in the short case studies above are rich in instances in which things progressively affect our main actors. In Mezquitán, Saturnino was entangled with objects, techniques, possibilities, and constraints. *Mizticuil, chahuixtle, compadres, salvia,* the sun, the moon, the rains, a tractor, a calendar, maize cobs, webs, work, ploughs, the soil, cows, tomato pickers and

Staturnino himself: they all infect each other so as to collectively arrange the details of that graceful and harmonious dance called agriculture. In Tolimán things were no different. There, León gained familiarity of consumer preferences through a painstaking learning process that includes judicious tinkering with both human *and* non-human elements such as ferments, agaves or innovative technologies. Likewise, in Costa Rica plantain bananas swelled to export-quality proportions when farmers closed ranks not only with extensionists, middlemen, and politicians but also with biocides, fertilisers, and management directives. Crucially, it would be a mistake to say that any one of the actors involved in these cases 'own' any of these stories: in their particular way, each of the actors can simultaneously be seen as 'owners' and 'owned'.

What lesson should a development sociologist draw from this? If interested in testing assumptions, becoming infected by the object of study would not be a bad idea. Thus he would not try to determine either Saturnino's, León's or Del Monte's ontology by deciding, on his own, what their respective worlds are made of. Let us continue this line of thought with the example of Saturnino: if, to Saturnino, agriculture maps out a world in which people and things all play crucial roles, then our development sociologist should respect this - even if it contradicts his received (and cherished) notions about society or agriculture. Instead, he would need to question the standard categories of social scientists which have it that it is the humans that act, while the non-humans (the sun, the moon, the *chahuixtle* or the *mizticuil*) are merely passive objects. If he wants to understand the type of agriculture exercised by Saturnino *in terms of Saturnino* (as any actor-oriented sociology would propose) then the following passage might be of help:

'We are never faced with objects or social relations, we are faced with chains which are associations of humans (H) and non-humans (NH). No one has ever seen a social relation by itself... nor a technical relation... Instead we are always faced by chains which look like this H-NH-H-NH-NH-NH-H-H-H-H-NH...' (Latour, 1991: 110)

This is precisely the point were any actor-oriented approach bracketing the *thinginess* of the social goes awry. Of course, Anglo-Saxon sociology has heard of STS before, but it has misinterpreted the message by taking it as a proposal to grant agency to things. As Latour and others have been at pains to explain, the issue is not to grant agency to things, but to think of agency as a composition of forces:

'It is by mistake, or unfairness, that our headlines read 'Man flies', 'Woman goes into space'. Flying is a property of the whole association of entities that includes airports and planes, launch pads and ticket counters. B-52s do not fly, the U.S. Air Force flies.' (Latour, 1999a: 182).

In Saturnino's case this means that it would be incorrect to state that it is *he* who practices agriculture when this is in fact an activity jointly performed by an ensemble of elements (*including*, of course, Saturnino). This may be hard to grasp for anthropocentric science, but even if one sticks to the notion that it is Saturnino who practices agriculture, this in no way justifies leaving outside of the story those elements that enable Saturnino to carry out his activities in the first place. Such a silencing of reality reduces complexity and ironically contradicts the philosophy of Long's actor oriented approach.

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Taking the entanglements between people and things seriously has implications not only for the notion of agency, but also for two other concepts that are central to Long's actor-oriented approach: knowledge and power. The case of León, for example, points at what is usually termed 'knowledge'. Contrary to so many accounts, 'knowledge' about consumer preferences is not gained by way of an invisible quantum leap that takes León from a state of sheer 'ignorance' to a condition of 'knowledge'. The progressive and cumulative process of becoming knowledgeable about consumer preferences involves knowledge encounters at the interface between producers learning to be influenced by consumers (and vice-versa). This can in no way be understood without taking due account of the potentialities that bottles, stills, fermentation tanks or agaves offer León. Worse: no project or programme that aims to help producers (including those of *mezcal*) to enlarge their 'knowledge base' (and thus market share) will ever achieve its goal if knowledge is taken to be something that is confined to cognitive processes contained within producer's minds. Likewise, 'power' is not something that resides within a human (or, for that matter, a non-human). Power or force can only be understood by taking into account the complex fusion of people and things that *together* borrow their support and potency to specific projects of the happy few (and that, in turn, can neither be reduced to any one actor in particular). Take the case of plantain bananas, for instance. Farmers, dirt roads, extensionists, technological packages, politicians, Del Monte and plantain bananas all borrow their *potencies* to a project without a clear 'owner' and composed of an equally heterogeneous set of elements: Del Monte, extensionists, U.S. consumers, structural adjustment programmes but also plantain bananas and the farmers themselves. Power here becomes increasingly mixed up in the machinations of humans and the possibilities and constraints offered by things. Boundaries begin to blur as one delves deeper into the intricacies of the case, thus making it increasingly difficult to state that power is a property of individuals or groups. Not comprehending the distributed nature of power (or agency and knowledge for that matter) renders invisible the dynamics of social change and results - as the history of social science demonstrates - in redundant and tame explanations that are often cast in terms of essentialist oppositions (micro/macro, subject/object, agent/structure, free/determined, and so on) and that are incapable of making a difference.

A few plain examples from Mexico and Costa Rica suffice to make one thing clear: the time in which development sociology could fabricate good science about social change without paying due attention to non-humans is forever gone. It would be unfair, however, to characterise the work of Long as being insensitive to this message which resonates the findings from STS. There may be many reasons for this, and one of them relates to what Clyde Mitchell once said during one of Long's Advanced Research Seminars, namely that 'to be a professor is a long slow slide to illiteracy'. Mitchell was anything but illiterate, but the point he was making was that it was a shame that our best brains end up losing so much time with petty administrative issues. Whatever the reasons: Long's first references to the work of the pioneers from STS date back a decade (Long, 1992), and STS authors were already compulsory reading in his 1989 Research Seminars. It seems, however, that these references were used as rhetorical devices only, for they did not have a direct effect on the design of an

actor-oriented research programme. Long's most recent book (Long, 2001), though, seems more receptive to the proposition that actors are composite phenomena.

The table is set for Long's approach to become 'infected' once again - not by Anglo-Saxon models of the actor, but by flesh-and-blood actors. There is nothing out there to stop this, and nobody needs to feel ashamed of showing an unreserved sensitivity and commitment towards the people we study: on the contrary, there is much pride to be gained in doing so. For too long, Development Sociology has been blinded by the social. Why not - like Saturnino, León, or Del Monte - take the entanglements between actors of a different *genus* in earnest? What would be against turning Development Sociology into the study of the hetero-*genus*, of materialities as well as socialities? Let us turn things on their head again, and become dangerous once more without fearing ridicule. Contrary to what Napoleon said, from the ridiculous to the sublime is only a step!

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Governance and the construction of accountabilities and moralities in the Atlantic Zone of Costa Rica: a case study of an exemplary extensionist

Pieter de Vries

Introduction

As a result of neo-liberal and structural adjustment policies, many developing countries are presently introducing participatory extension approaches in which issues of accountability and empowerment are paramount. Participatory approaches of this kind have been heralded by multilateral institutions such as the World Bank as key vehicles for improving the efficiency of state bureaucracies, for increasing farmers' self-reliance and for making state policies more sustainable, both in ecological and organisational terms. From a sociological perspective, it can be argued that the introduction of participatory extension approaches is an important element in the construction of new types of relations between farmers and the state for the constitution of new types of governance.

This chapter sets out to critically analyse a number of normative assumptions underlying the concept of (good) governance currently employed by many social scientists working from an institutionalist perspective. To assist this analysis, I draw upon post-structuralist insights developed around Foucault's work on governance and on the actor-oriented approach developed in Wageningen under the direction of Norman Long. The argument, in short, is that the strength of the governance concept has been undermined by policy-oriented work aimed at developing prescriptions for 'good governance'. It is also argued that the governance approach could benefit from an ethnographic approach that pays closer attention to the social practices of situated actors.

The chapter begins with a discussion on the concept of governance and proceeds with a case study of an extensionist working for an integrated rural development project in a colonisation area in the Atlantic Zone of Costa Rica. In the conclusion, a number of ideas about the possibilities of integrating institutionalist and actor-oriented approaches are presented.

Some critical comments on the governance approach

Governance has recently emerged as a powerful new concept in policy arenas and recent theoretical works about state intervention. In opposition to structuralist and instrumentalist views on the state, the governance concept moves away from the idea of the state as being the principal actor in designing and implementing policies and programmes. The practice of government is instead seen as the outcome of a complex set of interactions between different sets of actors. Kooiman (1993:258) thus defines governance as *'the pattern or structure that emerges in a social-political system as the "common" result or outcome of the interacting intervention efforts of all actors involved'*.

The governance approach has been developed as a policy framework for improving the effectiveness, efficiency and legitimacy of state interventions. Governance, in this view, can best be visualised in terms of polycentric institutional arrangements (Ostrom and Wynne, 1993: 177), the idea being that people's organisations are most effective when individuals organise themselves in groups in relation to single or multi-purpose authorities in particular areas. Such polycentric arrangements allow for an effective mix between local indigenous organisations, development organisations and state agencies. The state is viewed as but one actor within a larger constellation of organisations in which manifold contracting relationships can be established (public-private; donor-NGOs; government-NGOs; NGO-Community based organisations; CBO-group/community).

On the basis of these ideas, the notion of 'good governance' has become increasingly popular among multilateral institutions (see the World Bank State of the World Report 1998 dedicated to the state). In this policy context good governance embraces the state, the market and civil society as three different domains of activity, each with its own modes of regulation, set of resources and practices. It also refers to a set of rules and norms that regulate the inter-relations between these domains in a transparent and accountable way. Hence, the role of the state, rather than being the prime agent of development, is viewed as creating an environment in which the market can regulate economic activity, and where civil society can enable citizens to organise themselves through democratic and transparent organisational forms.

The good governance perspective can be criticised on several grounds. To begin with, the notions employed (accountability and transparency) are not so much analytical concepts that can aid research into the intricacies of administrative and political relations that, by nature, involve a wide range of actors. They are normative concepts contrived by policy-makers. As Long argues,

'One must avoid accepting uncritically the definitions and assumptions of administrators, planners and politicians. [For] the life-worlds of farmers and other actors are not confined to the spatial and strategic options promoted by policy-makers even when these conceptions acquire a "reality" as powerful instruments for allocating resources and for defining the discourse of policy and analysis' (Long, 1997: 53; see also Long 1988, 1989).

Thus, if we take the actors' points of view seriously, we should not give preference to any particular set of actors (in this case, policy-makers and

politicians). Furthermore, articles of faith and good intentions should not be confused with real-life programmes of action and their outcomes.

Instead of working with a policy-framework, we need to develop an analytical conceptualisation of governance that enables us to assess and analyse current changes in relationships between farmers, state and non-state institutions. It also needs to analyse the roles played by the idioms and vocabularies of policy-makers in shaping such relationships. To do this, we can draw upon ideas developed by post-structuralists on policy-discourse in order to criticise three notions central to the concept of (good) governance as developed in policy circles: transparency, civil society and accountability.

To begin with, the notion of transparency is problematic since it conceals the fact that relations between policy-makers, politicians and administrators involve multiple hidden agendas (Schaffer, 1984). These hidden agendas are sometimes well established but often still in formulation. Transparency conveys the idea that it is possible to design clear-cut rules and procedures for organisational processes with an optimal degree of openness. These assumptions run counter to the observation that administrative activities involve the emergence of certain pragmatic rules of the game (Bailey, 1969) and forms of practical or tacit knowledge (Giddens, 1984), which resist being made explicit because they are inherently political activities. We therefore need to problematise such normative constructions and view them as elements within policy discourses deployed by policy-makers and administrators for specific purposes (Apthorpe and Gasper, 1996; de Vries, 1997; Grillo, 1997). Furthermore, it can be argued that the notion of transparency is but one of a battery of elements within a wider development apparatus (Escobar, 1995; Ferguson, 1990) aimed at constructing defined visibility through a bureaucratic/institutional optic. Accordingly, in post-structuralist theory transparency is viewed as a discursive technique for opening up a space for intervention in hitherto 'inaccessible' domains of administrative life, hence creating new domains of intervention.

The conceptualisation of a domain of socio-political activity separate from those of the state and the market is also central to notions of good governance. Such a notion of civil society assumes that society is composed of organised individuals and groups who define their interests and commitments as being distinct from that of the state and, accordingly, organise themselves 'autonomously'. Reality, however, is more complex; people organise themselves within a multitude of different domains (the family, community organisations, business enterprises, etc.) constituting defined fields of activity which are underpinned by certain moral notions or values. The artificial separation between state, market and civil society obscures the existence of organising practices which cross-cut the family, community and entrepreneurial domains that enable people to access and combine different sets of material and authoritative resources.

Finally, accountability is a problematic concept since it assumes the existence and possibility of defining a generalised/universal set of moral standards concerning 'good' administration. The point is not so much the lack of mechanisms for holding bureaucracies accountable for their actions, but the fact that these are embedded in idioms, power relations, moralities and practices which are culturally specific and context dependent. Rather than a fixed set of rules and norms, accountability should be seen as tied to particular performances

and settings, such as when farmers make jokes about the incapacity of officials to make good on their promises, thus representing the enactment of forms of popular culture which ridicule authorities (Scott, 1985). Again, from a post-structuralist perspective, accountability can be viewed as an element of policy discourses constituting what Foucault, coining a neologism, has denominated '*governmentality*' (Burchell, 1991; Miller and Rose, 1992). Accountability, then, can be viewed as a set of (discursive and non-discursive) techniques aimed at instilling forms of calculation among often distant actors, thus enabling the exercise of power from a distance (Latour, 1987). The engendering of forms of accountability, in this view, is another set of practices by administrators aimed towards rendering the world calculable and predictable by developing modes for governing the conduct of others (Miller and Rose, 1992).

Indeed, the work of Foucault and his followers on technologies of government is useful for researching and analysing the deployment, uses and effects of the discourse and practices of participatory extension methodologies. However, we should not assume that policy-makers are able to impose their agendas on 'distant' actors such as extensionists and farmers through the construction and manipulation of policy discourses. As Long (1997: 54) argues, it is necessary to complement the post-structuralist approach with a detailed examination of how discourses are deployed in particular social arenas, and by giving more attention to issues of strategy and social life. For these reasons, it is important that a methodology is developed for studying social interactions between bureaucrats and farmers by focussing on the encounters that take place between them in various types of social settings. Accordingly, an analytical conceptualisation of governance should concentrate on the construction of accountabilities and moralities both as a result of the deployment and appropriation of policy discourses by different sets of actors and as emergent properties of social interaction between bureaucrats and farmers.

These ideas are explored further with the use of an ethnographic case study concentrating on the social production of moral notions of the 'good extensionist' or the 'good farmer'. The case study also focuses on the production of languages of accountability, whereby bureaucrats and farmers evaluate and assess government programmes and the roles of the various parties involved. The case study demonstrates that such languages of accountability evince mixtures of technocratic policy discourse, focussing on both the skills necessary for rendering financial accounts, and on popular notions and images of social justice.

In 1988-1990, research administrated by the Costa Rican Land Reform Institute (IDA) was conducted in a settlement area (the Neguev Regional Office) in the Atlantic Zone of Costa Rica. Before becoming a settlement Neguev had been a cattle ranch until 1978, when it was invaded by a radical peasant organisation (UPAGRA). After a couple of years of struggle it was purchased by the IDA, which embarked on an ambitious programme to convert peasants and plantation workers into entrepreneurial farmers through the implementation of an integrated rural development project. Not surprisingly, the project was a massive failure because of 'implementation problems' and the difficulties of putting into place an effective 'beneficiary selection system' (de Vries, 1997).

The style of intervention used in the project was most definitely top-down, if not outright repressive. I documented the trajectory of the project interventions in

a previous article (de Vries, 1995) by focussing on a series of interfaces or critical encounters between settler-beneficiaries and IDA front-line workers (extensionists, social workers, land-measurers etc). In the article in question, I set out to show how the life-world of one 'exemplary' extensionist was shaped by a particular technocratic discourse. The discourse was aimed at enhancing institutional performance through the introduction of transparent working procedures (such as a computerised beneficiary selection system); hence minimising the role of clientelistic relations in IDA's functioning. This discourse, however, was appropriated in different ways by institutional managers, regional administrators and the front-line workers in the settlements, giving rise at the local level to highly demeaning and even racist views on the settler population. I argued that the conflictive and contradictory character of the technocratic discourse was reflected in what I call the 'fragmented nature' of this exemplary extensionist's life-world. This had distinct implications for the way in which he developed a code of conduct (or style of operation) for dealing with settlers, colleagues and the institution at large.

Although the research predates the introduction of participatory methodologies in Costa Rica in the 1990's, it can be argued that present relations between extensionists and settlers do not differ substantially from those recorded ten years ago. In fact, as Pacheco (2000) and Zúñiga (1998) show, participatory methodologies of this nature have had little effect in terms of their intended objectives i.e. improving the quality of communication with a view to enabling forms of local-level planning that make possible a more efficient use of scarce resources. On the contrary, the introduction of these methodologies imposed an additional administrative burden for the extensionists, rendering them even more dependent on entrepreneurial actors than before. Subsequently, the use of participatory methodologies in the Ministry of Agriculture has recently been discontinued in view of their lack of effectiveness.

A case study of an exemplary *técnico*

At the time of my research, Samuel was one of ten field-level workers representing the Neguev regional office and was in charge of the medicinal plants and pineapple programmes. He comes from San Vito; a coffee producing area in the southern part of the country regarded as being one of the few successful attempts to promote colonisation by Europeans in Costa Rica. His father was a small coffee farmer and cattle holder in this same region. Given this background, Samuel preferred to define himself as a *campesino*. His background, he would argue, was the main reason he preferred to work in the field with smallholders than in the office. Most of the satisfaction he derived from his work came from the appreciation he received from the farmers he worked alongside of.

Samuel was employed at the IDA headquarters in San José and sent to Neguev for the explicit purpose of establishing medicinal plants, spices and dyes programme. This programme, Samuel's first, was initiated in 1982-83 by Alberto Ramos, a former university lecturer of his, who had become the IDA expert in charge of the national medicinal plants programme.

Samuel had done practical work under supervision of Ramos in two Indian reserves in his native province during his studies. Before this, they had collaborated with each other on laboratory work on medicinal plants at the national museum and have continued to maintain very close working relations ever since.

In the Indian reserves, Samuel dedicated himself to collecting and classifying medicinal plants on the basis of the Indians' own indigenous knowledge. He spent fifteen days in each Indian community living with an Indian family. This was an important experience for him and he recalled that,

'These people are highly reserved and if you want to gain their confidence you have to make a lot of effort. Yet, ultimately I developed a deep appreciation of them and I think they also valued my work'.

After Samuel graduated from the university, Alberto Ramos made arrangements to get him a job on his medicinal plant programme. This, however, proved to be very difficult and they had to wait until someone known to them was appointed to the Board of Directors before getting the necessary support. He was finally transferred to Neguev in 1984 where he set out to select all the plants with medicinal properties from the area in order to establish a demonstration plot. As he recalled, *'I started to relate to the plants, for I did not know much about them in this area. I had to detect them and learn their names, the scientific and popular ones'*.

Samuel and Alberto planned to promote the cultivation of medicinal plants for commercial purposes and had developed connections with a Swiss exporter. After some time they had a variety of plants and were experimenting with various planting distances, stalks per station and so on. They had also acquired a plant dryer. Samuel began to look for settlers willing to grow these plants. In the beginning it was decided to work with four different settlers, each on a half-hectare plot with five different plant species. But problems began to surface as soon as the plants were ready to be collected. The dryer could not cope with the large volumes produced and it appeared that the Swiss exporter suddenly did not have the connections required for exporting the plants. He was convinced that there was a large international market for the plants but he had underestimated how difficult it was to enter it. In Samuel's opinion, a court case could have been taken up and won against the exporter but it was hardly worth the effort. This was a bitter experience for him: *'My conscience said to me that I had to find a way of getting rid of the plant material while paying the farmers for it. Otherwise I would lose their trust'* he recalls. In the end he decided to buy the plants himself: *'I had established friendship relations with several settlers and I knew that they would be very disappointed in me if I told them that there was no market for the plants'*. In fact, he paid the farmers the prices agreed to with money he that borrowed himself, incurring a heavy financial loss in the process. This, it must be said, illustrates a very rare example of an extensionist assuming responsibility for programme failure. In a more typical situation, the settlers would have been blamed for such a failure, accused of 'ignorance', laziness' or the inability to follow their instructions.

From then on, Samuel decided to place more emphasis on the social function of the programme by providing home-grown medicines and preventative herbs (against headaches, nervous illness, etc.) for the farmers and their families. He planned the programme so that it would incorporate a number of educational

activities, and settlers were offered the plants for free. Altogether some sixty gardens were established in the settlement, including a communal garden set-up for settlers to examine and choose the plants they wanted. There were also various field days (*dias de campo*) organised and gardens were established on the school grounds in collaboration with the teachers. It was hoped that they would explain to the children the various uses of plants and that the latter would take them home. In fact, the teachers also ended up playing an important role in approaching settlers who were interested in the programme.

In this way, Samuel became well known in the community and established working relationships with numerous settlers. Although some efforts were made to find a commercial market, a reliable exporter could not be found and many lost interest due to the absence of a commercial outlet. After a while the demand for the plants began to decrease sharply and only a minority of the settlers continued with the programme. The medicinal programme came to a standstill not long after, when he became more involved in other crop programmes. Despite its apparent failure, Samuel nevertheless was of the opinion that some success had been achieved with the programme. One settler in Milano, for instance, had created an income for himself by raising four hectares of oregano and selling it at the producers' market in San José. The same settler also provided medicinal plants to UPAGRA, who organised a festival during which the women with the most beautiful gardens were awarded prizes. Samuel proudly asserted that all of the material came originated from one of his demonstration plots. It had nevertheless become clear to him that men were predominantly interested in commercial programmes. In this way, Samuel had discerned the different underlying interests between women and men with regard to livelihood strategies. As he put it,

'with men you have to talk in colones - *the Costa Rican currency - because they are mostly interested in money. Women are more interested in family affairs, cheap medicines, and the opportunity to have a small additional income. The medicinal plants programme demanded a lot of work, and men were not going to provide it if the monetary reward did not correspond to the amount of labour they expended.'*

He had also had problems in other settlements with the women's groups that were assisted by the 'women and development' section of the IDA. The social workers had promised them good profits in a short time, if only they would organise themselves properly. Although the quantities produced were small enough to sell in one of the regional markets, the plants required careful selection to provide a good product. Once Alberto Ramos and Samuel were accused of deceiving the women after the produce fetched a much lower price than had been expected. Marketing, Samuel pointed out, was a profession in itself, and he admitted that in their enthusiasm they had made the error of suggesting to the women that the main difficulty was that of growing the plants. Indeed, he recognised that he had been too paternalistic in his relations with settlers. The main lesson of this experience for him was that production and marketing problems could not be resolved by extensionists alone. It would require close co-operation between extensionists and their beneficiaries.

The Chilli Programme

After the not so positive experience of the medicinal plants scheme came the chilli programme. Samuel was convinced that the only way to solve the livelihood problems of the settlers was by developing a mix of profitable cash crops that were suited to smallholder cultivation. From the outset he had been looking for a spice that would attract the commitment of a wider group of farmers, but he could not find anything which combined good market possibilities with existing agronomic conditions.

His choice for the red pepper - or chilli - came by chance. A settler once mentioned to him that he was thinking of cultivating chilli. He told Samuel that close to Pocora some farmers had been growing it and had had no difficulty in selling it. This interested him greatly so he went to Pocora where he inspected a few plots and talked to the purchasers. He also spoke with the manager of a processing company, Kamouk. It appeared that the manager was a very open person and they immediately got along well. On that same occasion they talked of a possible production area of fifty hectares. Later, they reduced the planned area to twenty-five hectares, in view of the high yields that they expected.

There was not much available data on the hot chilli, as only ASBANA - the National Association of Banana Producers - had been doing research on it. With the help of information that was provided by the Chilli growers Samuel had met, he made a cost calculation (*avio*) which he presented to the Credit Fund. He had a good relationship with functionaries from the Fund in San José, and they decided to extend credit for the programme. Subsequently he initiated the search for possible programme beneficiaries. As he recalled:

'First I talked to settlers I knew from the medicinal plants programme, but there was not much interest. Then I made lists of the best farmers with the help of two other técnicos. *On the basis of that list I succeeded in finding twenty five beneficiaries'.*

However, many settlers still had lingering doubts. Chilli was a new and relatively unknown crop in the area and all other previous programmes had been failures. Consequently, some of the farmers decided to plant only half a hectare, which meant that only seventeen of the targeted twenty-five hectares was reached. In any case, there was much distrust amongst the farmers. The first credit delivery, for example, was not accepted by the settlers because they wanted to have more information. Ultimately, however, they fared very well. As Samuel recalled,

'Much better than any of us would have dreamed. In fact, I would have already been relieved if it had not become another failure. In fact, this was the first really successful programme in the settlement and some beneficiaries made a profit of as much as 600 thousand colones.*'*

Samuel calculated that altogether it had made the settlement seven to eight million *colones* richer. This of course had significant consequences for him. As he said,

'Since then the roles changed and instead of me pursuing them, settlers would start asking me if they could participate in the programme. But the market was restricted and I could not include any more beneficiaries.'

A major advantage of red peppers is that they grow on infertile soils, provided the drainage is good. However, they are not well suited to humid tropical areas since they are highly vulnerable to a fungus called *malla,* which as yet cannot be controlled. It would only be question of time before *malla* arrived, after which chilli would not be able to be grown for at least three years without being

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affected by traces residing in the soil. Samuel realised that sooner or later the plantations would be affected by this illness. Chilli, then, was a transitional crop. It offered many the opportunities to make a quick profit but would not provide a long-term alternative to the production and marketing problem.

Early successes saw the number of chilli cultivators expand to forty-two across the entire settlement, with many farmers financing their own chilli. However, Samuel gave preference to settlers in the poorest settlement sectors. Indeed, he claimed that he was in search of profitable alternatives for those areas in the settlement with the poorest soils. Furthermore, Samuel adopted a careful attitude towards credit, not providing new chilli cultivators with credit because of the risks incurred by the spread of *malla*.

He continued his search for a longer-term solution and eventually 'discovered' *maracuya* (custard apple). Again, it was the suggestion of a settler who told him that fairly large plots of custard apple were being planted in the area of Sarapiquí that led him to this. He promptly went to the area to investigate. At the National Bank of the village of San Miguel he obtained a cost projection that had been made for a few producers who were cultivating *maracuya* with bank credit. *Maracuya*, he decided, had the same favourable characteristics as chilli in that it provided a regular monthly income but more importantly, it was better adapted to the Atlantic Zone.

Relationships with settlers

Samuel, like the other officials, was selective with regard to the people he worked with, although he claimed that he got along with the majority and had had bad relationships with only two or three. He recounted a nasty experience with a really 'difficult settler' (*problemático*), Norberto Casas. He described him in the following way,

> '*There is in El Silencio (one of the sectors of the Neguev settlement) a farmer called Norberto Casas, who is terrible. He criticises everything, he gossips with you about other officials and with them he gossips about you. He also spreads stories about his neighbours and then when you visit them you feel uncomfortable. Since he is an older man he thinks he knows everything better than us kids. First I had problems with him because he did not want to follow my recommendations. He even diverted the credit. Once I gave him money to buy inputs and he pocketed it. Then I wrote a really harsh note to him (*bien chiva*) with a copy to the Credit Fund in which I made clear to him that given the fact that he was diverting credit and that he gossiped about me and about other* técnicos *I could not continue assisting him. I had already given him a lot of credit, about sixty thousand. I talk to him only if it is absolutely necessary. I attempt not to have any kind of involvement with him'.*

In his view, issues like this concerning the trust relationships between *técnico* and farmer cannot be taken into consideration in programme design, and this makes extension practice much more complex in reality than it is on paper. He would argue,

> '*That is the problem with these programmes of technological transfer. You can design a technological package but you cannot change the farmer. How are you going to change the customs of someone who has been tilling the land for twenty-five years? In the end extension amounts to a matter of personal relationships.'*

The issue of control was important to him in trust relationships. He therefore found it easier to work with new crops, unknown to the farmer and requiring modern technology. When comparing maize with chilli for example, he would argue that settlers have extensive knowledge of maize but they were forced to listen more to the *técnico* when it came to chilli. It was then easier to wield control over the application of a technological package with a crop like chilli. Trust between him and the farmer was in his view essential to his work. Trust, however, was not merely intuitive but something that could be tested on the farmer. Before going to the field, for example, Samuel always reviewed a file with recommendations and notes that he had made about the settlers he was going to visit. Trust for him was something that should be validated on the basis of real progress. It was not merely based on friendship or sympathy. It was just as much based the confidence the farmer has in the *técnico* and vice-versa. In elaborating upon this theme Samuel commented,

> *'With settlers I usually have a good relationship. Yet I always keep a distance. That is my nature. It takes time before I trust them. That has nothing to do with the fact that I am a* técnico *and they supposedly peasants. For, neither do I have relationships of friendship with the other* técnicos'

And in talking about them he said,

> *'They are colleagues [*compañeros*]. But to say that they are friends, well I do not know what your concept of friendship is... to have a friend, I consider, is like having a brother. You must have a lot of* confianza *[confidence]. I would say that here I do not have real friends, but there is certainly a feeling of friendship among us.'*

Establishing a friendship with a settler was problematic in his view, since it could give rise to situations that should not occur in a relationship between a farmer and a *técnico*, such as displays of disrespect. Yet, he was clear in arguing that, *'in essence it does not matter to me that they are farmers. I have been a farmer myself for a long time. Friendship after all is a personal relationship, it is subjective'*. These remarks reveal a contrast between Samuel's attitude and that of the other *técnicos*, who were accustomed to making displays of friendship with settlers, often characterised by jokes and by not taking things too seriously. Samuel's attitude was more concerned with establishing relations with settlers based on mutual respect, confidence and trust.

He had once had a disappointing experience with a settler, who he had included in the chilli programme and whom he considered as someone who could play an important role as a local leader. The settler in question ended up diverting credit for other uses. *'Actually'*, he argued, *'I like him as a person, but that does not conceal that I am disillusioned'*. On the other hand, there were settlers he did not trust initially but for whom he gained much appreciation in the course of his work. As he put it, *'in the course of a relationship you learn things from them and often you have experiences that are not pleasant at all'*.

Trust as the basis for a working relationship, and for a possible friendship, did not in his view form an excuse for unjust or politically oriented criticism. One experience he had with an UPAGRA leader attests to this. During a visit made to Neguev by some *técnicos* from an agro-processing company to provide information on non-traditional export crops, one UPAGRA sympathiser began a tirade of criticism against the IDA, pointing out what he saw as the political function of production programmes. Samuel recalls this as a very unpleasant

experience, especially since it took place in front of an outsider. In his opinion 'dirty linen should be washed at home'. Another radical leader, on that occasion, congratulated him for his commitment and called him the first técnico in the settlement who showed that he was ready to share his knowledge with the peasants. Yet, he continued questioning him for not being able to take an independent stand vis-à-vis the local administration. As this radical settler put it,

> *'Look, Samuel, you have shown that you are not afraid of establishing relationships with peasants and thereby to run risks. Why are you afraid to question the institution's policy of dividing the community? As a child you surely contradicted your mother, didn't you? Well, I think that an institution does not deserve more respect than your own mother'.*

In effect, Samuel had an ambiguous relationship with UPAGRA leaders. On the one hand he resented the fact that the IDA's Regional Director in the Atlantic Zone, had at various times stopped him from working with organised groups which were considered to be close to UPAGRA. The Regional Director had once forced Samuel to dispose of a truck full of medicinal plants that were to be delivered to such a group. On the other hand, Samuel had an ongoing conflict with a few of the peasant leaders who argued that he was neglecting the need to forge strong local organisations that could defend the producers' interests, and that his approach only benefited wealthier pro-IDA producers. Samuel, in fact, was very sensitive to these arguments, but he argued strongly against a political approach to the 'organisation' problem. Contrary to many of the radical peasant leaders, he was totally opposed to using the Association of Small Producers, essentially a farmers organisation, as a platform for dealing with social and political objectives related to community issues. He referred to the success of the coffee sector in Costa Rica, achieved through piecemeal but constant efforts at building strong organisations focused on production instead of politics. He did, however, take the view that a union such as UPAGRA should be given the opportunity to defend the interests of the peasants in a peaceful and collaborative way. It was a disappointment to him that many peasant leaders with highly developed organisational and rhetorical skills were not involved in the establishment of local organisations. He would bemoan the fact that many of these characters preferred to spend their time 'smoking marihuana and drinking' instead of working hard on their plots to repay their debts.

Samuel's personal projects in relation to the bureaucracy
I went to the field various times with Samuel, usually in his old jeep but a few times - when his car was being repaired - I offered to drive him around. Samuel was quite open about his view of the institute and about his personal projects. He also liked to reflect on the deceptions and tensions that working with smallholders entailed, on the political underpinnings of administrative life and on his aspiration to be paid in accordance with his professional abilities and dedication. He repeatedly asserted that he had little aspiration to ascend within the institute. A major reason for that was that he did not like office work. In addition, he dreaded the kind of political struggles an institute's manager had to become involved in to maintain himself in that position. Moreover, he was thinking of cutting his ties with the IDA because of the low salaries that were paid. He was even considering going independent and providing extension to

producers on a private basis. He was emphatic in his belief that the only incentive he had received till now was the gratitude of smallholders. He had received little recognition from the administration and once made the comment that taking initiatives in an institution provided no rewards, only risks. '*If the chilli programme had been a failure, everyone would have blamed me. And the same holds for the new programmes I am involved in*'.

Discussion: operational styles and governance

It is remarkable that although Samuel has been considered by farmers, colleagues and his superiors alike as an exemplary extensionist, he has not been very successful in his professional career in the IDA. One reason for this is that he has spent too much time with the farmers and is too committed to them. Although he has been viewed as a good and dependable colleague, he is also considered an odd one: someone who cannot be counted on in a political conflict. He has a dislike of politics and therefore has not been able to develop a network of friends within the institution. With the exception of the relationship with his former teacher, he has no protectors at higher levels.

On the other hand, his relationships with the farmers are not devoid of difficulties either. Most farmers would consider him as being the best and only responsible extensionist in the regional office but many have accused him of working only with farmers he likes. In the light of his past experiences with 'difficult' settlers and the prohibitions imposed upon him by regional administrators about working with organised groups (for fear these may be infiltrated by 'radical peasant leaders'), he has decided to develop very personal relationships of trust with selected settlers. The notion of trust is central to his style of operation but it is a trust that is not simply given away. Trust, as Samuel defines it, is subject to continuous re-assessment. His caution here is the result of having been deceived, more than once, by farmers he thought he could trust. He accounts for this lack of trustworthiness by referring to the 'special character' of farmers in the Atlantic Zone '*who are so different from those in my area of origin*".

His relationship with 'radical UPAGRA leaders', though personally friendly, has also been characterised by a degree of distrust and lack of confidence. Although he appreciates their organisational capacities, he believes they should concentrate more on becoming good farmers instead of engaging in political activity. His reply to leaders claims that the institution has, for political reasons, set out to destroy their efforts to establish peasant producers' organisations, is that they should seek a constructive type of relationship with the IDA administration instead of the current conflictive approach.

To round off this discussion, I would pose the following question. What can a focus on this extensionist's style of operation and life-world tell us about 'the construction of accountabilities and moralities' as defining features of patterns of governance? To begin with it is clear that Samuel's life-world has not been confined to the spatial and strategic options promoted by policy-makers, even though these options did acquire a 'reality' of their own at settlement level as 'powerful instruments for allocating resources'. Samuel, though apparently complying with the project's technocratic policy discourse, did not adhere to

them in principle and strongly relied upon his previous experiences in his native area when dealing with settlers. Although he did adopt the official discourse of labelling settlers in the Atlantic Zone as troublesome, in practice he established very personal working relationships with individual settlers.

Accordingly, institutional performance cannot be understood solely in terms of the 'the deployment and appropriation of policy discourses by different sets of actors' for there are various extra-institutional factors that affect relationships between front-line workers (such as extensionists) and farmers. In Samuel's case, we see that although he was constrained by IDA policy in his attempts to establish working relations with the settler population at large, he still managed to find room to manoeuvre in establishing effective networks for determined crop programmes. These networks, in fact, can be seen as the emergent properties of the social interaction between a farmer and a group of farmers.

Finally, what implications does this analysis have for the notion of governance, and in particular, for the possibilities of integrating institutionalist and actor-oriented approaches? In my view, policy and analytical models such as governance should be treated as rough approximations of a reality *as imagined* by policy-makers and researchers. This does not imply that these models are false in the sense that they fail to represent real life correctly. They are, however, coloured by the professional and analytical interests of those who busy themselves in fashioning them. It follows then, that although influencing the way in which policy-makers design policies, the assumptions held by governance models about the separate existence of the market, civil society and state domains are highly questionable.

To conclude with, I would argue that policy and analytical models are highly consequential in shaping social interactions between different sets of actors in ways that are not predicted by the models themselves. These patterns of social interaction, as I have suggested, have emergent properties that in turn reveal the simplified character of policy/analytical models. An actor-oriented approach, then, can document and analyse the mutually constitutive relationship between these policy/analytical models and defined patterns of social interaction.

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Part III:

The actor oriented approach in practice

13

'Working for our own dreams' - shaping and reshaping mother earth

Ronnie Vernooy

Grounding theory, informing practice

In the last paragraph of his inaugural 'Wageningen' address, Norman Long made a reference to the dynamic and critical students with whom he has had the pleasure of exchanging ideas and experiences (Long 1984: 19). I came to Wageningen in the summer of 1981, more or less at the same time as the Long family did. No doubt, these students were very pleased about Norman's arrival at the Agricultural University. I was lucky to be one of them.

In this chapter I present how Norman Long's conceptual and methodological approach, enduring enthusiasm for *le métier* of sociologist, and friendship have influenced both my studies and professional career.[1] In the first part of the chapter I write briefly about my student years in Wageningen covering the period from September 1981 to the summer of 1992. These years include time spent in both the classroom and 'the field' where I carried out extensive research in Nicaragua for my Master and PhD degrees. In the second part of the chapter, I describe and reflect on the post -Wageningen period which began in August 1992 and continues to this day, during which I have been a program officer at the *IDRC* (IDRC) in Ottawa, Canada.

During the Wageningen years I eagerly internalised the core elements of Norman Long's social actor oriented sociology. As students we did our best to make a contribution to the debates introduced in the Leeuwenborch (the name of the office building where the rural sociology department is housed) by Norman and colleagues about the multi-faceted nature of the commoditisation of agriculture, the complexities of intervention processes, the embattled constructions of knowledge and the role of the researcher. Perhaps even more significant than exploring new conceptual terrain was Norman's encouragement for us to go out to the field to learn about and see for ourselves how men and women in the rural (and urban) areas of the South were trying to make a living. Analysing, theorising and debating the invaluable insights and experiences that

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[1] I would like to thank my colleague John Graham (based in IDRC's Singapore office) for his comments on this essay. John's wisdom and guidance - let's keep our feet on the ground! - continue to be of great value to me.

we gained from living with farmers, fisher folk and traders represent in essence what the Wageningen years were all about. In a nutshell, Norman and his social actor oriented approach taught us the importance of grounding development theory.

In Ottawa, my contribution to development research has moved into new directions. My work as a program officer focuses on critically supporting researchers from the South to design, carry out and assess problem-solving oriented research projects and to share the lessons learned with others. Although we are very closely connected to the efforts employed throughout the research cycle - providing conceptual and methodological inputs for proposal design, facilitating or providing training, reviewing work in progress, regularly visiting projects in the field, assisting in monitoring, evaluation and dissemination of results - we normally do not take part in projects as researchers ourselves.

Working at IDRC opens a window to the world. The centre supports researchers in more than 50 countries in Africa, Asia and Latin America. Since 1992 I have had the opportunity of co-operating with and visiting researchers from Botswana, Zimbabwe, Kenya, Uganda, Ecuador, Colombia, Costa Rica, Honduras, Mexico, Cambodia, the Philippines, Nicaragua, Cuba, China and Vietnam. More recently, my work has focused on community-based natural resource management projects in the latter four countries. Fortunately, every now and then we have a chance to do some research ourselves and/or write about the research that IDRC supports. Two years ago I had the opportunity to return to the field (Nicaragua) as part of a two year professional secondment to the *International Centre for Tropical Agriculture* (CIAT) to co-ordinate one of its projects supported by IDRC.

Throughout the past eight years in Ottawa (and Nicaragua), I have continued to build on the key elements of the 'Wageningen' period, but the emphasis has shifted from constructing theory in an academic setting to contributing to social change outside an academic setting. Attempts to do this in a reflective manner - perhaps we could call this informing (or grounding) practice - have directed me toward the exploration of new conceptual and methodological paths. These paths include insights from ecology, learning theory and participatory (action) research. In a perfect world, I imagine, grounding theory and grounding practice walk hand in hand.

I close this introduction by mentioning that Norman Long's influence extends beyond the often unpredictable but always fascinating ups and downs of sociological development theory and practice. One day near the end of 1987, as we walked through the corridor of the sociology department, Norman told me that I should '*meet this nice lady from Canada. Nicole is her name. She is from Quebec. She is following the Management of Agricultural Knowledge Systems course...*' Nicole and I met a few weeks later in the same corridor and we continue to meet each other every new day!

The Wageningen years, 1981-1992

'Far from being uninteresting and inconsequential trivia of day-to-day life, some of the features of mundane social activity are deeply implicated in the long-term (and large-scale) reproduction of institutions. At the same time, 'macro-structural' properties of social systems are embedded in the most casual or ephemeral local

interactions. There are some complicated theoretical and empirical problems to be worked upon here.' (Giddens, 1987: 44)

Making and remaking a living: the meaning of commoditisation
One of the topics introduced by Norman that fascinated students like myself was the commoditisation of agriculture. Although we were not always 100% clear about the different theoretical points of view, we could easily grasp the questions that Norman formulated as central to the debate (Long, 1986: 3-4, see also Long, 1977: 71-104): What does commoditisation mean in the every day lives of peasants and entrepreneurs? Are increasing commercialisation and integration of rural enterprises in the wider capitalist economy singular processes or do variations occur? If so, why do rural enterprises respond in different ways? Do people resist increased commoditisation?

In *Peasants at work: the agricultural labour process and commoditisation in two Nicaraguan villages* (Arts *et al.*, 1987), we offered a contribution to the commoditisation debate focussing on the agricultural labour process i.e. the organisation of different agricultural activities at household and village level seen mainly from the perspective of poor, semi-proletarianised peasants in two *comarcas* in the south of the Department of Matagalpa. The study, carried out in 1985-1986, aimed to provide 'more systematic comparative studies at regional and local level, so that we can understand more precisely the effects of different types and combinations of commoditisation' (Long, 1986: 17). Our findings demonstrated that the local processes are indeed important sources for variation in the development of commodity relations and in the mediation of external forces by local structures (*ibid.*: 22).

We found twelve significant patterns of labour allocation among peasants in the two *comarcas*, including combinations of households who sold their own labour (during different periods of the year, involving men, women and children in various ways), but who also operated at other times as employers of labour. The patterns also demonstrated the importance and the efforts that go into building non-monetary relationships, including the so-called *mano vuelta* ties, which are based on the exchange of labour (and sometimes access to land) between relatives, neighbours and/or friends. The research done in both *comarcas* illustrated that theoretical abstractions and predictions such as the uni-linear individualisation of the household unit, externalisation of farm tasks and proletarianisation of the labour force were not very useful and at worse, simply incorrect. The study also provided important insights into how different households and farm enterprises were related to each other, a crucial element that had received little attention in theoretical debates.

In 1988 I returned to Nicaragua, this time to the Atlantic or Caribbean Coast, to co-ordinate the collaborative research project 'Regional autonomy and local-level development,' a joint effort between the Centre for Research and Documentation of the Atlantic Coast (CIDCA) and the Wageningen department of the Sociology of Rural Development. CIDCA is Nicaragua's foremost research centre on ethnic, linguistic, historical and socio-economic aspects of the country's Atlantic region and its six ethnic and indigenous groups. In this project we pursued a number of academic interests, building on the theoretical issues outlined above as a means to strengthen the basic and applied work of CIDCA in the fields of socio-economic research and development planning (Vernooy,

1992, 1995). At the same time, we intended to contribute to the autonomy process in the region in which CIDCA and my Nicaraguan co-researchers were energetically involved. The multi-faceted results of the fieldwork carried out in two zones i.e. the Bluefields area in the south and the Waspan area in the north, allowed for additional reflection on methodology as well as on the theoretical topics already discussed (commoditisation, intervention processes). My affiliation with CIDCA provided a way to increase the utility of the research results - an experience that continues to influence my current work.

The research dealt with the coastal people's efforts to make a living, and in particular, how they tried to cope with the disastrous effects of hurricane 'Joan' that hit the region in October 1988. It also looked at how the recuperation process was influenced by the reconstruction program of the then Sandinista government, aimed at overcoming the chaos and destruction caused by the ferocious winds. We studied how the dispersed rural enterprises and households in the hinterland of Bluefields, the major city on the coast, organised production and investigated the dynamic world of small-scale commercial activities and enterprises in town. This included an analysis of politics and policy making and the interplay of these processes with economic and social dimensions of livelihoods. We also paid special attention to gender relations and divisions in agriculture and trade, an aspect that was not always fully addressed during work in the Wageningen classrooms.

Focus was given to local trading and livelihood practices, including material and cultural elements, and how these connected into regional and supra regional contexts. We explored these contexts because they had become directly relevant to the livelihood practices of the people in Bluefields, especially the women (Torres and Vernooy, 1992). Women constitute the vast majority of those involved in this economic activity, both in Bluefields and Nicaragua as a whole. We learned about the complexity of the lives of some of these women in their attempts to solve problems arising from management of their businesses, rearing children and dealing with men. Macro-economic and political circumstances restricted opportunities for women by increasing the burden of domestic commitment and sharpening gender divisions of labour, inequalities, and conflicts. The emergence of new gender relations and divisions of labour as a result of the key role of women in the Bluefields market could therefore not be interpreted as a definitive break from the economic exploitation and subordination of coastal women within and outside of the household and family units. Nor could it be viewed as a departure from the fading of class and/or racial differences among coastal women. Nevertheless, these women were actively re-shaping the regional political economy. Together with thousands of other Nicaraguan women merchants, they were also transforming the national political economy.

Fires and counter-fires: reviewing intervention processes
A second issue of much interest to some of the students was the analysis of planned social change and policy making through the study of rural development interfaces (Long 1989; see also Long, 1977: 144-184). Here, the guiding questions formulated by Norman were; how can we more adequately grasp the relationships between policy, implementation and outcomes? How do different

types of households, groups and communities develop strategies for dealing with the new circumstances they face with the introduction of new development strategies? How can we break the theoretical deadlock of viewing social change as either the result of unmediated external forces or as the unmediated reactions of peasants to development interventions? (Long, 1989: 3-5)

We directed attention to the analysis of the agrarian reform policy implemented by the Sandinista government (van Gerwen and Vernooy 1987). In addition to relating the findings of our fieldwork in El Barro to the commodisation debate, we analysed how the peasant sector in the country actively influenced the policy process: both from a historical perspective and from within the context of the raging contra war which in the mid nineteen eighties had become a structural element of everyday life and survival (Vernooy, 1987). However, interest in policy-making processes did not only concern agrarian issues. As part of the research on the Atlantic Coast we also followed and analysed the post-hurricane 'Joan' reconstruction program initiated by the then Sandinista government. This program focused on the distribution of aid (food, building materials, medicines) but also included a rebuilding program (houses, roads, infrastructure such as electricity and water) and the formulation of a more ambitious development plan for the Southern Autonomous Atlantic Region (RAAS), by far the hardest hit area. The RAAS government also declared a 'no burning' decree following a series of forest fires that broke out in several sites of the region during the dry summer months after the hurricane. This decree rapidly became part of the reconstruction program discourse as the fires represented a threat to both the rural and urban population of Bluefields and its hinterland. Moreover, the fires were also viewed by government officials as a threat to the potential timber revenue that could be generated by sales of the thousands of trees on the ground in the region -razorbladed by the hurricane.

The distribution of food turned out to be an ongoing process of transactions and negotiations in which new forms of organisation and participation emerged that were not planned beforehand. In this process, 'aid' became an intrinsic part of the political struggle to make a living. The prohibition of burning revealed the complexity of the problems caused by the natural disaster. This measure 'threw wood onto the fire' as it provoked a direct confrontation between those who opposed and those who advocated burning. During the clash, interests and convictions concerning the viability of the agricultural and economic practices of the hinterland farmers were brought into dispute. The direct and indirect effects of the hurricane threatened the modes of survival of the peasantry, not merely economically, but also politically as their practices were declared illegal and their demands for alternatives were left unanswered. This situation was definitely not planned and neither were the confusion, uncertainty and desperation that followed. The series of encounters that were part of the reconstruction process provided strong intensification of the contacts between the regional government, the main farmer union (UNAG) and the peasantry. The peasants contested many aspects of the presumed logic of the reconstruction program including the no-burning decree. They strongly opposed the regulation and institutionalisation imposed upon them by the regional government and the emergency committee.

As part of our research into the world of trade in Bluefields, we also analysed the making and unmaking of the regulation of prices of basic goods by a special commission created in the RAAS in 1991. During the late 1980s and 1990s

many Latin American governments made, on paper at least, an enthusiastic turn to market-led development policies. Nicaragua, then governed by the *Unión Nacional Opositora*, a coalition of parties headed by Violeta Barrios de Chamorro that defeated the FSLN in the 1990 elections, was no exception. Free trade, privatisation and reduction of the state-apparatus became the main strategies for adjusting national economies hit by severe and prolonged crisis. However, liberalising tendencies did not by definition imply the withdrawal of the state. In fact, the price regulation policy became endowed with a highly complex and contradictory process of regulation, legitimisation and negotiation. The study highlighted how people actively contested the policy measure by pointing out its conceptual contradictions and the incoherent nature of its implementation, and how different 'parties' -merchants, price inspectors, politicians and consumers - used the measure to revive old political struggles at the regional level and between the 'Coast' and 'Managua' about state authority and decision-making boundaries, resource allocation and the application of sanctions. Our data validated the theoretical caveat about the linear and logical view on policy making processes. It also demystified the assumption that new policies were, by definition, better policies.

The Ottawa years, from 1992 to today

> '*A learning approach is appropriate for most areas of human activity. It presumes that neither the ends nor the means of social interventions can be fully known in advance, and that understanding and consensus on them must be built up through practical experience. Mistakes are unavoidable and some failures are bound to occur, but with ongoing evaluation, results can be improved. Programs that seek to promote learning must 'embrace error,' modifying actions so that ultimately they meet socially defined objectives. This can be a rocky road, but it is a preferable one.*' (Uphoff 1992: 12)

Supporting researchers

In August 1992, I joined the IDRC in Ottawa, Canada, as a program officer. The 'Wageningen' social actor oriented sociology roots proved helpful for getting this job. When Nicole, who was the first to establish contact with IDRC, told Joachim Voss - the then director of the Sustainable Production Systems Program - about my background, an interview was soon followed by a job offer. Established in 1970, IDRC is a crown corporation funded by the parliament of Canada. Its head office is located in Ottawa; smaller, regional offices are located in Asia, Africa and Latin America. The Centre's purpose is to initiate, encourage, support and conduct research into the problems of the developing world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions. Stated otherwise, its mission is 'empowerment through knowledge' in developing countries by developing countries' researchers. Through project grants and professional support to applied, development-oriented research projects, the Centre aims to provide the means to people to:

- Research into their own situation, problems, constraints and potential
- Gather, analyse and disseminate relevant data concerning their life-worlds

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- Propose and implement actions that solve identified problems and improve their livelihoods, efficiently and effectively
- Assess the outcomes of the (action) research process and learn from successes and failures for the benefit of others and for the design of future projects and programs.

Thus, IDRC's interest is to support research that directly addresses development problems and that explores new development opportunities. The aim is to produce knowledge that is useful beyond the walls of academic institutions. Its mandate and objectives emphasise capacity building through a learning-by-doing approach. It is therefore not surprising that the centre has supported projects that use or explore a participatory (action) research methodology (Found, 1995; Vernooy, 1997) since the early days of its inception. This is a 'philosophy' or approach that I have fully embraced. It allows a social actor oriented approach and an interest in producing research results that are useful for a process of social change to live under the same roof.

Participatory (action) research emerged to make science respond more directly to the ideas and needs of those people most affected by poverty, oppression and resource degradation. The challenge then, is to carry out research that facilitates a better understanding of the complexities of social life on the one hand and a sounder base for action on the other. At the heart of this approach is a collective effort by professional researchers and non-professional researchers to:
1. Set research priorities and identify key problems and issues
2. Analyse the causes that underlie these problems and issues and
3. Take actions to find both short and long term solutions for the problems identified.

It is expected that such an approach will have a positive impact on effectiveness via an increased use and acceptability of research results. It will also positively influence efficiency, making better use of resources, reducing the costs of project execution and the delivery of results. And finally, it will enhance capacity: the ability to do research through increased conceptual and methodological expertise. While the linkage of research and action is generally agreed upon by practitioners in the abstract sense, the form this action takes is often a point of contention. Some would argue that the logical outcome of political action is to challenge existing power structures. Others are willing to work within existing power structures to reach more pragmatic goals. Projects supported by IDRC cover the entire spectrum of perspectives. The centre is not advocating a blueprint approach.

Participatory research on natural resource management
IDRC supports research in three broad program areas: social and economic equity, information and communication technologies, and environment and natural resource management (ENRM). Since joining the centre, my work has focused on the latter, in the regions of Central America and Southeast Asia in particular. The natural resource management programming has a strong eco-regional focus and emphasises the importance of stakeholder analysis and involvement. Increasing concerns about the (mis)management of the natural resource base stimulated the development of an approach in which resource

dynamics are addressed at a more aggregated level of analysis (e.g. micro watershed or watershed). It allows the interactions among components of an ecological system and the various productive activities carried out in a defined geographic area (e.g. farming, fishing, and forestry) to be dealt with more systematically. Stakeholder involvement refers to the active participation of small farmers, large farmers, entrepreneurs, municipal authorities, NGO staff and policy makers who together analyse problems and define research and development initiatives and work toward reconciling conflicting or diverging points of views and interests. In particular, the active involvement of NGOs, local governments, grassroots groups and farmer associations is now a feature in many IDRC supported projects. One of the ENRM sub-areas that I am interested in is agricultural bio-diversity. IDRC is supporting projects that aim to develop community conservation and utilisation strategies as well as projects that experiment with various ways of participatory plant breeding (e.g. projects in Mexico, Honduras, Cuba, India, Nepal, China, Syria, Tunisia). In all these projects, researchers aim to give the end users a more meaningful voice in the research and development process (CGIAR Program on Participatory Research and Gender Analysis 1999; see also: http://www.idrc.ca/sub).

In the following sections I present more details about the conceptual and methodological basis of the work in the ENRM program. I use the centre's Asian program, the Community-based Natural Resource Management (CBNRM) program and one of its projects to illustrate this. This is followed by two other project examples from the ENRM program for Latin America and the Caribbean. These form part of he Managing Natural Resources project, better known as the 'minga' project (from the Quechua word *mink'a* that describes forms of collaboration in Andean communities on specific tasks, such as sowing, harvesting or the construction of houses, see: http://www.idrc.ca/minga).

Community-based natural resource management in Asia
The *Community-Based Natural Resource Management* (CBNRM) program in Asia started in 1997 and builds on previous research supported by IDRC in the fields of agriculture, forestry, fisheries and nutrition. The following is a summary description of the program and an overview of its problems, context, objectives, approach and challenges (for more details see CBNRM, 2000; also accessible at http://www.idrc.ca/cbnrm).

Despite rapid industrialisation and a well-established historical network of large cities, most people in Asia remain directly dependent on a productive natural resource base for their livelihoods. Unfortunately, pressures on this resource base are increasing (Rigg, 1997). Urban-biased industrial development and non-locally managed international investments in export-oriented resource development are leading to resource degradation. Resettlement due to displacement, voluntary migration and historical conflicts exacerbate these resource pressures. Rural populations have increased rapidly with the improvement of basic health and living conditions. This has led to an expansion of cultivated land, even into areas that are ecologically fragile or inappropriate for permanent cultivation. Within communities, power and gender relations often marginalise specific social groups. Systems of resource tenure and access are complex, containing traditional, culturally specific systems modified by colonial

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and state regulations that may be changing rapidly with national economic policy reforms.

Problems related to the sustainable management of natural resources are most critical in the uplands and coastal areas, where natural resource degradation can lead to an often irreversible loss of food productivity, the breakdown of ecosystems and loss of habitat. A widespread process in Asia is the privatisation of natural resources such as forests and coastal areas that were once collectively managed. Privatisation may lead to productivity increases in the short term, but it often leads to increases in poverty because it excludes poor people who previously had access to these resources.

While circumstances vary in different countries, there is a striking convergence of interest in questions of local resource management. Structural adjustment in some countries is leading to reductions in the technical and enforcement capability of the State. In others, major policy transitions are affecting all aspects of government interventions in the economy (Kristof and WuDunn 2000). External pressures due to expanding trade and investment, and large-scale development projects in parts of the region previously isolated from international markets, are also having a dramatic effect on local resources. Local governments and grassroots organisations are at the same time becoming more assertive and articulate in their identification of resource questions - including the expression of their own views and interests.

'Traditional' policies and research have often discounted the role of local people in designing and implementing measures, projects and programs. Proposing an alternative approach, the CBNRM program works with the local men and women most directly involved with natural resource management. Often they are the poorest of the rural poor or belong to ethnic minorities that are politically and economically isolated. The CBNRM program recognises that these men and women may have intimate knowledge of the local resource base, that they may have (countervailing) views on resource use and management and that they will only be motivated to improve productivity if they can be assured of benefiting from it.

Research issues, questions and actions
In examining the issues linked to biophysical constraints, productivity enhancement and improved local capacity to manage resources in a sustainable manner, the program expects research efforts to take into consideration research questions, actions and issues such as:
• The nature and dynamics of indigenous or local environmental knowledge generation, experimentation processes and strategies for livelihood security; How do we analyse and assess such processes? (Pottier, 1999) How to account for gender differentiation? How can we build on local people's experimentation and adaptation efforts?
• Social heterogeneity, stakeholder analysis and conflicts; How do we analyse the realities of social heterogeneity which often exist at the local level? How effective are stakeholder-based approaches? How to better understand and deal with conflicts? How can we foster participatory processes for a better understanding of diverging viewpoints and interests? (For a study dealing

with these questions concerning local water management in India and Nepal, see Moench *et al.,* 1999)

- Governance, policy making and the roles of government: How do we analyse, support and experiment with new policy making processes? How can we more meaningfully and effectively link research to policy making? How can we contribute to a dialogue about the legitimate and supportive roles of governments in resource governance and management? (For an example of a study focussing on these questions in the context of the renovation (*doi moi*) process in Vietnam, see Boothroyd and Pham Xuan Nam, 2000)
- Micro-macro interactions and interdependencies: How do we properly analyse, reshape and monitor the interactions between the micro and macro levels? For example, between recent increases in levels of soil erosion on the coffee covered slopes in the central-west of Vietnam, the preceding rise of the world market price of coffee and the agricultural commodity export policy of the Vietnamese government? (de Koninck, 2000)
- Culture, perceptions, meanings and institutions: How do values, norms, rules and regulations impact on resource access, use and management? How do struggles over meaning take place?

A central feature of the research approach adopted in this program is that it focuses on the systematic integration of expertise in the natural sciences, employing social science perspectives on the interplay of community decision-making processes and supra-local institutional forces and contexts. Given that Asia is a very large and heterogeneous region, the program focuses its resources on the poorest countries in the region, and on some of the poorer regions of larger countries. In the transition economies of Vietnam, China, Laos and Cambodia, institutional capabilities and academic skills in social sciences are particularly limited. As a result, capacity building is a continuing priority of the program. In the following section I give a brief description of a particular CBNRM project to illustrate how the conceptual and methodological approach underlying the program is translated into practice.

'Working for own dreams:' CBNRM in the mountainous area of Guizhou province, China

Guizhou, located in the south-west, is one of the poorest provinces in China with about half of its population belonging to ethnic minority groups. These groups mainly inhabit the mountainous rural areas, where they manage complex production systems consisting of irrigated and rain-fed rice lands, less productive uplands and grasslands, forested areas and so-called 'wastelands'. Among the problems people are facing are low yields, low levels of crop diversification, depleted forests and over-grazed common grasslands.

In 1995, a multidisciplinary research team at the *Guizhou Academy of Agricultural Sciences* (GAAS) initiated a research process in the villages of Dabuyang and Xiaozhai in Changsuan County to address natural resource management issues at the local level. Through the use of participatory appraisal tools, the team described and analysed current household and community-based management practices, evaluated the impacts of economic, socio-cultural and

agro-ecological factors on the natural resource base in the villages, and identified constraints and opportunities for technical and policy interventions aimed at improving livelihoods and the sustainable management of land, water and trees (Chen Deshou *et al.*, 2000).

With the input and participation of the villagers, the team facilitated the implementation of several interventions, monitoring and evaluating their impact. In one of the villages, a two hundred year old problem was solved through the construction of a village-managed drinking water system - a system regulated through a set of norms and rules that defined the rights and obligations of all users. New regulations for the management of the remaining collectively owned forestlands were formulated in both villages, including obligations to practice afforestation and reforestation. Orchards were also established on some of the wastelands. Medical doctors and health workers from GAAS also spent time in the two villages, and women and children in particular benefited directly from this support.

Following a very positive external evaluation of the project in 1998, a second phase proposal was developed and approved. The principal aim of the second phase is to investigate the opportunities for the transfer of the approach and results obtained to four new villages and eventually, to the province at large. At the same time, the team will continue to monitor the health, nutritional and environmental conditions in the villages of Dabuyang and Xiaozhia. In the four new villages, participatory analyses of resource management systems including gender roles have been carried out and production constraints and opportunities for interventions were identified. The farmers themselves have coined the phrase 'Working for our own dreams' as a description of this action research process. The research team has also broadened the involvement of key stakeholders, actively including local and provincial level administrators and policy makers. In addition, they have integrated participatory monitoring and evaluation into the research cycle, providing the farmers with the concepts and tools that will enable them to reflect critically on the research process and the meaning of participation. This further strengthened their learning, accountability and effectiveness because participatory monitoring and evaluation emphasises not only what is being monitored and evaluated, but also who is measuring and how different concerns and interests are negotiated and represented (Sun Qiu *et al.*, 2000). In the context of China, the project and the GAAS team are breaking new ground and contributing to CBNRM innovations in the Southeast Asia region at large.

We now return to Nicaragua for two more short descriptions of ongoing projects that I am collaborating on. Both of these projects represent concrete examples of how attempts have been made to combine the social actor oriented approach with a social action focus. The first example, of a project executed by CIDCA, builds directly on the 'Wageningen' connection referred to earlier. The second examples does as well, albeit more implicitly.

Coastal area monitoring on Nicaragua's Caribbean coast
As we experienced first hand, hurricane 'Joan' changed the landscape of the Southern Autonomous Atlantic Region dramatically in 1988, destroying large tracts of forest, eroding coastal shores, causing the death and dispersal of fauna,

and initiating huge forest fires during the dry season that followed in 1989. Other factors are affecting natural resource use patterns in the region as well. The armed conflict that took place in the country during the 1980s and into the early 1990s is still impacting on the infrastructure and social fabric of coastal communities. Reconstruction has been slow. Many coastal residents, young men in particular, left the area and never returned. The agricultural frontier, advancing from the west of Nicaragua, has reached the headwaters of the rivers that feed into the Atlantic Ocean and is creating major tensions between the mainly *mestizo*, agricultural-frontier farmers and the long-time non-*mestizo* coastal residents. Displaced landless peasants arriving from the interior are deforesting communal lands that occupy a large area covering a range of ecosystems such as lowland rain forest, swamp forest, pine savannah and mangrove forests, causing not only conflicts but increasing rates of sedimentation in rivers as well. These problems are exacerbated by transnational corporations that are moving quickly into the area to exploit forest and fisheries resources.

On the political scene, battles for power between opposing parties and groups on the coast, as well as between coastal groups and the national government based in Managua continue. The decision-making processes defined in the Autonomy Law are also under heavy pressure by centralised policy-making rules and regulations pushed through by Nicaragua's current neo-liberal government. Another pressure that deserves mentioning is the rapidly increasing trade in and local use of drugs and the related effects of this. The Atlantic Coast is increasingly being used as a passageway to the USA for Colombian drug dealers.

Faced with these pressures and desiring to do something about their underlying causes, an initiative was born in 1993 to focus in a systematic way on issues surrounding the use of the natural resources in one of the coastal basins: Pearl Lagoon. Under the leadership of Patrick Christie, then a Masters student at the University of Michigan, USA, and Roberto Rigby, a Nicaraguan coastal marine biologist related to CIDCA and with support from IDRC, an initial six months period of exploratory research resulted in the identification by local people of the need for a management plan for the basin's natural resources. The breakdown of traditional mechanisms for resource management, caused by the war and the rapid transformation of the subsistence economy into an increasingly commercial and market driven economy, had led to a situation in which resources were depleted on a scale and in a rhythm that was causing major concerns.

In 1994, based on the findings of the exploratory phase, the initiative entered into a formal research project phase, with a focus on the most important aspects of the coastal environment as identified by the habitants: the lagoon fisheries, the pine forest and the freshwater rivers. The project also expanded in terms of geographic scope. In addition to the town of Pearl Lagoon, three new communities became directly involved: Kakabila, Orinoco and Marshall Point. An interdisciplinary research team was formed under the leadership of CIDCA, and included so-called communal investigators. Communal investigators are women and men recruited from the local communities with an interest in researching the issues related to management of the natural resource base. Thus, over the course of six years, this initiative, originally named the Coastal Area Monitoring Project (CAMP; later known as CAMPlab when a laboratory unit was added) has grown to include dozens of individuals from the twelve lagoon communities and seven full-time staff. Local people are involved in the

monitoring of pine savannahs, fish populations, and water quality with qualitative and quantitative methods. They are also developing stronger community-level institutions. The goal of these efforts has been to develop a knowledge base to inform a formal management regime for the area's coastal resources. Eventually, local residents became involved in the development of a fisheries management plan and a pine savannah management plan through CAMPlab. They also initiated reforestation of denuded pine savannahs (Christie *et al.*, 2000).

Back to El Monte: new fieldwork in central Nicaragua
In January 1997, I returned to Nicaragua this time accompanied by Nicole and our two children. A professional secondment agreement between IDRC and the International Centre for Tropical Agriculture provided a chance to co-ordinate an action oriented project in the hillsides of Matagalpa - a project funded by IDRC since 1993 for which I was the responsible program officer. After five years in the office, I felt it was time to return to the field and 'practice what I preach'. Returning to Nicaragua for two years also seemed a nice opportunity for us to extend our bonds with the country and its people.

The Hillsides Project is an action-oriented research project aimed at providing farmers, farmer associations, non-governmental organisations (NGOs), and policymakers with strategic information and methods for improving the management of the natural resource base in the fragile and degraded hillside environment of Colombia, Honduras and Nicaragua. This is realised by developing sustainable land use and decision support systems through community based, participatory research and development. The central hypothesis underlying the research is that improved participation by local people is a prerequisite for improved resource management. Key research work is being carried out in three watersheds: one in Colombia (since 1993), one in Honduras (since 1995) and one in Nicaragua (since 1997). In Nicaragua, the area of research is the Calico River watershed, located in the southern part of Matagalpa, about 125-km north-east of the capital, Managua. The Calico River is a tributary of the Great Matagalpa River, and its watershed covers an area of about 170 km^2. In 1997 the total population was about 23 800, spread across 17 rural communities (approximately 13 000 people), and encompassing the municipal capital, San Dionisio.

The research carried out to date in the three countries has resulted in a number of working principles (Vernooy and Ashby, 1999: 257-259). They can be summarised as:
1. Building and involving local organisations is a means of changing the ways in which local groups interact with each other and with the broader society. It is aimed at amplifying the range of options of the less privileged, enhancing their involvement in policy making, providing space for more people to make their voices heard and to improving the quality of their participation.
2. Watershed resources are used by a variety of direct and indirect users with different and sometimes opposing or conflicting interests and/or stakes - hence the concept of stakeholders. This is particularly true in the highly agro-ecologically diverse hillside environments (usually with high

population densities) such as those that can be found in Central America. To organise for sustainable management at the watershed level we must therefore identify these stakeholders and recognise that stakes could change over time. This requires a continuous analysis of the configuration of stakeholders and stakes.

3. Research can contribute to the creation of a forum for analysis, discussion and negotiation where ideas can be exchanged and initiatives planned. This is important for allowing stakeholders to participate. The building of trust is essential, but may take time and patience. Recognising the strengths and weaknesses (comparative advantages) of different players is also a key principle that helps build the required trust.

4. The process of organising needs to focus on defining (new) rules and norms for equitable resource use. This will require informed communities (user groups, stakeholders) with the capacity to engage in dialogue and to undertake particular tasks. This in turn requires an appropriate level of community or grassroots organisation, based on managerial capacity at the local level, involving both rural institutions (including rules and regulations) and organisations.

5. Local-level monitoring of resource use is required to ensure compliance and regulation. To achieve better resource management practices through co-operative actions, rules, and sanctions, local people and those co-operating with them must have a good understanding of the resource dynamics (e.g., soil dynamics, nutrient flow, and water cycles). Monitoring will help raise awareness among local decision-makers about the interdependencies of resources and, if carried out collectively, can easily create ownership, skills, confidence, and credibility.

6. Building linkages between local communities and the level of national institutions and policy makers helps local actors exert a demand for services and influence policy agendas. This includes the integration of government into the local planning process so that interests and concerns are taken into account. It also includes the sourcing of technical assistance and expertise transfer.

7. Integration and working in concert are important objectives of the organising process. The ultimate goal of developing more sustainable management practices is to integrate planning efforts from the level of farm to micro-watershed to watershed. This requires bringing together the direct users of the resources who are living and/or working in the watershed. However, outside or external users of the resources may also exist, and efforts will need to be made to likewise involve them in planning efforts. They may have different interests to those of the users living in the area; this would require bridging or negotiating internal versus external interests in the watershed.

People first: a continuing journey

This brief description of my program and project work at IDRC illustrates that the journey from Wageningen to Ottawa has continued in the conceptual and methodological direction set out by Norman and the group of Wageningen

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professionals and students of which I was part in the 1980s. Although perhaps not explicitly, I think it is fair to say that the programmatic approach as reflected in the environment and natural resource management area embraces a social actor oriented paradigm. Foremost, we are interested to learn from the women and men living in the rugged mountainous areas or stressed coastal basins struggling to make a living under often very difficult conditions. The key questions that our research partners in the South (with our support) are trying to answer are how these women and men perceive what is happening in their community, watershed or region and how they can use research as a resource to create more space to manoeuvre.

Questions of commoditisation (in the context of trade liberalisation, globalisation), planned interventions (e.g., structural adjustment programs) and the dynamics of clashing knowledge worlds as perceived from the Wageningen hill ten years ago have not lost any of their significance. However, in my 11th floor Ottawa office vista some new research questions have emerged, concerning research methodology, practice and social change. Among these questions is a much stronger preoccupation with natural resource dynamics - how to analyse the use and misuse of mother earth's resources from a time-space and people perspective – and as interest to broaden the methodological spectrum by including innovative tools developed by participatory (action) practitioners. In many of the IDRC projects, local women farmers and fishermen are joining researchers in a collaborative effort to analyse their situation and to design, try out and assess new practices.

Norman Long's encouragement to explore new research directions continues to exercise its influence. Hopefully, these explorations are leading to brighter days for the people in Matagalpa, Bluefields, Pearl Lagoon and Guizhou.

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Politics and the making of local state in Benin: decentralisation from an actor-oriented perspective

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Introduction

Actions towards decentralisation began in Benin in 1991. It took more than eight years for state institutions to elaborate the complete set of legal texts that were to organise the reform. While communal elections were finally expected during the year 2000, there has been no indication till now (end 2001) as to when exactly they will take place. It would appear that people acting in state institutions are just as reluctant towards decentralisation[1] as people from civil society are. In informal settings, it is argued that the weakness of local resources, the poor condition of public infrastructures and state services, and widespread poverty will make it impossible to organise 'development' locally. Moreover, a misled opinion prevails that the risk of national disintegration attached to these reforms is too high compared to the expected gains.

My main argument is that if the campaign for decentralisation sounds like pure mystification and fallacy, then so do the arguments of those resenting it. The fact of the matter is that the state ceased to exist a long time ago in the everyday lives of most people: lives that have already been living in situations of de facto decentralisation for years. In the process of building the nation state, social actors have demolished the substance and image of the modern state. In its place, they have created a polycentric and half-mythic power field for the management of local affairs. Hence, although the actual outcomes of the decentralisation reforms (if ever implemented) are unpredictable, they will most probably generate forms of governance and livelihoods that are worthy of documentation.

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[1] Decentralisation reforms are administrative dispositions by which central state concedes autonomy to territorial units, up to a level defined by a government act or law taken in parliament. In Africa, decentralisation reforms are presented as the remedy to the failure of central governments and as a normal step in the democratisation processes that was launched in the early 1990s. They are used as ideological back up to economic liberalism, political pluralism and the disengagement of state bureaucracies advocated since the mid 1980s. These reforms are forcefully proposed by international financial institutions and donor countries to African states, that are confronted in various ways by economic bankruptcy and severe crisis regarding their political legitimacy.

The actor-oriented approach from an interventionist standpoint
This paper mainly concerns the local appropriation of political pluralism and the processes through which the modern state is being demolished and replaced by polycentric power fields in Benin. Investigations into these processes were conducted with an actor-oriented approach, in which the social actors faced with particular circumstances of action were able to express their own accounts of it through discourse and attitudes in order to give an indication of the meaning taken by these circumstances in their everyday lives.

In the social sciences, it is quite usual that social actors attribute meanings and potentials far beyond the scope and context of the research. In Benin, as in most African countries, the production of social knowledge about modernities remains under the hegemony of developmentalist paradigms (Bierschenk and Mongbo, 2000). Donor agencies and governments equate the practical relevance of any research endeavour with its potential contribution to the confusedly defined so-called development targets. When interacting with people in their everyday lives, researchers working in the field of social sciences will unvaryingly be asked the question, 'What will we gain from this?'[2].

In part of the field research experiences analysed in this text, I have chosen to take an interventionist position. I have been involved in field activities with the *Centre Béninois pour l'Environnement et le Développement Economique et Social* (CEBEDES), aimed at supporting people's survival strategies in situations of poverty, food insecurity, cash scarcity and cultural confrontation. During the course of my research into the everyday life and survival strategies of people, it has become morally unbearable for me to document and report on these realities from a distance and not to join the people concerned in an active search for ways to improve their situation. But in so doing, I have been able to create the social circumstances that prepared the ground for the discursive and behavioural performances I witnessed, accounting for people's perception of the central state, and the actual making of local state. Moreover, I have been able to experience invaluable occasions that brought me to the juncture of where and when social actors (from central agencies to target people down in the field) negotiate modernities (Long, 1989; Arce and Long, 2000).

The researchers have therefore brought the rules of the game as social actors have intended to enact them to the research activities that produced the material discussed in this text, without losing the control over the research objectives. In this way, I gained my first experience of actors demolishing the modernisation set-up with agricultural and community development projects.

The people involved dismember the entire intervention architecture (conceptual framework, institutional arrangement, technological packages etc.) and turn pieces of them into assets for their personal self-achievement strategies (Mongbo, 1989a/b; 1995). Later, I had the opportunity of documenting similar processes in wider contexts. Processes such as local politics, general state

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[2] For these people, 'gain' means much more concrete and direct material or symbolic individual benefit than any hypothetical collective gain. Researchers from western countries are credited with 'development' projects (ongoing or future) already being conducted by their countries in their research locations, even though most foreign researchers would distance themselves from the institutions of their own countries.

administration from national to local level, development planning and implementation in the fields of school education, health, water etc.[3]

The rest of the text is organised into three sections. First, I briefly outline the scheme and myth of decentralisation in Benin as formally planned by the central state institutions. The second section presents and discusses cases and processes of institutional development at local level, illustrating the demolishing of the central state and an anticipation of a decentralised state by social actors. The last part of the text deals with the local appropriation of the multiparty system, the modern tool for political pluralism and democracy. The conclusion elaborates on why and how the implementation of anthropological research can be useful in documenting these processes.

The myth of decentralisation and its formal face in Benin

Decentralisation reforms bear three main assumptions: Firstly, that the establishment of a local framework for legal order will make local government and administrators more accountable and therefore enable a less arbitrary approach in the field of civilian rights. Secondly, as political representatives get closer to citizens, a better mobilisation and more efficient allocation of resources at local level will be enabled. Thirdly, that since the political careers of the local elite will be dependent on their capacity or success to induce social and economic welfare for their people, these elite will be under scrutiny to install principles of good governance, equity and transparency (CAD, 1997, in Blundo and Mongbo, 1998:3).

In the case of Benin, decentralisation reform is expected to enhance democracy and development at local level. Three hierarchical territorial units are retained: the '*Villages*', the '*Arrondissements*' and the '*Commune*': the latter being no more than former '*Sous-Préfecture*' or district. Each of the 77 *Communes* will elect a '*Conseil Communal*' of 9 to 45 members (depending on population size), who then will elect the Mayor from their ranks. Elections will be held at the '*Arrondissements*' level. Therefore, the people elected will not be representative of villages but of the '*Arrondissements*', a collection of mostly arbitrarily grouped villages, with hardly any shared political experience.

The '*Conseil Communal*' also called '*Collectivités Locales*', will be endowed with financial autonomy and holds competence (executive and decision-making) over various sectors such as nursery and primary education, health, land management, local finances etc. It is particularly prescribed that each '*Conseil Communal*' should ensure a sustainable local development through an increase in its resource basis and in this process, is entitled to independent inter-communal

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[3] Two research contexts in particular are relevant here. One was conducted in 1995-1997 through CEBEDES as a monitoring assignment of the '*projet de coopération décentralisé*' funded by the European Union delegation in Cotonou and implemented by state agencies and by local and European NGOs. The field studies on this project were conducted by a team made of Marc Levy and Isabelle de Boismenu of the *Groupe de Recherche et d'Echange Technologique* (GRET-Paris) and myself. The second research project was about '*Acteurs, réseaux et institutions dans le département du Zou à la veille de la décentralisation*'. It was conducted through FIDESPRA in 1999-2000, on the request of the Danish cooperation in Cotonou. The main researchers involved were Anne Floquet, Rigobert Tossou from Université Nationale du Bénin and Simon Bolwig from Copenhagen University, and myself.

and international co-operations (MD, sa: 3-5). The *'Conseil Communal'* is assisted by a *'Secretaire administratif'* appointed by the national state, but will also appoint from its ranks several heads of *'Arrondissements'* who will not hold any decision-making competence over local affairs. Deliberations fall under the exclusive competence of the *'Conseil Communal'*. Moreover, there is a *'deconcentration'* disposition whereby the central state administration is brought closer to local level through the appointment of a Prefect at each of the 12 provinces. The Prefect will have an approbation responsibility over the decisions of the *'Conseil Communal'* and the executive actions of the Mayor, without having the power to stop them.

Institutional development and politics at local level: an anticipation of decentralisation

A striking feature of the state in rural life in Benin is the presence of a very active 'rural civil society' in the face of what remains of the state body. To a large extent, this situation is the unplanned outcome of two broadly inter-linked social processes that evolved over the past four to five decades. The first category of these processes includes those that made the state become a virtually absent entity, playing marginal and invisible roles in the very sectors of its legitimacy. The second category of these processes relates to the experiences that local communities underwent while implementing and coping with state administrative regulations at local level during the post colonial period.

Virtual and marginal state made invisible at the local level
As a result of its deficiency in all domains of life (e.g. inadequate resource allocation, lack of staff, arrogance and poor performances of those in power), the state has been rendered virtual in almost every field of its legitimacy. Committees and associations of users are involved in the management of public schools (*Association des Parents d'Elèves* APE), public health services (*Comité de Gestion du Centre de santé de la Commune/ de la Sous-Préfecture-* COGEC/COGES), agricultural production - *Groupement Villageois/Union Sous-Préfectorale des Producteurs* (GV/USPP), transport (*Union Nationale des Conducteurs du Bénin-*UNACOB, *Union des Conducteurs et Transporteurs Inter-urbains du Bénin* - UCTIB), taxation and local finances - *Caisse Locale de Crédit Agricole Mutuelle* (CLCAM) and the management of market places etc. These committees and associations regulate the organisation of access. They share running costs with state staff, and arrangement that is often accompanied by confrontation and fierce bargaining. They also assume the responsibilities of daily management and quality control. The head of local state police, for example, would acknowledge that his office has a severe lack of material and staff, and is unable to properly face expanding insecurity in his village. The police need to co-operate with the indigenous night police sect (Zangbeto) for a reasonable coverage of their territory.

The perception that a state is being engendered with the establishment of the above mentioned committees and associations is misled. It is a state that is completely virtual in nature: a state of some future reality perceived through its

current precursory form. Furthermore, the above mentioned committees and associations do not seem to have any connections with the national state. They are therefore not a premonition of a modern national state, but rather the premonition of a state in demise.

In many specific fields such as transport, taxation, road security and the management of market infrastructures, some groups don't attribute any legitimacy at all to the state and its regulations, the collection of taxes etc. They would argue that they do not see any concrete indication of state existence in their business. As a women's group of a small market in Cotonou, the main city of the country put it in 1997 after they had had their market infrastructure built with European Union Funds (FED) and technical assistance from the Association Néerlandaise d'Appui au Développement (SNV):

> *'You say it is the state's mandate to look after public places. Where was 'your' state when we were suffering here since 1975 and held our business under sun and rain, in mud and dust, with waste disposal and flies around our stalls? Those who now claim to represent the state were unable to give us a single leaf of corrugated iron to repair our huts or a truck of sand to maintain the path to the market. Then it was not a public place to be looked after by 'your state'. Now that we poor women, with the help of people of good will as SNV and FED have succeeded to turn it into a dwelling place, 'your state' comes to share. You can go call the head of state himself. We are ready to face him...'*

These women continue to control access to the seats and organise taxation in the market till this day. The revenue, they argue, will chiefly be used for running costs, including the maintenance of infrastructure (see Boismenu, Levy and Mongbo, 1998).

Similar 'rebellions' against state local administration on market infrastructures have occurred in other cities as well. In most of these cases, the local administration could not get any support from authorities at higher levels. With the local administration reform of 1982, every district received financial autonomy for the collection of certain categories of taxes (e.g. local private business taxes) and for allocating these revenues to local development matters. Presently, the frequent complaint of most district heads are about what they call *'incivisme fiscal'* (fiscal disobedience). Less than 40% of expected taxes are raised and local authorities have very few means to make people comply with tax payments.

The state still runs some services and obscure regulations in the fields of school education and health. The virtual nature of the state here results from the fact that its institutions have met defiance at many levels, generally as a reaction to the poor performances and arrogant attitudes of staff which in turn contradict the poorly articulated reactions from higher authorities. The bureaucracy of the Ministry often shows solidarity and support with local staff when confronted with population dissatisfaction, but the support given in such cases rarely attempts to ease the relationships between the health staff and the local population. It instead tries to bring the latter back in line (*'les remettre au pas'*). Of course, such strategies serve only to widen the gap between the service and its potential clients, especially in fields where people can choose not to 'consume'. People who live close to a well-staffed state health centre, commonly prefer to travel 10 to 15 km in difficult conditions to reach confessional centres instead of using the state facilities in their immediate vicinity. As one of them put it:

'There, at least you and your sick kin are hosted as human beings and fairly charged. The person might die in the end. But at least surely from the sickness, not from the harassment and stupidity of some arrogant and incompetent health agents'

Similarly, the status of the state at local level is reflected in the marginal size of its coverage, even in the fields where state institutions still operate. In the Zou province for example (Floquet, Mongbo and Tossou, 2000), formal education shows enrolment figures of less than 60% of school aged children (private and public schools included) with a primary school drop-out rate of 30%. The lack of infrastructure, didactic materials and teaching staff certainly explains the situation to some extent but a lot of questions remain unanswered. The formal health sector, for example, does not perform any better. Attendance to health clinics remains very low, even in areas with good infrastructures and staff. Meanwhile, there is hardly any regulation of the so-called informal health education system *(apprentissage)* and health *(tradi-praticiens)* sectors and state services show very little capacity or desire to make the private operators of these sectors adhere to existing regulations.

The fact that the former socialist government tried (and failed) to retain all socio-economic sectors within the public state sphere does not fully explain the absence of regulations for private business. Firstly, the socialist regime only lasted 17 years and 10 years have already passed since this regime ended. Secondly, even the agricultural sector that employs some 70% of the working population has been excluded from government. Although state bureaucrats have shown heavy involvement in this sector since the first year of the 20th century, there is still no legislation that organises, even in the broadest terms, access to agriculture land.

In the end, apart from a few visible assets such as offices, roads, arrogant civil servants, police agents racketing drivers on inter-city roads etc, the state plays a very marginal role in the everyday lives of the people. Moreover, this marginal role is made invisible by its own operational processes. Indeed, most state interventions are conducted within donor financed projects, whose labels, flags and presence is displayed with such ostentation that the ownership of project achievements is almost always attributed to the donor (as opposed to the state). In the 1970s and 1980s, the presence of foreign donors (providing funding and technical assistance) in the agricultural sector of particular provinces had state bureaucrats referring to each of these provinces as either German, French or World Bank territory in informal conversation. Attempts to avoid such bias and improve so-called local project ownership brought about the idea of donors pooling resources in sector programmes, with decision-making and implementation assigned to supposedly autonomous local agencies (from state and donor daily management) and staffed with natives. In Benin, various programmes were launched along these lines in the mid-1990s in the fields of water and sanitation, health, agriculture, micro-finance etc. Nevertheless, development projects are still perceived by local people as non-state activities and worse, as a solution to state failure. The discourse mostly used by local people about the origin of these projects is illustrated by the following quote:

'We were in our village without water (or agricultural facilities). We reported our problems to the state (meaning state local staff or visiting authorities) but we had no reply. Then came the project 'PADEAR' (water project), 'PADSA' (agricultural

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*project), 'AGEFIB' (micro-finances project) etc. Since then, things have got better....
We thank the project...'*

Since formal visits to these projects (apart from those of project staff) mostly consist of donor's missions (review, evaluation etc), it is the donor in question that is thanked for having contributed to ease the living conditions of villagers. The state, on the other hand, is perceived as having chosen not to provide assistance deliberately. When in more informal situations, if one indicates that the project in fact is the outcome of the state's work and attention in favour of the locality, a reaction that most invariably follows is:

'The state? Which state you ever see coming to localities like us? If these donors had not been there, when would the state ever remember us and bring such good things to our village? '

There are hardly any local expatriates working on these projects in the field. If present on the project, most operate from the offices in the capital city. Field and management staff is recruited locally, contributing predominantly to the reproduction of the 'donor-own project' discourse. As most of them are recruited by the project on a short-term contract basis and do not have the status of civil servants, they tend to praise the project (against the state) for having rescued them from jobless a situation. On this point, state civil servants and non-state staff working in the projects share common interests regarding the continuation of the projects. Therefore, from their perspective, encouraging 'beneficiaries' and praising the 'project' and its donors forms part of their strategy to ensure the continuation of the project and the advantages they gain from it.

The state's local administration: an empty shell
Within state territorial administration, the districts (called *sous-préfectures* since 1989) have always been the smallest state administrative de-concentration units. There are 77 *sous-préfectures* in the country, each of which will become a *'commune'* with decentralisation, electing their own 'government' and managing their own affairs as a *'collectivité territoriale'*. At present, the *sous-préfectures* are headed by the *Sous-Préfet*, a master level staff appointed by the government. The daily operation of these *sous-prefectures* provides little more than a further demolishing of the image of the state in the face of the local population. According to the formal administrative chart, *sous-prefectures* are in charge of the following activities:
- land-use planning (land partition, conflicts resolution etc.)
- financial management of local offices
- economic affairs (promoting local economy though projects and facilitate private initiatives and business)
- social, cultural and sport affairs
- population affairs (various administrative documents as birth, death, marriage certificates etc.)

Sous-préfets are supposed to be supported by an advisory council comprised of the representatives of all state services operating in the district and the representatives of local development associations. A few weeks in the field following the daily affairs of some *sous-préfets* in the Zou province reveals that

they are largely driven by small talk with a few notables, dealing with household conflicts and land conflicts opposing individuals, families or villages. These 'affairs' are treated without much planning, and most importantly, without referring to pre-set regulations that do not exist any way.

In most fields, especially for the regularly occurring land conflicts, the *sous-prefet* contacts some 'notables' for consultation and subsequently attempts to apply so-called indigenous non-written land rights. Occasionally, the *sous-prefet* also engages in small talk with notables and local police staff about the operations of gangsters in the territory, concluding such discussions by complaining about the lack of means to face these issues. Some projects aimed at building social infrastructures are discussed and submitted annually to state budgets for funding. These projects, however, rarely concern school education, health or social services as they fall within the sphere of competence of the local state services and the local committees concerned.

The *sous-préfet* then attempts to gather a few members of his advisory council to address the issues left over to him. In special circumstances, such as the hosting of a minister, the President, or for events such as national elections, he might be able to gather all of the council members but not without considerable effort on his part. The latter would complain of a lack of time, or having urgent orders from their regional directorates or ministries. Council members have no prescribed hierarchical links with the *sous-préfet*. They are supposed to report to their regional offices and ministries, not to him. In fact, the *sous-préfet* is supposed to support or facilitate the economic and social life of the locality but he/she is completely disconnected from the state services in charge of these sectors. The *sous-préfet* doesn't even have immediate access to data from health centres, schools attendance etc. Planning in these areas is vertically organised, from local service to regional offices and from there to ministries. The local police head of one of these districts indicated to me that information related to his staff numbers, qualifications and operational capacities were of strategic importance to national security and could not be disclosed: not even to the *sous-prefet*, the local 'face or head' of the state.

Non Government Organisations (NGOs) have been active in the villages since the early 1990s. But most of them operate on contract basis signed with regional or national projects such as *Programme d'Appui au Développement du Secteur Agricole* (PADSA) for the agricultural sector, *Agence de Financement des Initiatives de Base* (AGeFIB) for micro-finance, and *Projet d'Intervention Locale pour la Sécurité Alimentaire* (PILSA). The head staff of such projects are based in capital cities and operate as autonomous agencies reporting to the ministry of planning. They might, if circumstances called for it, pay a formal visit to the district head (*sous-préfet*) but do not report to him.

The institutional isolation of the *sous-préfet* in local state affairs is worsened by the miserable quality of *sous-prefecture* staff and equipment, which makes it almost impossible for this administration unit to process any data (if it were handed in by local services in the first place), let alone report on it. The case of the Djidja district gives some illustration of this although not the worst. Djidja district covers 1025 km2 with 70.000 inhabitants. The district administration employs 27 agents. Of these 27 agents, the most qualified are the head district (master level) and 4 assistant secretaries (maximum four years in secondary school). Ten others have primary school education while all the remaining staff

are illiterate employees working as 'assistant' tax collectors, night watchmen, office cleaning and liaison agents. The so-called bureau of economic affairs is operated by 8 semi-literate men (in fact three of them cannot read or write) with two motor bikes at their disposal who collect market taxes at distant places (from 10 to 60 km). Three secretaries (typists working with old typing machines) comprise the secretarial pool of the district. The issuing of the simplest administration paper or certificate can take hours or days. Arrogance is therefore a useful asset for them in hiding their incompetence concerning people's requests.

In most of the nine districts of the Zou province, what generally passes as the 'economic bureau' is no more than two to four semi-literate men in charge of collecting market taxes at the market places, and only at those market places where market attendants still admit them. As for the financial management bureau, its task is in fact limited to selling stamps and carrying order forms, and budget and accounting documents back and forth between the district office and the local state financial office. In 1999-2000, four of the nine district offices of the Zou province did not have any means of transport and three of them were not connected to a telephone network.

The main consequence of the situations described above, (whereby the state becomes virtual, marginal and invisible in the everyday life of local communities) is that the image of the central state is erased from people's frames of reference. Modern crucial events of state reproduction such as referendums and elections are therefore emptied of their meaning. The gap created by this is filled with polycentric power fields and managed by local political actors outside state control. These local political actors constitute what can now be called 'rural civil society'. They emerged within a 'mutation process' (Arce and Long, 2000: 17), at the juncture of local forms of organisations (land and space management, working groups, chiefdoms, religions etc.). The various state administration reforms conducted since the colonial period (and even before, at places where kingdoms existed) also contributed to this emergence, as did the development projects and the incorporation into the market economy.

Locally created state: polycentric monster
In local communities, the state's field of legitimacy is occupied by local political actors who combine assets from various sources. The position one occupies in this local framework of power changes according to the social value attributed to one's assets. Furthermore, dynamic actors will exchange assets depending on their auction values. It is in these ways that a local and polycentric state is created, as well as the rules and paths through which one can earn and exert a power position within this state. Let me now cite a number of cases as illustration.

The so-called participatory approaches implemented in development projects during the past two decades (especially in agriculture, water, health etc.) have generally been operated by taking short cuts around state institutions. This also occurs at the local level with the bypassing of so-called users associations and committees (Naudet, 1996 in: Jacob, 1998: 125). These committees and associations are expected to function for a wider involvement of beneficiaries but they perceive and use the projects as power assets instead. As such, members of

these committees identify themselves with the project rather than with the people they are supposed to represent, using their position as an asset for brokerage. The so-called sociological proximity of committee members with potential beneficiaries has generated very little of the equitable access to infrastructures and good governance hoped for. However, any results achieved in terms of project facilitation and an audience closer to the population rarely emanates from this single asset. Occupying a key position in the local economy (finances, land ownership, type and size and income generating activity, size of labour controlled etc), or in the local religious life, or in mythic groups, or being connected with networks outside the village are necessary complementary assets.

These project-inspired committees and organisations inter-link, as indicated above, with local forms of organisations, but also combine with the state administration set-up at the village level. Colonial and post-colonial territorial administration leans heavily on local chiefs and notables of pre-colonial socio-economic structures. The socialist government (1972 –1989) undertook to eliminate once and for all, the old political system and the people, structures and ideology that supported it. Therefore, 'new' men and institutions were put in place in the villages. Village 'heads' and councils were young elected people, elected on criteria defined by the '*Comité Central*' and the '*Bureau Politique*' of the Socialist Unique Party. As documented in various villages in Benin (see Bierschenk and Mongbo, 1995; Bierschenk, and Olivier de Sardan, 2000), the political situation at local level evolved alongside of national political development, taking as much profit as possible from it. Local actors adopted state regulations, created new organisations and even decided upon spatial management issues.

The case of Gbanlin, (a village of the Collines province) as documented by Lemeur (1998) is worthy of some attention. There, the first phase of the revolutionary era (1972 – 1982) and the various assets it brought (village farm, local self-reliance taxes, head taxes etc.) were used by the new village chief to reproduce the patrimonial and kin-based style of management at use under colonial and post-colonial administration: the very thing the government intended to combat. In 1982 he and part of his council was evicted. The period 1982-1990 coincided with the launching and implementation of the integrated rural development project, funded by the World Bank and the French co-operation. Just as most fashionable big development projects financed by the World Bank in that period, the project was implemented by the *Centre d'Action Régional pour le Développement Rural* (CARDER), state agency. The project covered various aspects of agricultural production such as rural road construction, water wells, credit facilities, farm equipment etc.

The new village council has initiated broad and 'democratic' discussions for strategic choices on village infrastructures, networking to attract these infrastructures in the village and on the ways in which these would be managed. A few prominent men (local traders) and youth groups occupy central positions in the discussions and have been granted responsibility for the management of the infrastructures, even though they hold no formal position in the village council. Some official meetings of the village council have even been held in one of these men's house, instead of the official village centre for these activities. This illustrates that these people have walked away from the centralised

approach designed by the government for the management of village affairs on their own initiative (and most probably as an outcome of the power balance of that specific time in the village and/or in relation to national events). The main local state representation seems to have handed management power of public infrastructures over to individuals and groups who do not have any state validated legitimacy. Factors such as these formed the premises and anticipations of the committees that were introduced later by development projects (see Lemeur, 1998: 50-55).

Similar developments occurred in Oungbega in the Zou province. There, the local elite created a development cocktail by combining the CARDER project, a World Food Programme donation and local contributions in order to gain three social infrastructures: a drink-water well, an oven for cooking clay pots and a storage house for the palm oil processed by a group of women. As a response to this, clusters of villagers emerged around each of the leading managers of the infrastructures, generating patron-client types of relationships fed by the patron's assets (religious, financial or commercial status). This situation ended up in a dispute in 1990 over the water wells and the management of the oven. The dispute coincided with national changes of political regime and local elections. This resulted in the development of three factions in the village, loosely corresponding to the settlement patterns and professional features of the village (Clay pot makers, oil palm processors and merchants). Solutions envisaged included an implicit partition of the village and the suggestion to have three separate village heads installed. Support for these ideas was lobbied for within the government and parliament and the project was eventually pushed through, against the will of the district head. The project was also negotiated with political parties during the election period. The justification for the partition project did not refer to the dispute about socio-economic infrastructures. It only referred to the need to better involve people in the development affairs of the locality.

At the national level, major changes in the political regime took place in 1989. A shift was made from a centralised single-party socialist regime to a pro-liberal multiparty system. These changes were interpreted at the local level as a weakening of the state. The positions of village head and membership of village councils became less attractive to people. In their eyes, the mission apparently assigned to village representation of the national state was little more than that of maintaining formal contacts with the district head, whose power status had been significantly eroded. A committee was subsequently formed in the village, staffed by young literate people with connections in 'higher places' (central government and leaders of political parties in parliament), but also with one 'Vieux Sage' (old wise man) in charge of backing the group up in the village. Their mission was to take care of issues that were considered more strategic and vital for the community and to track and attract NGOs and funding opportunities to the village (see Mongbo, 2000 and 1995 for similar power reconfigurations at local level in reaction to changes in the national environment). Regular informal meetings were organised at the various local power centres on national politics, local development issues and for selecting the political parties to which the village could best 'sell' its votes.

Consequently, it can be seen that in local communities, the committees, users organisations etc. operating in the traditional fields of state legitimacy (school, health, transport, water etc.) are not just isolated individuals or groups filling the

gaps left by the state. Nor do they operate as simple modern organisations. The local institutional landscape depicts an on-going political struggle, institutional innovations and the creation of local state. This is nothing but an anticipation of the decentralisation reform but the outcome is a political machine that functions with rules and regulations that are almost mythical in nature and difficult to grasp or understand for insiders and outsiders alike: a polycentric monster. One then understands that the hypothesis that state decentralisation would lead to democracy at communal level is naive, and in any case, lags far behind local political dynamics. Obviously, state administration technocrats, the national political elite, donors and staff who face these realities are aware of them, or are at least aware of their manifestations but they fail to read their essence and processes. The stubbornness of central state and its funding partners to proceed with the modernisation reform (or to pretend to be doing so) therefore resembles political hypocrisy and intellectual laziness.

Local appropriation of political pluralism

The national political elite are well aware of dynamic political activism at the local level but they have very little knowledge as to the modalities of this dynamism and the factors that determine people's choices during national elections. The president elected in 1990 with the advent of the democratic regime (Nicephore Soglo) inherited from the socialist regime a country in severe political and economic crisis and profound social misery (see Mongbo, 1995). A slight improvement was achieved in the national economy in the first 5 years (4% per cent rate of GDP and regular payment of civil servants' salaries). But the currency devaluation of January 1994 was followed by a sharp increase in prices and the serious erosion of people's purchasing power, albeit not as severe as the crisis of 1990. Nevertheless, Sogolo was defeated in the elections organised under his auspices 1995. The candidate who won in 1995 (Mathieu Kérékou) had led the socialist regime for 17 years before being defeated by Soglo in 1990. Three years after Kérékou regained power in 1995, he lost the legislative elections (1998) and had to run his government with strong opposition from the parliament. But Kérékou and his allies seem to have learnt from these experiences. For the presidential elections of March-April 2001, they made strong investments in the manipulation of national and local institutions to a level that could not be challenged by the opposition. Kérékou was subsequently re-elected in a situation of total confusion.

Nevertheless, the multiparty games in local communities continue to be confusing and unpredictable for the national elite as far winning votes is concerned. This forms part of the reason why governments as well as parliaments keep on delaying the activation of the decentralisation reform, even though the process was launched in 1990. Each political coalition seems to fear a loss of territory once an opposing party or coalition has won a commune.

It is clear to most stakeholders that local people show very little interest in macro-economic debates such as, for example, the structural adjustment programmes, globalisation of economy etc. Local discussions and political games around national stakes are reported to be concerned with the 'logique du terroir' or local logic (Bako, 1995), whereby political parties are of ethnic and

regionalist nature. According to this theory, individuals would vote for political parties and candidates who are as close as possible to their clan or ethnic ground. Though this holds in many cases, there are good grounds for its attenuation. Local playing of the multiparty system buys much more from local history, political experiences and needs related to social infrastructures than from any national political or economic stake. It is not just a matter of ethnocentrism or a *'logique du terroir'*.

In fact, it occurs more often that people translate national elections into local political stakes built on local political experiences that date sometimes far back in history. Irreducible conflicts between families or within regions that have been inherited from the past are reproduced in the form of political opposition against and among natives or neighbours. The outcomes of these processes in terms of political pluralism vary from one locality to the other according to the choices made by present day actors.

Three contrasted cases will now be presented for illustration of these points. The localities concerned are Ouessè-Mahi land, Agonlin land, and Abomey, the two latter having longer pre-colonial conflictive political experiences and a much larger number of senior politicians than the former.

In the early 1990s, national debates among political parties were about the pros and cons of the structural adjustment programmes imposed by donor countries and the IMF and World Bank, and on the alliances that would best ensure access to power. In the mean time, village political activists confronted each other on the best strategies for advancing village equipment with socio-economic infrastructures on the one hand, and for having as many natives as possible in the national state and administrative spheres on the other.

In Ouessè for example, political activists were interested in having natives in government as ministers or high ranked officials or in parliament as deputies. In addition, local political wisdom in most villages has it that during political campaigns all political parties are welcome provided they bring gifts. But the final choice would be (at least according to people in Ouessè) for the party that is best positioned on the national political scale with a well positioned local native for winning a place in government or parliament (Gbessemèhlan and Rijnierse, 1995). This is seen as an investment in human resources that can earn individual and collective returns in the future. The saying has it that *'when you have your relative on the apple tree, you cannot eat unripe apples'*. Only then would the right party arrive, showing good capabilities to bring infrastructures to the village.

The situation is quite different in Agonlin land and Abomey. The Agonlin land extends over 1615 km² and covers 3 districts (Covè, Zagnanado and Ouinhi). The population size in 1996 was 112.000, 92% of which live from agriculture. In terms of ethnic, linguistic and socio-cultural patterns, the 'country' is relatively homogeneous, which has been the main argument used by the native elite at every political event for local vote mobilisation since the colonial period. Of course, the same argument works for division, as vote seekers happen to be many but quite often belong to different parties. To some extent, present-day divisions are rooted in historical backgrounds. The land is situated some 60 km eastwards of Agbomey, the capital city of Dahomean kingdom. The Agonlin land is naturally protected from Danxomean expansionist policy by the Zou River and valley, and remained under the influence of Ketou (a Yoruba Kingdom on its

eastern side) until the mid-19th century. Only then, King Glele of Danxome (1858-1889) succeeded to win the territory from Ketou and used it as a settlement and advanced gate on the western side of Oueme River. From there, he organised assaults against Ketou and Abeokouta. Political, economic and socio-cultural relationships have been intentionally intensified between Agonlin and Danxome since then[4]. Nevertheless, the Agonlin territory kept a cultural identity different from the Fon and never gave up to their language, as did the population of Djidja (North of Abomey) and Cana (South-East). But of course, the political shift provoked by King Glele did not win unanimity among the Agonlin population. It has instead ended up creating deep division and conflictive relationships, the substance of which remains until the present day.

Since then, the political landscape in the Agonlin land has shown deep divisions and fragmentation that has increased with the process of modern state building started with colonisation. More recent political events have facilitated such development: some Agonlin elite played frontline roles in the socialist regime (1972-1989) while many others were very active in the opposition combining their political conviction with historical conflicts. Many of the latter have been tortured, put in jail, sacked from jobs etc. In the mid-1980s, when village and district development associations were authorised by the socialist regime, the Angolin area was the most prolific of all the regions in terms of representation. One of the three Agonlin districts currently has three separate development associations while districts elsewhere in the country have only one. In this context, local political battles reflect extra-local alliances flavoured with pre-colonial divisions. Some groups are strongly linked with Fon-dominated political parties (seen as bearing the legacy of Danhomean kingdom). Nicephore Soglo's *'Renaissance du Bénin'* party exhibits these traits. In reaction to this, other groups would side with the political parties that best challenge the Fon-dominated party on the national political scene. Parties such as this presently support Mathieu Kérékou. The every day operation of this pluralism seems to be limited to the hampering of any achievements of the party in power, so that the opponent might use this as political ammunition for the future elections. The present head of Zagnanado (one of the Agonlin districts), for example, is a native and known as a Kérékou supporter. In 1998, he initiated an urbanisation project of the central part of the district. The idea was to give this important and historical place a better face. He declares: 'This is an important locality. It is the historical bridge between two important civilisations in West Africa, the Adja-Ewe and the Yoruba. Moreover, this specific district was the second colonial district in the Zou (after Abomey) after 1898, and finally many of the national elite are natives from this place. But it remains a village.'

The urbanisation project consisted of encouraging families who owned land next to the main road to sell it to wealthier individuals and associations so that modern houses could be built that would change the face of the city. The farmers association, the local bank, some native entrepreneurs and intellectuals became

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[4] King Glele had strong allies and sacred friendships among some Agonlin families. Some of them were made local chiefs, and some dignitaries from Agbomey were appointed as ministers. A few militaries were settled in the region with their families. Exchange of women, joint cross-cultural and religious ceremonies (exchange of vodoun) were other artefacts used by these people to maintain Danxomean influence on the Agonlin territory. Until now, most of these traditional ties have been maintained.

interested but the initiative also raised fierce opposition. The ensuing dispute went to the high court as those opposing the project believed that the district head had committed a great betrayal by undertaking to sell the heart of the locality's land out. The district head's perception of this was of course different. The main motivation behind the court case, in his eyes, was that his opposition was trying to prevent him from engaging in actions that might win people's votes in favour of Kérékou. When I discussed the issue with some of the members of this local opposition, they responded:

'Yes he told us that. But we told him that we did not link our local worries to any national waste of energy as Kérékou's campaign. But we added that if he suspected that this could cause such confusion, then it was another good reason to stop. The law does not allow anyone to use local land patrimony to finance presidential elections'

Some of the people active in this dispute where also leaders of committees such as school and health etc. The same types of actions took place in Abomey, the capital city of the province. In both cases, local authorities and political activists got support from their political networks. A point worth noting here is that the same higher government authorities who always fail to assist when it comes to 'fiscal disobedience' within the miserable posture of state local administration and services can always find ways and means to react promptly to political stakes. For the district heads, it is better to serve extra-local political networks (or to pretend to be doing so) instead of struggling to win local votes for themselves at the moment of communal elections. In fact, the decentralisation law states that a state staff member must have resigned from his post at least two years before the elections if he/she wishes to compete by ballot for a communal position in a locality. In these conditions, fighting for a good position on a party's list is a more effective means of obtaining power than proving to local populations that one can be a good mayor. This line of analysis is understood by local staff as well as the local political activists as *'Armes égales'* (the same weapons).

The foregoing discussions illustrate that the dispositions of the decentralisation law in terms of local democracy lag far behind the complexities and dynamics of local politics. This is also something that the national elite is well aware of.

Conclusion

During the late colonial and early years of the post-colonial period, modernisation has launched the project of a nation state, the artefacts of which have been demolished and incorporated into a state currently in formation: a virtual African state.

My argument in this chapter has been three fold: Firstly, the decentralisation reform in Benin lags astonishingly far behind local political dynamics and the actual decentralised and autonomous functioning experiences and practices of local communities. This applies to its content as well as what form it is supposed to take concerning state control and administrative involvement in local affairs. Secondly, the power supposedly relinquished to local authorities for shaping economic processes with regard to the organisation of fair and equitable access to resources at communal level appears quite unrealistic, especially if one

considers the complete failure of the central state itself in this field since the end of the colonial period. Moreover, local economies and (natural) resource management have been involved in regionalisation (or globalisation) processes for so long and to such an extent that interventions in these fields at local level will not yield results unless they are undertaken within broader geo-political frameworks. Thirdly, given that both technocrats and politicians designing and/or voting on these laws, as well as donors supporting the reform, are social actors and full stakeholders in the political bargaining process, it would be naive and misleading to assume that they are not aware of the realities described above. This contradiction between policy and discourse on the one hand and experiences and practice on the other is functional to the reproduction of each of these social categories. It also emphasises the marginality of the state's formal dispositions in the everyday life of local communities.

In this context, local actors may prefer to have an awareness of regional and international economic and commercial processes, opportunities and stakes. But as far as local politics is concerned, social science research on decentralisation processes is sorely needed: not so much with a view towards 'enlightening' policy makers but more for the sake of documentation and feed back for the actors concerned. This could be pursued along the following lines of enquiry. To begin with, how are the legal dispositions for the decentralisation process absorbed into the polycentric half-mythical power field and forms of governance produced? And finally, what are the effects of the above mentioned processes in terms of political marginalisation, participation, people's livelihoods and state legitimacy?

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Conflicting therapeutics: a Mexican case study of encounters of medical cultural domains

Horacia Fajardo[1]

Over the wall
He raises his view toward the infinite, shakes the feathers he holds in his hands and murmurs. Roughly sixty years old, dark skinned, dressed in a mantle tied at the waist with a thick band of home-made loom woollen yarn he continues his murmuring whilst he bends over the baby. Supported by his mother, the baby looks at him calmly, even with indifference.
The man places his hands, without touching the skin, above the baby's small head and, in a smooth manner shakes his fingers as if he was getting rid of something. Now he passes his hands over the small arms of the child ending at the fingers at which he stops to rub each one of these. He then moves his feathers in the air above the kid's protuberant abdomen. Then he moves down to the child's feet, rubs all toes, and shakes the feathers up high.
He pauses.
Then he bends his head down to the child's abdomen, sucks and gets upright again. He spits on the palm of his hand and shows the piece of black corn lying in it. Then he throws it away.
The healing is over.

Introduction

The heading of this introductory chapter describes the traditional healing of a child carried out in the backyard of a house. Venancio was the first child with severe malnutrition whose healing I attended, one month after my arrival in Tuxpan, one of the main towns in the Huichol Mountains in the western part of Mexico. I arrived here in May 1994 when I was invited to lead the Nutritional Recovering Centre in Tuxpan de Bolaños, Jalisco, which had begun functioning a year earlier. This would be my first working experience in an indigenous zone, something that, truth be told, had never had my attention before. Certainly, my professional development had taken place in rural areas but the Huicholes appeared to me hermetic and mysterious, far enough for me not to ponder about

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this too seriously. I also had certain reserves about working with them. But, as I was fighting a tough battle to regain my position at the University, I was happy to accept the invitation offered also because it seemed to offer economic relief and sufficient time for me to initiate my research on therapeutic plurality and attempt to fulfil this.

Thus it was that during the four years that I worked at the Centre I registered daily events in my field book –obviously hindered at times by the ethics involved with my attendance at certain moments. In hindsight I have come to be deeply impressed with the intimacy I was allowed during those four years that I stayed with the Huicholes. During those times I admired them, expressed sarcasm at their behaviour, or cried for the disgraces I saw. Once I fell for the temptations of the 'Huichologist' –the man who spoke on behalf of the group.

Being part of the problematic of study inserted me into a process of trust and confidences with the population and gave me relative influence on the decisions taken in some of the programs. Yet this role also made me question the pertinence of allocating time to writing my thesis when demands for direct actions already required more of me than my time and abilities could allow. Nevertheless, as the Huicholes openly and clearly say, the persons with their projects come and go. They stay and receive and control visitors of all kinds, sometimes with courtesy and invitations to the familiar ceremonies when they don't even know them; at other times visitors are asked to leave although they have only just arrived and hardly expressed the motives for their visit.

A world with many deficiencies to some, exotic issues and magic to others, pride and dignity to further observers, and humour and skill to final examiners. However a world that is always defined by outsiders. Far from these categories this paper then tries to describe the way in which actors hold different conceptions about health and their corresponding therapeutics. The case of Venancio provided a first analysis with which I began to understand the elements involved with this disease, the Huichol medicine and its relationship with biomedicine, the attitude of the population and multiplicity of objectives in the projects for Huicholes. Thus I examined the forms taken by encounters between actors that organised their practices according to different paradigms in a case of needing health attention, and the possibility of changing such practices.

In a decidedly ethnographic analysis of such a strong 'intervention' situation I would like to begin by introducing the case and remark upon it thereafter.

Venancio

The doctor from the Unit of Attention to Health of Tuxpan took Venancio to me so I could see a child with severe malnutrition. He had 57% of the weight expected for a child his age. From the knees down to his feet his legs were too thick, due to water retention, which is common with such cases (edema). He was eighteen months old and held by his mother, who looked emaciated and who was five months pregnant. A further five children escorted them, the eldest 12 years old.

Venancio's mother had taken him to the doctor because he had diarrhoea, vomited and had a fever. I had just taken census of weight and size of members of the community of Tuxpan and this family was not in my registers. It was one

of the few homes we had encountered with its door locked during our door to door survey.

Tuxpan did not look the way I had expected it to be when I arrived in the Sierra. Before arrival I had imagined Sierra Huichola to contain many trees and an air of freshness. There were only a few trees however accompanied by a stifling heat. The physiognomy of Tuxpan also did not harmonise with the houses I had seen years before in the middle of the Sierra, which were made of *otate*, had grass roofs and stood from the ground on trunks. Instead we encountered clearly marked streets with lighting, houses made of adobe and roofed with tin sheets, a community house made of stone and three big buildings that dominated the view from the entrance to the town. These were the indigenous Coordination Centre of the National Indigenous Institute, the school shelter and the Unit of Attention to Health with its annex, the Centre of Nutritional Recuperation.

In our door to door survey in June 1994 we found that of the 181 buildings of Tuxpan de Bolaños only 76 were occupied throughout the year, as 13 were public buildings and 92 belonged to families that lived permanently in nearby towns and only used them when they came for civil or religious ceremonies. Such exact details were achieved largely due to the collaborating worker from the Health Department who, when doors where closed, would direct me the community to which its residents belonged. In the case of permanent residents of Tuxpan he told me the name of the head of the family and suggested that they would probably be at their corn plots at this time of year. This had also been the case for Venancio's family.

The doctor explained to me that he had only brought the child to me because he had already decided to transfer him to the hospital in Guadalajara. Therefore he would not give him any medicaments to make his mother take him out of the Sierra. Assuming my inexperience with the Huicholes he justified his decision by pointing out the gravity of the child's situation and the argumentative attitude of the population. He told me; '*this people is opinionated, lazy and ungrateful, they might even say that we killed the child if he does not get well*'. The mother held on to her child painfully and stared to the ground without saying a word whilst she listened to our dialogue.

I tried to talk to her but she would not answer any of my questions even though she did understand Spanish well enough to keep repeating that she would not go to Guadalajara. The doctor insisted that the Huicholes were truly capable of letting the child die so I suggested that we should start with an antibiotic treatment[2]. When the mother saw that, despite the arguments of the doctor, I had begun preparing a syringe to inject the child, she began to answer my question. Venancio had been sick for eight days and no longer wanted to eat. He would not even take to her breast. According to her they could not go to Guadalajara because her husband would not allow them to leave. While I explained that this might then result in the death of the child she held on to him tightly and tried to restrain herself from crying.

After I had injected the child I explained to the doctor that since he was not going to go to the hospital I was going to try a treatment here. Saying that my

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[2] It is important to say two things here. Firstly, my work then depend on the DIF at Jalisco and not on the Health Department. Secondly, the program for which I was hired focussed on malnutrition. Responsibility for the decision made was thus mine.

efforts would be futile, he told me that if was my decision it was now also my problem; he did not want to know anything more about it. I explained to the mother that I would tend to the child if she would also stay night and day at the centre of recuperation to watch the results of the treatment. Should things turn out worse she had to agree to send the child to Guadalajara, despite the dissent of the child's father. Initially she did want to stay but on my insistence we agreed that she would stay during the day and go home at night. As the Centre of Recuperation did not have enough space to harbour patients nor the unit of attention to health, she sat down in the shadow of a tree in the common yard.

Despite of what he had said before the doctor remained and watched me. Between consultations he came out to confirm that the mother and child were still there and he checked the progress of Venancio. Every time we met he once again extended his arguments and critique of the attitude of the local population telling me various stories, which he had collected from four years experience in the zone.

The regular patients of the Unit of Attention to Health and numerous other visitors that we had at the centre of recuperation came closer, curious to see the child, talk to the mother and exchange opinions. In the presence of this the mother seemed to feel embarrassed and could not find a way to get comfortable and remain unnoticed.

The child reacted amazingly to the treatment. Two factors helped with this. When I arrived at the centre I found several boxes with a mixture of special nutriments for such cases as that of Venancio (when we had run out of these they were never replaced). Furthermore a Japanese anthropologist, accompanied by a professor from Jalisco with his family, had recently paid a short visit to Tuxpan. They gave me an important amount of medical samples, including expensive and thus rare antibiotics. Thus Venancio had antibiotics that were seldom used in the Sierra, vitamins and special food composed for malnutrition cases. To that we also added fresh fruit sent by the DIF Jalisco.

After a week the woman and her child did not come back. Even though the improvement of the child was clear the recuperation of his weight was still far from acceptable. The doctor, somewhat joking, somewhat serious said I should forget about the case, the family would let him die. With my pride hurt I went to look for the family. More helpful than the map I had was my reference to the nickname of Venancio's older brother, 'El Chubasco'. Asking for him I easily found the house.

The door was closed and they did not answer my insistent knocks. I stepped on a rock to look inside the house over the adobe wall. They were there. Thus it was that I watched the scene I described at the beginning of this paper whilst my presence went unnoticed. I was fascinated and sceptical at the same time. When the healing was clearly over I greeted them. Surprised they turned and saw me standing watching over the wall. They had little alternative but to open the front door.

The man with the feathers was the traditional leader. He shook my hand and said something in their language, which made everybody laugh. I laughed with them even though I did not understand what was being said. He left and provided me with free entrance. Shamelessly I entered, crossed a dark hall with plastic sacks and sheets thrown on to the floor as a bed. In the patio Venancio was asleep in a hammock hanging from a plum tree. His mother and a few small kids

around her looked at me with curiosity but no fear. The father, meantime, had walked away somewhat so he would not have to greet me. Yet he remained near enough to hear what we would say.

I asked how Venancio was doing. His mother told me he was fine. I used some food names in Huichol and the translation of the word 'skinny' to explain to the mother that the boy still needed medical supervision and food. Speaking words in their language made the children laugh and I got an interested look from the father. The woman talked to her husband and she agreed to back to the Centre with me. I left the house with her, the child and his brothers.

Venancio's weight percentage had not changed much, but the oedema was at a minimal level. Automatically I found myself explaining to the mother that the child's oedema was due to him needing to eat fruit, milk, eggs, meat or even beans. Suddenly I felt silly and shut up because even for me, with a regular income, it was difficult to find such food in Tuxpan. Instead I gave her a bag of powder with nutrients for the child, some cans of food and candies for the kids, and a promise of a similar weekly endowment if she kept bringing Venancio for check-ups. She informed me that he had been cured by a Mara'akame[3] - the man with the feathers- but she would still bring him to me.

I obtained more information about the family and the disease thanks to the curious children who had been present during the process and gave me their opinion spontaneously. One young boy said that Venancio's father was a really mean person who would not mind if his son died: '*He does not even want to sow anymore, he is drunk and lazy,*' he concluded. According to a Mara'akame, a visitor of the DIF at that time who also happened to be the child's granduncle (mother's side) the child's disease was caused by the factor; '*they are like that*'. And added; '*Venancio's grandfather has killed two women [died during the delivery process]. They [Venancio's parents] are my relatives but they don't come close. If they don't follow The Custom, the kid will pay*'.

With the Mara'akame who was taking care of the child our relationship was always good. It had begun with active co-operation and co-ordination that, as a field worker of an institution, is necessary with the traditional government. Later this relationship had developed to friendship. In answer to how he had tried to cure the illness of Venancio he answered ambiguously that it was because of 'El Costumbre'[4] and proudly added; '*it was hard for me, but he finally went out*'.

Sometimes because the mother herself came to check on Venancio, sometimes because I went to take her from her home, I could continue watching Venancio for several weeks, but always giving the endowment promised. Two months later I wrote in my field diary: *Venancio looks very cute, he is my first triumph...I'm sorry*, I corrected myself, *it was the Mara'akame's triumph*. Once he had recovered to an adequate weight my relationship with the family declined until, because of complications during delivery, I almost had to kidnap Venancio's mother to send her to the nearest hospital.

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[3] Mara'akame is the name of the local expert who has three main functions: a) as therapist, b) as bard relating and preserving the ancient history of the Huichols, and c) as priest and thus organiser of village ceremonies.

[4] 'El Costumbre' could be translated literally as 'The Custom'. It defines the ceremonial practices of the Huicholes that maintain a broad vision of the world as a place in which land, natural resources, ancestors and gods are closely linked with sowing and caring for corn seed.

Besides this special care of severely ill children, a program of early awareness was initiated to reduce the number of severe cases. Many factors were involved with the introduction of the program, but undoubtedly one of the most important was the involvement of the institutional personnel in the dynamics of local life and their constant analysis of this. After Venancio, other children also began to arrive from all around; sent by doctors from other units, by reference of friends or relatives, others brought by the pilot of a light aeroplane that flew through the sierra on a weekly basis. In the period of July to December 1994 twelve children of the approximate total of 500 children living in the zone were attended to at the centre of nutritional recuperation. Ten were rehabilitated, two died. In 1995 there were only two that needed to be interned, another died in his home in a distant community as the family had refused to accept the diagnostic. From 1996 to 1998, no children needed to be interned for the treatment of severe malnutrition but a girl who came with a generalised infection (septicaemia) died in a hospital nearby. She came from the same community as the last child who had also died. Each child that arrived was a communal event that attracted visitors to the centre to talk with the parents, watch our moves and express their opinions. A Mara'akame's wife from Tuxpan used to spend long periods with me at the Centre, talking about all sorts of things and leading the patients to her husband.

The clues of interaction

In the example, a clear situation of health care, the institutional medical practices are mediated and defined by elements typical of the place. That is, they are localised.[5] According to Kevin White (1991) the factors intervening in health attention are living conditions, knowledge, social control, human agency and governmental practices. These are issues which are presented by the author as challenges to medical sociology because they are derived from debate amongst several scholars about the relation of medical practices, health polices and the answers of individuals and populations to these.

The various dimensions of knowledge
The practice of health care implied knowledge. Firstly, it requires an analysis that distinguishes the knowledge required. Secondly it should contemplate the different levels involved in it. In Venancio's situation the most remarkable aspect was the intervention of several kinds of knowledge. To put it simply: in his healing both local therapy and allopathic knowledge were applied. Allopathic knowledge is commonly named in literature as 'biomedicine' (its language and

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[5] Nevertheless the dynamics of interaction in a situation of therapeutic plurality are not exclusive to the Huichol zone, or for that matter to countries regarded as underdeveloped. In fact the offer of therapies *everywhere* increases with each day and with it the number of followers. According to various authors 85% of the Mexican population appeals to more than one kind of medicine, the sale of medicaments without a doctor's prescription has risen by 62% (not including the exchange of used medicines between patients). In addition we found that 90% of the population uses home remedies and traditional medicine whilst the ratio of local therapists to biomedical doctors stands at four to one in rural areas at a national level (IRIS, 1986; Zolla, 1992). Kleinman (1980) found similar figures for Taiwan.

practice are taken from biological understanding of the human body), or 'Western medicine' (historical origin). On the other hand, local therapy has been called 'traditional medicine' (referring to a belonging to a specific tradition), 'magic' or 'witchcraft' (because of the contribution of 'supernatural' forces).

When local models of medicine and biomedicine intervene some will argue that the actions of the local therapists should be considered dangerous (Ofiaeli, 1991). Others argue that we should bet on the integration of the two spheres of knowledge because, as Wolfers (1990: 5) assures us, traditional medicine should not be defined as different and/or opposite to 'modern' medicine. But, Wolfers concludes, besides providing the advantage of enabling comparison between biomedicine and traditional medicine, local inhabitants will be able to show chose the treatment of biomedicine (Foster and Anderson, 1978: 131 and Hardon, 1990) without ignoring traditional treatment. In the Venancio's case, this approach is partially supported as they visited both medical experts; the population cannot consider them antagonistic. But it also partially contests the attitude of each of the two medicinal approaches as operating in different domains. Beyond this, what are the dynamics and implications for medical sociology of this case?

Differences amongst therapists
An approach to the study of both kinds of therapies pays attention to the divergence of knowledge between the therapists. This is justified as long as each therapist, as an exponent of a knowledge type, and integrator of healing practices in relationship to other kinds of social conditions or non-human elements, can explain his/her respective frame of knowledge with some clarity. The result of this scrutiny may not only be very interesting, but also valuable, as it will show divergence between the kinds of knowledge use to attend to a patient, in this case between a doctor with a University grade and a local Mara'akame. But it will also enable finding out how the two experts can emphasise the value of their approach, providing a defence against the negation of the other's efficiency. In the case presented both the Mara'akame and the 'western' doctor claim the cure of the child on own merit whilst maintaining their good personal relationship.

But divergence of knowledge is not only found amongst therapists from different contexts. Vargas y Casillas (1989) pointed out that Mexican doctors face a dilemma when they encounter the therapeutic practices of 'uninformed' Mexicans. He suggested that this dilemma occurs especially with doctors who have a same cultural background as the population they work with. They have come to receive conceptual equipment at the University that regards traditional home practice as inappropriate.

This element could explain the divergence between the attitudes of doctors' attitudes towards such a situation. But the divergence among therapists of a same frame of knowledge had other explanations. Kaja Finkler (1991), in her study at a Mexican hospital about the effects of therapies on patients, found meaningful variations in the diagnostics of doctors. This variation, according to her, did not appear to relate to the difficulty of establishing the cause of disease, but to the inclination of each of the doctors towards a specific speciality. Finkler's contribution interestingly enough indicates the idiosyncrasy that plays a role in the approach of every therapist.

This can also be seen in the attitude of the doctors involved with Venancio. Nevertheless, the argument to the attention or inattention of the boy does not refer to the diagnostic from a biomedical frame of knowledge. The discrepancies between doctors in handling this patient do not come from different valuations, as the diagnostic of severe malnutrition is simple. The underlined argument has to do with the management of the patient inside a specific cultural and social context, in which small details intervene.

In a way, the treatment of Venancio's disease, though complex, was not difficult, as the necessary elements were available. Whilst a doctor was missing, we did have the storage of the DIF. Another detail explaining the divergence is the emotions of the actors involved. This is an interface we could call a recapitulation of previous experiences; personal histories reviving with adjoining repercussions in practice. Jefeery and Jefeery (1993: 47), explain that in the language of clinical doctors fear can sometimes arise due to previous experiences in which an emergency situation had been faced with lacking capacity and a feeling of hopelessness.

One of the doctors working in the zone expressed the fear of becoming blamed for the child's death. In early activity amongst the Huicholes he did a good job when a strong epidemic resulted in high mortality rates. In order to stop it he and others worked for days and nights on end. He was convinced that it was his work and the application of his knowledge of biomedicine that had finally controlled the measles epidemic, but instead the recognition of the population went to the local therapy of the Mara'akame for controlling the epidemic. It is a history of such critical situations in the sierra he had to deal with where he has become confronted by a local population who fail to recognise his efforts. It has led him to regard the local population as 'opinionated, ungrateful and indolent'.

From my point of view what comes out amongst other emotions is a hurt pride. This is provoked especially by the mockery of the other medicine whilst attempting to provide care. It results in a tenacious persecution, which breaks into the family's attitude. Furthermore there is also the impression one has to deal with that in such a precarious state the child might suffer dire consequences on leaving him without attention. Finally, it is about trying to achieve this specific recuperation as it is the first case in the zone, saving the job and showing that something can be achieved here. But without the nutritional compounds and the donation of medicines this perseverance might have led to different results.

Thus the divergence between therapists from a same frame of knowledge do not have to concern the medical knowledge in abstract. Instead such abstract knowledge is carried out by concrete persons who, according to experiences, interests and emotions, apply it in specific ways and contexts.

The divergence of knowledge between therapists and patients
It is necessary to regard another level of knowledge, that between therapists and patients. As was already mentioned earlier, the divergence amongst the first ones does not prevent both of them to be consulted. In fact the University graduate was also called 'Mara'akame' by some, indicating the equivalent regard given to the healing functions of both. Kleinman (1980) emphasises this point. In his study of the relationship between therapists and patients in Taiwan he presents how the patient and the doctor develop different models that explain the body

and disease according to the culture in which one lives and the information one has. To study this relationship he proposes a scheme called 'explicative models'. He proposes to focus on what he calls a 'microscopic level', that is to say, go beyond trying to understand the attention given to health by directing effort towards understanding 'clinical reality'. In his own words: 'understand how the actors of attention to health *think* in a particular place. Believes about their illness and their expectations and evaluations of particular types of attention to health, helps the investigator to gather every thing in its health systems' (Kleinman, 1980:26, emphasis of the author).

The objective of Kleinman is to focus the ethnographer on the 'the medical system' to gain access to the 'cultural systems'. This, he adds, goes together with Geertz's definition of the cultural system as a map 'of and for' a special area of human behaviour (Geertz 1973:3-30, cited by Kleinman 1980:26). In his attempt at convincing the anthropologists of the value of this approach and because of the prevailing systems theory at that time, he explained medical systems to best be understood as local social systems which might differ from one locality to another (*ibid*: 35). He remarks the plurality that is found in any locality and therefore regards it wrong to describe a medical system of a society as if it were simple and unchangeable (*Ibid.*: 35).

In this way Cecil Helman (1990) showed that understanding the model of 'doctor and patient' has an effect on the healing. In a similar position, Gerhardt (1996) says that judgement of the disease and cure depends on the individual narrative and on the specific case. Hence it is in the field of knowledge and understanding where the efficiency of a cure can be proved.

Hence the study of divergence between therapists and patients can be regarded as giving priority of focus to the individual understanding and regards the hermeneutics as forming the obstacle to understanding. It seems unnecessary to say that in general terms the contributions of the authors mentioned are relevant to understanding the interaction between actors with different forms of knowledge. Nevertheless Kleinman's understanding of knowledge as *thought* needs to be kept in mind.

Venancio's mother goes to the doctor because of the gastro-enteritis of her child and once it has been solved makes clear that the doctor's job is over. For the inhabitants biomedicine has a place and limits in the treatments of disease. Local medicine is treated in equal fashion. The alimentary supplement is taken like 'any other medicament'. It has thus become superfluous to Venancio's mother once her son has regained a state of health she regards as acceptable. Understanding in terms of *thought* does not show up here and therefore does not have a specific repercussion for healing. Actually there is confirmation of what Parking said; 'people is not interested in knowing which are the boundaries of the medical system, nor in knowing what is underneath the diagnostic, the treatment of the rules of a supposed system' (Parking 1995: 150).

In this sense, the approach to understanding this interaction has to be open to social practice to enable the acquiring of knowledge of the whole situation. The boundary marked for allopathic practice by Venancio's mother does not mean that she does not care about the underlying disease (malnutrition). It just means that she considers it to correspond to a different context, one which the Mara'akame in charge called 'The Custom' for which the presence of the family is also needed at the healing moment. Here the family's presence is necessary

because Venancio's illness is seen as the result of the Custom and the failures of the family for which the boy must then 'pay'. In the local comprehension are integrated elements that, for the moment, we would call 'magic' with arguments of social behaviour. Hence Venancio's situation is hereby regarded as either an exception or a social stigma for the family. The latter implies a failure of the family to the Custom with regard to the expected behaviour of a Huichol: to sow and care for the corn seed.

Now in Venancio's case there also appeared to exist some elements that go beyond the relationships between actors, even beyond the case itself. To argue this I can mention that the improvement of Venancio, carefully followed by the doctor of the Unit for Attention to Health and the curious and other Mara'akate has attracted other ill children. Collaboration relationships are produced with other actors and their projects such as the light-plane pilot that transports patients from different regions; with the Mara'akame, whose wife makes a visit to every new patient and increases his number of patients and at the same time the family income; with the parents of the rehabilitated or dead children that come with their own story and opinions; and with the extended families of Tuxpan that open a space in their lives for us.

The levels of knowledge between therapist/therapist and therapist/patient can then not be confined to the relationship of individuals, neither should it regard these in terms of hierarchical relationships. With the practice of patients and their communal net the opportunity to gain access to several kinds of knowledge has opened. This allows the exchange of advise among the users related to health care, based on own experiences or those coming from other sources. It surpasses the ability of control by experts as had been argued before. This as, aside of what they can point out in defence of their own therapy, the plurality of the attention to health simply exists. Not only in the sequence of help that the patient follows, but many times through complementing approaches with one another in a relatively open way though this is not always noticed by the therapist.

Life conditions and their relation to health care
Kleinman (1980) and Hellman (1990), together with those who in their studies follow the 'microscopic' approach, have been strongly criticised. This mainly because their focus on the encounters between doctor and patient deflect attention from the political economical strategies and ideological metaphors present in health policies (Martin, 1991, Stein, 1990). More explicitly other authors such as Waitzkin (1981), McKewon (1979), Navarrro (1976), Illich (1975), Doyal (1979), Ginsberg (1979), and Singer (1990) say that the state of health in a population is strongly determined by social, economic and political aspects of the country and kinds of relations amongst countries. Thus McKewon (1979) could prove that the decrease in the frequency of tuberculosis in England, for instance, was not only due to medical measures (discovery of the bacillus and appropriate medical application), it must also be explained as resulting from the change in the whole English society. The research proposal for health care should thus include the macro-economy and its repercussions on the livelihoods of its population.

This has lead to a research line in medical anthropology that states it necessary not to forget such aspects. If they *are* forgotten the results will have reduced

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effect and produce ideologically flawed visions. This critique also reaches the concept of 'life styles', as is being developed in hospitals environments, where they identify 'healthy' and 'sick' life styles. This classification assumes that if an individual chooses a life style it is possible to choose the environment in which one lives too, ignoring social, economical, and power differences between the individuals of a population (Davidson and Cols, 1990).

In the debate between those who consider it more productive to focus on what happens between doctor and patient and those who stand for the panorama approach that includes the macro economy one point stands out most strongly; in the production of knowledge political neutrality may not form an argument. In order to solve this some propose to provide more participation to patients (Stewart 1990a, 1990b) and inhabitants (Wong & Janes, 1991). This argument says that it is necessary to take into account the possibility of enabling and endowing inhabitants with enough strength and power to affect decisions and behaviours during interventions of health programs. Besides that the inhabitants' integration is not only important for the programs' successes but a necessary condition to preserve the culture of the region or the country. (Zolla, 1992).

This approach has been denounced as providing programs with a primary focus on health itself and participative strategies as forming discursive *tricks* that work in practice as economically cheap ways of getting the attention and controlling policies of the population targeted (Menéndez, 1984; Evans & Stoddart, 1990). Furthermore, that these programs are designed to extend the health market, esp. drugs and technology (Doyal, 1979). In my opinion one of the strongest critics to the programs of primary health attention states that biomedical knowledge is given to biomedical knowledge. It tramps on traditional therapies, denying the ways of thinking, feeling and acting in the world to which they are applied (Jordan B, 1992).

The study in Mexico, mentioned earlier, done by Finkler (1991) takes a different approach by using a wider frame that includes studying the economic situations of the families and observing their behaviour and social actions. It shows that patients conceptualised and qualified medicaments according to their social position, the economic problems and their family environment. In Venancio's case the web of relationships, including ecological and economical issues, must not be forgotten for fully appreciating the decision made to bring the boy to the Centre for a check-up. Paternal tricks may have been used to face the ridiculous 'nutritional orientation' during a situation of shortage of food.

Knowledge as situated practices
There are theoretical choices we have to make in the implementation of a program for understanding what is happening during an intervention process. If we follow the scheme of 'explicative models' what we should do is understand the explicative model of the Huichol patient related to health and sickness (malnutrition), ensure that the Huichol understands the biomedical model and then, a necessary process of understanding will begin which will help the healing. This has to integrate more elements that mere thought. The risk of such an approach is that when an explicative model is judged from the advantaged position of who begins its clarification it could lead to automatic justification of all intervention campaigns and interventions that would qualify as 'incorrect' in

all other explanations. At this moment, instead of an understanding of the local conceptual frame, a process of 'rectification' would take place which would result in the hegemony of a particular frame of knowledge and the negation of many others; a process which Hobart (1995) has coined the 'growth of ignorance'.

In order to surpass this it is necessary to seriously examine the local frame on which medicine is based. Once metaphors of the body abounded. Recently the debate has re-sharpened. From my point of view the classification of the 'physic' or 'biological' corporeality of the human being, well-fed, ill-fed, healthy or sick, involves a series of tools and abilities that are often handled, with wavering certainty. Therefore any biomedical expert could hardly rebuke Foucault's assertion that the exact superposition of the 'body' of the disease and the; 'body of the ill man is nothing but a transitory historical fact' (Foucault 1966). Juliana brings her child because he has diarrhoea, fever and swollen feet and he does not want to eat. We, doctors from the University, decide that it is a case of 'gastro-enteritis and malnutrition', while the Mara'akame says it is the custom.

Foucault (1966, 1991) and some of his followers (Hackings, 1991; Rose & Miller, 1992) have argued that the definition of 'normality' is based on statistic means and lies in the hands of plan makers to provide certain 'distance control'. This is the presence of corporal disciplines where power is mainly wielded. In this exercise of power, research centres, laws, norms and knowledge are linked. Foucault talks about the 'regimes of practices' as places where plans are founded and where it is taken for granted that what is said and done there needs to be done by rule with reasons provided. The analysis of 'regimes of practices' means to analyse behaviour programs that have a prescriptive effects about what must be done (jurisdiction effects) as well as the codification of effects about that which should be known (verification effects) (1991: 75).

An alternative approach to the 'regimes of practices' of Foucault is the 'habitus' of Bourdieu (1984) to which he grants conformation of the body as it is developed by each individual. He says that the habitus is the generative principle of judgements objectively classified besides the classification system of these practices. It is in the relationship between these two capacities that the habitus exists as a representation of the social world, the space for life styles (Bourdieu 1984:171). According to Bourdieu the habitus works as a base for the classification systems that go beyond being systems of knowledge as also forming means of power. Therefore there are different habitus for each social class as defined by them and kept separated from those of other groups.

From the small example that has worked in this chapter as a guide to become associated with these reflections one needs to see that the population has accepted the biomedicine while keeping their own definitions and practices. Thus, if the classification systems generate different bodies we have to accept that any of these produce a particular body with specific corporal disciplines. What is called 'the Custom' among the Huicholes refers to the repetition of regular practices linking agriculture, myths, ceremonies, ancestors, and social organisation. Examining the comments of the curious and the Mara'akame we could say that the Custom is a form of classification itself which, at the same time classifies the individuals. Therefore they are used as distinctive elements for the identity which the group gives to itself. In this way the Custom could be called the 'habitus' or 'regime of practices'. Even through their modification in

time – for example the weekly acceptance of previously unknown canned food by Venancio's mother- the corporal discipline needs to be discussed. Thus the notion is developed that joint knowledge and institutions to exercise power throughout the corporal discipline can also refer to local practices of attention to health and its respective experts.

What then matters for us is the relationship between these two. Indeed, although there is a common reference to the exercise of some kind of domination over individuals in both analyses, some major differences can be found. In Bourdieu's habitus, there is acceptance of the dominated to legitimise the good 'taste' and manners of the dominant. Therefore there will sometimes be attempts to approach someone else's habitus. To achieve this the individual has to move or transform the type of capital she/he has; namely, the cultural, social, economical and symbolic capital possessed, although the archetypal education of the dominated ties her/him to the impossibility of conforming to 'genuine' good taste and manners[6]. Foucault, with his 'regimes of practices', implies a relation of acceptance or antagonism that is in some way conscious and voluntary of the individual to superior control. Secondly, he asserts that there will always be individuals who reject giving up their consent and thus, dissension will always exist according to the grade by which individuality is wished. Ones against power will always be restricted in their rights. (Rose, 1991).

Certainly, in any medical framework it is not only tangible as a specific form of medical assistance, but also as a series of elements involved which establish the relations between the individual and his/her environment, the social group and organisation projects which have repercussions on the level of habitation and socio-political organisation. Authors like Margin-Eiffel (1990) and Ashis and Visvanathan (1990) appear to complement this idea. The last authors examined this from the perspective of nineteenth century dynamics in India. They show how dissident groups can impel their own norms of hygiene, ethic and moral as an alternative to government power since 'if health is power and the State a form of hygiene the society should have alternative notions of health, pathology and cure' (Ashis and Visvanathan 1990: 168). This relation between the production of knowledge, technology employed and the institutionalisation of certain forms of social behaviour, can happen with or without an explicit intention or clear conscience in the patient or the therapist. They may or may not correspond to the objective of keeping or transforming certain order in the group.

On the other hand, Frank (1991) argues that care and discipline are difficult to separate from one another. Care of one's own body is a legitimate right, not a way of obeying the norm. The use of a variety of attentions to health approaches as provided by different frames of knowledge could introduce the possibility of escaping from certain forms of control.

We have found then that these general focuses on 'regimes of practices' and 'habitus' need to be studied in specific domains. Sometimes, as in the case of Juliana, regarding subverted/dominant positions it would seem that the modification or maintenance of some habits follows the exact opposite direction as rules of the dominant are contested to maintain positions. Within each group

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[6] Those who criticized the concept of 'life styles' cannot include Bourdieu in their criticism however as he pointed out that the difference in styles was due to the working position of people in his country, France. Yet he has become categorically accused despite various protests of the Bourdieu on different occasions (Bourdieu, 1990).

complex dynamics exist which can only be understood in their particularity, created as worries of certain actors (Fardon, 1995).

Finally Mark Hobart argues that knowledge should not be considered as a mental entity but as localised practices. Otherwise it would mean denying the historical and specific conditions in which these have been invoked and would close off reflection of the purpose, the agents, subjects and objects related to particular situations (Hobart, 1995: 51). In this sense the term 'local medicine' should not be regarded as fully encompassing and unchangeable. For example, in a study on the conception of 'hot and cold' in traditional Mesoamerican medicine, it was found that the populations studied did not relate these qualities to the intrinsic properties of the elements pointed out as such. Rather the adjudication of such properties followed the idiosyncrasy of the interviewed and does not relate to generalised classifications (Campos, 1992).

Human agency

The opposed positions set out above confront us with a chain of contradictions. Nominally, the care or the control, the responsibility of the government for the health of its population or of individuals for their own bodies, decision making lying in the hands of the population or in those of planners, the integration of traditional medicine or not, to classify or not, etc. All can finally be read as if from the normative and prescriptive domains of strategists, scientists or politicians, all of them may be decided over.

There is a series of answers that imply leaping beyond these dichotomies. On the one hand Good & Delvecchio Good (1993) have qualified as stereotypes many of the critics to biomedicine. They had a long list that went beyond those discussed here and said that when one starts with this list it is difficult to recognise what happens in the daily practices of the actors. For example, if we start from such dichotomies, how could we explain the actual learning of all the actors in the interaction field? Fisher and Arce (2000) show a case in which, biomedical knowledge had no entrance into local explanations of diseases until the tool used by colonisers in Africa, the microscopy, could be applied in diagnosing 'sleeping disease'. The tool and thus also biomedical knowledge incorporated into the local symbols. Hellman (1986) showed how the allopathic doctors from a middle class neighbourhood in London adapted the vocabulary and notions of health and sickness from their patients. Proceeding in this way, they separated from their own frame of knowledge and began to reinforce the popular notions.

With regard to other aspects, especially respect to the health market expansion or 'the medicalisation of life', Ivan Illich (1975), van der Geest and Susan Raynold Whyte (1991), have a different point of view. Without forgetting to take into account the interests of the great pharmaceutics industries, they maintain that free access to medicaments give the patients freedom from the immediate expert; not only from the doctor, but also from the druggist. In the perspective of this book, which contains several case studies in the countries known as belonging to the 'third world', the apprehension of medicaments by the population is as if these were tools or things for exchange. That is, they entered into explicative frames and practices because 'the medicaments are being

constantly re-interpreted, the distribution channels are transformed and the traditions are reworked' (van der Geest and Whyte, 1991: 10). In the same manner Leon (1993) provides an example of a program based on preventive measures that had small impact on the population especially because the explanation of the disease was not medicalised.

Hence the causality and effects of any program can be found in the generation of relations that exist in the events since 'the individuals and cultures have assimilation mechanisms amazingly powerful...that work as enzymes to change the ideological composition of strange bodies' (Greenblat, 1991: 14; cited by Laffey and Waldes, 1997; Appfel-Marglin, 1998).

What is really being discussed is what White (1991) cited; the establishment of human agency. Giddens asks himself: are we the creators of society or has she created us? Even though he says that this discussion belongs to the history of sociology and still does not have an answer convincing enough for the proponents of one or another school tradition to take a dominant position, he emphasises the human being as a reflexive agent with action and purposes. This is a frequently avoided aspect in the analysis of programs. In my opinion the way that critics and solutions for help programs are expressed, leading us to suppose that the complete result is attributed to the programs, giving the population only a passive roll, is an exemplary case.

Thus, depending on the will and wishes of the programmers, the population or patients may become self determined or simply beneficiary. Local healers can be integrated into the program or the biomedical knowledge being imposed on them. As the example set out and in the experience of those who have worked in intervention projects, the subjection of inhabitants does not occur. On the contrary, the actors show themselves to be very active and this activity can even come to challenge the principles on which the programs were implemented. On the other hand, as the example shows, the actors intervening in Venancio's case are multiple. That it to say, there is no homogeneity, nor among those who represent medical knowledge and neither in the population. This leads us to the question of asking how one can then consider the activities of all actors? That is, if the actors' actions correspond and are directed consciously toward an objective, clear design, or if they are expressed in a spontaneous and sometimes even chaotic way (Scott, 1985), response each time is a game of interactions.

This argument is not about an approach to personal control as Peterson and Stunkard suggest (1989) nor to individualism. Attacks have frequently been made on the actor-oriented approach and its agency -reduced to take the will of the individual, as if it were the only characteristic mentioned. Long and van der Ploeg (1988, 1989) exposed for rural development programs the intervention process as a 'struggle of paradigms'. That is, the paradigm of those who make the intervention encounter those of who are thought to be the beneficiaries. The implementation implies that interface encounters will happen (Long, 1984, 1989, 1990, 1992) between actors with different interests, knowledge and emotions that struggle, negotiate, adapt themselves, etc. to keep control of their own visions and ways of life. Long considers that the intervention is a process of transformation that comes and goes constantly reformed by its own political and organisational dynamics and by the specific conditions it finds or creates including the answers and strategies of the regional and local groups who can

fight to defend their own social species, cultural boundaries and positions within a wider field (Long, 1992: 37).

The basic idea in this line of study and analysis of rural development in the actor-oriented approach is agency, which could not be assumed previously. Agency can only be seen in the 'act' as part of the 'state of life' of an agent (Gell, 1998). That is, the act inside the biography of the agent because as in the end the task of the anthropologist is to structure social relations that are the relations between the various biographies (Gell, 1998.1-10).

Conclusion

The malnutrition in the Huichol Sierra must be understood in the middle of dialogues of the group and the individuals within a difficult ecological environment, a history of relative isolation, social relationships in transition, ceremonies where myth and magic are always present but where the biomedicine also has a place. The situation exposed reflects dilemmas, emotions and games of power for all actors as well as the construction of 'reality' during the process.

In its approach, my research on malnutrition in the Sierra should be considered as constructed by social practices, using conceptual tools, relations with institutions and techniques applied on the body of the individual and the social group. Underneath this the proposition is that the topics enunciated until now can be taken aboard properly if considered as an intervention process (at the individual and population level); a daily exercise in *process*. That means that it is not only documented as an intervention nor that of marks guidelines and objectives, nor as an only critical evaluation of results obtained. In the 'daily exercise' there are countless factors that -as happened in the field work of this research- call the attention and will towards a series of 'minuscule' or 'hardly significant' actions. But in their effect on other process also considered minuscule and insignificant these could come to mark the direction of a specific kind of interaction.

In this daily exercise, constructed from minuscule and multiple elements, are expressed the way subjects move and comprehend the world (Berger and Luckmann, 1972). Because what is inside daily life does not need an explanation the ample winch of adjectives or labels 'about the Other' that originate or are expressed in the process of intervention gain relevance. These, in their assignation, show and justify the position taken since the process is being read. A position that is never completely defined because of the creativity of the subjects who adapt themselves to the dynamics of the interaction. This does not mean that the labels that are assigned always change in the process, since it could be that they reinforce themselves by adding more elements to their justification. This implies a valuation of the documental sources, the speeches and also the labels to give them a value in terms of their specific source, justification and time. That relativity reaches the narrative presented here, especially if it is clear from the beginning that the researcher is part of the situation in an active way, and is seen as an indispensable part of the negotiation. To summarise, if the interaction is a daily exercise its repercussions over the social life, habits and images have to be observed in daily life. Hence programs of attention to health need to be seen as an effort – appropriate or inappropriate – to work in an arena of heterogeneous

practices. This constructs an object of study whilst at the same time it tries to understand it.

In a general way, it is in this winch of interests, intentions, circumstances and creativity in which programs of primary attention to health operate and where the challenge to act for every intervention is found. In this way, I hope that the objective of the chapter, exposing Venancio's case to find clues relating to other arguments has been fulfilled. From it elements involved can be studied, through the actors with their conceptual background where their emotions, interests, and possibilities in the socio-political and ecological contexts play an important role. It is through the daily exercise in process that the answers and categories of actors can be analysed, their circumstance based or planned actions, and the form in which they are inserted in the arena of relations produced during their interactions.

It is clear that this discussion cannot be conducted by looking for abstract forms of knowledge about malnutrition, but rather in the localised practices of the actors in the panorama of their interaction; i.e. what and how do they perform their practices as simple daily elements.

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16
Water-networks and the actor: the case of the Save River catchment, Zimbabwe

Pieter van der Zaag, Alex Bolding and Emmanuel Manzungu

Introduction

The Save River catchment in eastern Zimbabwe comprises a physical space in which the waters of a large region are interconnected. In a physical sense, the Save catchment is therefore a 'real' entity. With the promulgation of the new Water Act of 1998 and the beginning of its implementation in 2000, the Save catchment also exists institutionally now: at least in the minds of some of the policy makers and other actors. In this spatial expanse, many more realities are enacted: geographically, socially, culturally, economically, and politically. But these realities are highly diverse and fragmented.

In order to build networks and secure livelihoods, people have sought to combine in all manner of ways, the different resources (natural, material, technological, human, legal, institutional, financial) that occur in the Save expanse (see e.g. Roder, 1965; Campbell *et al.*, 1989). A water use system for agriculture, for instance, involves one or more farmers consciously combining water (rainfall, river water, and groundwater) and land resources (soil particles, stones etc.) in a specific way. Such a system only works if tightly linked to other material resources, such as crops, fertiliser, pumps, siphons, electricity lines, documents (e.g. title deeds, water rights), court buildings, and of course money and account statements, and with other, less tangible resources such as unwritten rules, wisdom, knowledge and information flows. This network also links human actors, both as an intended strategy (e.g. a farmer dealing with an extension officer, a sales representative of a seed company, a Headman, etc.), but also unintentionally, since the water cycle itself links actors together (e.g. up- and downstream irrigators).

A water use system can therefore be understood as an actor-network (Law, 1994).[1] Networks of human and non-human actors emerge around water use that have a sense of order, enabling actors to take further action, further ordering the networks and their environments in the process. Water-networks, as we will call

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[1] Law (1994) draws on strands of the sociology of technology and actor-network theory; see also Callon (1986, 1987), Latour (1987, 1991), Callon and Latour (1981) and Law and Bijker (1992). Kortelainen (1999) convincingly shows how actor-network theory can be applied to water.

them in this paper, are therefore recursive, emergent forms.[2] They cover different spans of space and time, and produce different outcomes in terms of (agricultural, industrial and mining) productivity, environmental sustainability and social equity.

Zimbabwe's water reforms explicitly seek to address the (historically based) inequitable access to water that exists between the commercial and smallholder farming sectors. At the same time, it is an attempt to improve productivity and environmental sustainability of the water sector as a whole, while basing the entire project on a sound financial footing. The reforms are therefore aimed at fundamentally changing the existing water use systems and water-networks.

Zimbabwe's water reforms exhibit quite a few characteristics of a top-down prescriptive process, drawing heavily on ideas from classic public administration and neo-institutional economics (North, 1990, Ostrom, 1992). The initial emphasis of the reforms has been on drafting new legal frameworks (Water Act 1998 and Zimbabwe National Water Authority (ZINWA) Act 1998) and crafting new institutions (ZINWA and Catchment Councils). It is then assumed that the planned implementation of new legal stipulations and operational rules, as well as the rational pursuance of new economic and normative incentives embodied in the new institutions, will result in the desired policy outcomes, i.e. re-distribution, accountability, stakeholder participation and cost-efficiency.

Long and Van der Ploeg (1989, 1994, 1995) criticise such a mechanical model of the relationship between policy formulation, implementation and outcomes. They argue in favour of a more process-oriented analysis of policy change by focusing on the capacity of social actors (i.e. water users and government personnel) to transform policy outcomes during implementation. Social actors actively pursue their own strategies and projects by drawing on existing knowledge, resources and capabilities, together with emergent organisational forms. Thus policy implementation, in this case, is conceived as an ongoing, socially constructed and negotiated process. A process that is contingent rather than planned.

Whilst sharing a view that favours a process orientation, we nevertheless note that the above mentioned approaches overlook the material dimension of water use practices. In this paper we intend to overcome this lacuna by analysing several cases of water-networks in the Save river catchment that operate alongside and within the colonial state engineered water administration. We then try to extrapolate the findings and see whether or not the new legal and institutional reality would enable these water-networks to arrive at more productive, environmentally sustainable, and equitable practices of water use. Our main contention is that the existence and transformation of water-networks as found in Save catchment cannot be explained by focusing on legal and institutional incentives alone, nor by focusing exclusively on the agency and strategies of social actors engaged on the waterfront. It is critical that the material dimensions of water use practices are engaged, since they constitute an essential part of these practices.

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[2] Norman Long has likened the emergence of ordered forms to how ants build their hills. The deposit of clay by the first ant enables the next to position more clay: 'each deposit sets up a kind of sense element. In other words they become foci of concentration. And so then the structures begin to emerge!' [Norman Long, 17 December 1987, Autlán, Mexico]

Much of the case material used in this paper was collected earlier within the context of a research programme that was initiated by Norman Long.[3] The paper attempts to synthesise some of these materials that were inspired by the actor-oriented perspective developed by Norman Long (Long, 1984, 1989, 1990, 1992). In the conclusion a plea is made to extend Long's actor-oriented approach by bringing in the material dimensions of water use practices, using the actor-network perspective. Technology and material dimensions of social practices are constitutive elements of social intercourse, and not exogenous to it.

Contrasts in the catchment
The Save catchment in Zimbabwe (covering an area of 40,000 km^2 before the confluence with the Runde River at the border with Mozambique) is a region of sharp contrasts. The lush, cool upper reaches of the catchment with its mountainous ecology (some 2,000 meters above sea level) differs markedly from the barren, dry and hot *miombo* woodlands lower down (500 m.a.s.l.). The high rainfall areas with 2,000 mm/yr are set against the dry areas that receive less than 500 mm/yr on average and are subject to large annual rainfall variations. The urban settlements (such as Mutare) form a contrast to the pristine parks, which may be publicly owned (such as Chimanimani and Gonarezhou) or private (such as the Save Conservancy which is a joint venture between a number of commercial farms). The exotic tree plantations in the mountains differ greatly to the sugarcane plantations in the lowveld. The commercial farming areas look markedly better than the communal areas and importantly, people living under poor conditions with few assets and little access to basic services are juxtaposed against affluent farmers with light aircraft in their backyards.[4]

The catchment area has been 'scarred' by many interventions, some of which date back to the 1930s. These include the forced establishment of contour ridges in fields, the voluntary establishment of terraces in some places, the complete removal of trees from arable land upon recommendation of the agricultural extension agency, and the carving out of areas for exclusive commercial farming with the resulting creation of communal areas. Recently, large fenced private parks have been established, consolidating many commercial farms where nature is being produced for the tourist market. More recently still, the boundaries of these parks have been breached by people seeking land. And finally, dams, furrows and pipelines have been constructed (private, public, legal and illegal) with some of these pipelines even crossing the watershed, connecting catchment areas that were previously unconnected.

These contrasting elements co-exist within the same physical space. The catchment knits water users together through the water cycle and the actors are

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[3] This collaborative programme between the University of Zimbabwe and Wageningen University and Research was known as ZIMWESI (1993-2000), and was mainly funded by NUFFIC. ZIMWESI has yielded many case studies, which have been published in, among others, Andersson (1999, 2001a, 2001b), Bolding et al. (2001a, 2001b), Magadlela (1997, 2000), Magadlela and Hebinck (1995), Manzungu (1995, 1999b, 2001), Manzungu and Van der Zaag (1996), Manzungu et al. (1999), Mutimba (1997), Vijfhuizen (1997, 1998) and Vijfhuizen and Makora (1998).

[4] In one district it was calculated that the average income of commercial farmers was nearly 400 times that of communal farmers (Wanmali 1992 cited in Roe 1995: 834).

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interdependent: the action of one person predicates upon another's, sometimes hundreds of kilometres downstream.

Water-networks in the catchment

People have developed a variety of strategies in order to cope with this interdependency. Some have embraced the formal legal-institutional set-up. Obtaining a water right for irrigation, in accordance with the Water Act of 1927 (revised in 1976) requires that certain procedures be followed. An entire suite of actors and devices has to be enrolled. For instance, a report would be required from a hydrologist from the Department of Water Development to ascertain whether the water applied for is available. A report from the agricultural extension officer in the Ministry of Agriculture would be required to assess the viability of the soils, the crops to be irrigated, as well as the volume of water required. The construction of canals, gauging weirs and often the building of a storage reservoir might be necessary. This again involves engineers who can produce designs adhering to dam safety regulations. In order to construct the required works, the applicant would have to mobilise funds with commercial banks, and most likely attempt to access highly concessionary loans from the farm investment fund, requiring a business plan indicating the market opportunities for the intended produce. In all, to obtain and exercise a water right and for a water-network to function, an actor would have to enrol a host of physical devices, monetary resources, legal documents and human actors. This assemblage of mobilised resources can be understood as a water-network, which, if successful, would prove a highly profitable alliance. Often, then, such a network was stabilised and sustained over time, and could subsequently be drawn upon for even more ambitious projects.

However, formally recognised water projects in the communal farming sector often followed a different route. Here, projects such as smallholder irrigation schemes were parachuted from the centre. Staff from the Department of Native Agriculture would closely supervise and prescribe the operations of the carefully selected irrigators or so-called 'plotholders'. Staff of the Department of Water Development would be in charge of supplying water to the scheme, whereas the agricultural staff would supervise water distribution and irrigated production. In this set up, the assemblage of resources that a plotholder had to manage was no less complex than that of a commercial water right holder, and often more unpredictable because of unreliable water supplies, distant markets and unscrupulous middlemen or monopolistic marketing boards. Plotholders would have to play the game of submission, while exploring the margins of the possible. They would also have to deal simultaneously with competing fellow irrigators.

For the majority of communal farmers, irrigation was but a pipe dream. They had to cunningly deal with the capriciousness of the rains. For them, however, it was not enough to appease and anticipate the forces governing the rain. They also had to contend with outside institutions, rules, regulations and enforcement officers who spoke the language of conservation. For state actors, conservation became a key justification for intervention (Anderson, 1984: 327; Beinart, 1984). The colonial command-and-control discourse found fertile ground here and a

complex set of legal, institutional and technical prescriptions were designed in an attempt to harness the behaviour of the communal farms. The Natural Resources Board was established and the Natural Resources Act of 1941 was promulgated. An army of NRB officers were enlisted to enforce the Act by prohibiting stream-bank cultivation and imposing penalties, while Land Development Officers forced farmers to construct contour ridges. Research stations mushroomed where soil erosion was quantified and extrapolated and an entire suite of state actors and new scientific insights and technologies were unleashed on the communal areas. What strategic response could have been provoked in this environment, other than synchronised sabotage?

Despite strong legal backing and the mobilisation of various technological and financial resources to monitor and evaluate conservation and water use, the resultant state-engineered water-networks proved not to be durable in the communal sector. Enforcement proved difficult, because the interventions justified by these self-referral water-networks, lacked legitimacy. In response, counter-discourses developed resulting in the emergence of various 'informal' water-networks that challenged the legitimacy of the command and control network that was in place.

After independence, and more particularly, after the adoption of neo-liberal structural adjustment policies, a need for change was felt in a number of areas that had facilitated reforms in the water sector since 1998. Concerns of equity and cost-recovery, as well as the need to include the non-commercial sectors in the decision-making process, led to the adoption of a new Water Act in 1998. A new institutional reality was thus created, with the establishment of catchment councils in which all water users were represented, to take joint responsibility for water allocation and the issuing of water permits.

This paper describes five cases of water-networks. The first focuses on rainfed agriculture, capturing rainfall on marginal lands. The second deals with a farmer-managed irrigation scheme where networks follow royalty and crop contracts. The third case looks at the competing claims of water between formal and informal small-scale irrigators. The fourth case shifts attention to competing claims between large and small operators. The first four cases are all set in Chimanimani district in Eastern Zimbabwe. The fifth case concerns a large water supply scheme for Mutare City. The diversity of the cases presented allows us to draw some generalised conclusions on water-networks, what they consist of, how they tend to operate and what this means for administrative reform.

Stones and rainfall on the hills in Biriwiri (Van der Zaag, 2001)
Biriwiri is a small valley in Chimanimani district, where from time immemorial people have used the waters of the Biriwiri River, a small tributary of the Nyanyadzi River that flows into the Save. They have used it for domestic purposes and for cultivating crops, on ridges along the riverbed or with the use of irrigation furrows. However, most communal farmers do not have access to river water to irrigate their crops, since their plots are located on the steep hills, away from the river. These farmers use rainwater instead to raise their maize, beans, pumpkins and other crops.

What is special about the Biriwiri hill farmers, compared to most other small-scale farmers in Zimbabwe, is that they have eked out their farming plots on hill

slopes which are considered, by the agricultural extension service, as being too steep and unsuitable for arable agriculture. To cultivate the steep slopes farmers have developed stonewalled terraces.

The Biriwiri terraces form almost level mini-catchment areas where rainwater is captured for the cultivation of crops. The way in which the stone walls are laid out implies that soil erosion is minimised, even on the steepest cultivated hills (steeper than 20%). They allow a form of permanent agriculture, and most terraced plots are cultivated each year. Farmers manure their fields annually and intercrop maize with beans. Farmers also believe that the terraced fields have an internal source of nutrients that sustain yields: while planting the seed with the hoe, stones that seem to 'grow' to the surface are removed and thrown upon the walls, the soil below being 'virgin' and nutrient-rich.

The terraces were developed in the early 1950s when the colonial state began to enforce the Land Husbandry Act and tried to implement contour ridges on the cultivated fields in the Biriwiri valley plain. This proved difficult because of the many stones in the fields. As a compromise, farmers were encouraged to lay the stones along properly pegged contours, forcing farmers to plough along the contour. Gradually, pronounced terraces developed. Local farmers soon found that such terraces were extremely suitable for the cultivation of the much steeper hillsides, rendering more land for arable use. This was a welcome discovery, because more and more people were continuing to arrive in the Biriwiri area, thrown out of nearby Melsetter Intensive Conservation Area but refusing to be resettled in the lowveld. Farmers (knowing that the cultivation of lands steeper than 12° was prohibited) will emphatically point out to outsiders that their terraces have been properly laid out by the *mudhomeni*, or extension workers, thereby implying that they are officially approved. The technology spread quickly and was adopted by new farmers coming into the area. At present, most hills in Biriwiri are terraced, and new terraces are still being constructed.

The development of the bench terrace technology, in which the farmers played a decisive role, facilitated the emergence of a durable network between farmers, soils and stones. The technology has proven capable of capturing rainwater whilst mediating the potentially destructive effects of heavy rainfall on steep slopes. Its downstream effects are therefore limited. Because the water-network captures rainwater rather than water flowing in rivers, its 'span' is limited, as it does not have to mediate with upstream and downstream users. It is has also been proven to be durable: some fields have remained productive for a period of some 50 years. Another reason for its durability is that male and female farmers have been willing to invest enormous amounts of labour in the construction and maintenance of their terraces. This is especially revealing, since the tenure of these arable plots is, at least on paper, insecure because of the prohibition to cultivate steep hillsides. Acknowledging the local headmen and chief, and asking permission for the clearing of new fields, is therefore carefully observed.

Networked water distribution in Mutambara irrigation scheme (Manzungu, 1999b)
Mutambara irrigation scheme irrigates 145 hectares with water diverted from the Umvumvumvu River, gravitating into the canals and furrows. The scheme was started in 1912 by a group of farmers who copied what was happening in the

nearby Mutambara Mission (Rukuni, 1988). The scheme was taken over by the colonial government in 1936, and government control continued until 1974 when the scheme was closed on account of farmer resistance to the colonial administrators. In 1980 the scheme was re-opened as a community-managed scheme.

Water access in Mutambara irrigation is heavily influenced by the socio-history of the scheme. The present scheme is the result of a fusion of two different irrigation initiatives (Manzungu, 1995, 1999b). Thanks to well meaning but ignorant (of the social organisation of the people) colonial authorities, this brought together feuding communities. As a consequence the down-stream irrigation blocks suffer incessant water shortages, even in years with normal water availability.

Water distribution in Mutambara cannot be discussed about without reference to the Chief of the Mutambara dynasty. The scheme is regarded as belonging to the Chief, since he is believed to have started the scheme: a claim which is not backed by archival records (Manzungu, 1999b). A lack of archival evidence however has not stopped the Chief and his associates from monopolising water access. Indeed, water tends to follow people with royal connections. Interestingly enough, the royal circle tends to shrink when there is a severe water crisis, as was the case during the drought of 1994, when the inner royalty completely monopolised the water. The dominance of the Chief and his associates regarding water access is point of contention and is contested. There have been cases where the hegemony has been challenged by a combination of technological, hydrological, legal and commercial factors.

Mutambara irrigation scheme has a history of growing crops like tomato and peas under contract to canning factories in Mutare town, 75 km away from the scheme. This is a lucrative activity that every farmer hopes to be part of but many changes have occurred since the early 1980s when contract farming started. Initially, the contract crop was grown under the auspices of a single 'club' representing a group of farmers who marketed the crop together. In 1996 there were 11 such clubs and in 2001 as many as 24 (Wiskapu, 2001).

The proliferation of clubs is financially related. Each club signs a contract with the company. The contract has to be respected by all club members, and this is achieved through social control. Social control is important because side marketing of the contract crop results in a particular group or club being penalised by the company. A common penalty is that the club in question will not receive seed the following season. Farmers now prefer smaller groups, where social control can be more effectively exercised.

These clubs are more than just marketing clubs. They are also a way of distributing water. The contract crop tends to receive preference during irrigation. Thus securing seed for the tomato crop secures irrigation water. Even members of the royalty have to play the game and place themselves within these structures of clubs if they are to grow the contract crop.

In years with less than normal rainfall, most farmers find it difficult to secure access to irrigation water. When faced with a wilting crop, farmers sometimes visit their holdings to irrigate their crops without permission in the middle of the night. Such thefts tend to go unpunished because of the general breakdown of the spirit of social organisation among the irrigators. A permissive infrastructure helps in the sense that water flows throughout the system all the time and the

numerous leakages make water diversion easy. No–one can with any certainty know how much water goes where. The relatively low operation and maintenance costs means that the Chief can afford to ignore the other irrigators. This would be different if, for instance, the scheme depended on pumped irrigation water. In such cases, regular bills (of electricity or diesel) would have to be paid, and technology would be forcing some solidarity amongst irrigators.

The way water is shared in Mutambara irrigation scheme shows how farmers depend on a number of elements that they combine in particular ways forming different water-networks. For a start, we can safely say that rules are seldom adhered to. In fact the rules only deliver water when things are 'normal', which is very rarely. Farmers therefore take strategic action to secure water, using and constructing different networks such as the royalty and the 'marketing' clubs.

The networks are comprised of many heterogeneous physical elements such as technology, investment, maintenance (infrastructure), hydrology and climate which all bring into focus the water source, water availability, the delivery infrastructure, and crops. These are combined or re-configured to ensure water access. Thus a drying Umvumvumvu river in Mutambara demands that water-networks be re-defined: they may 'shrink' as royalty is re-defined; but expand to outside companies whereby the commercial route emerges as an effective instrument to access water, circumventing royal claims. In addition, marketing clubs proliferate due to increasing distrust among irrigators. The water-networks also extend beyond the scheme level: in times of low river flows, Mutambara irrigators disclaim the entitlements of upstream irrigators using whatever arguments are convenient (Manzungu, 1999a). These include legal arguments, referring to statutory ('they do not have a water right') or customary law ('the Mission does not own the land, which was given by the Chief, therefore the water it uses is ours').

Competing for Nyanyadzi river water (Bolding et al., 1996, Bolding 1999)
The Nyanyadzi River flows from its origins in the Eastern Highlands of Chimanimani district westward into the Odzi River, which in turn flows into the Save river. The Nyanyadzi and its main tributaries, the Shinja, Biriwiri and Makwe streams, collect water from a catchment area of 800 km^2. On its descent the river passes through extensively used large scale commercial farmlands, resettlement and communal areas respectively, flowing from a lush, high rainfall area (1200 mm of rain annually) into the dry, sparsely vegetated lowveld (receiving 400 mm/yr). At its downstream boundary a government managed smallholder irrigation project (Nyanyadzi, started in 1934) depends on water captured upstream to irrigate the 414 hectares serviced by its open canal system. The river has presented two pressing problems. Firstly, its flow tends to decrease to a trickle during the crucial dry season months. Secondly, it tends to deposit increasing amounts of silt in the Nyanyadzi project, choking its diversion weir, main canal and night storage dam. These changes in the river's behaviour pose a threat to the sustained operation of the project, and are attributed by the irrigators to developments upstream. Many farmer initiated irrigation furrows have been developed across the catchment and compete with the Nyanyadzi project for scarce river water. Other land users have opened up new tracts of land on steep hills and in the close vicinity of riverbeds, thus adding a flavour of silt to the

river's storm floods. Furthermore rain clouds nowadays appear to avoid some of the upper reaches of the catchment, resulting in declining rainfall. Droughts have seemed to occur more frequently during the last 20 years. This has made land users in the catchment even keener to enter into a productive engagement with the river, thus increasing competition over valuable water.

Various networks have emerged in the catchment, responding to the scarcity of water, by mobilising different combinations of infrastructure, land use practices, water sharing arrangements, local authority and legal claims. This case discusses two such water-networks that have emerged within the same catchment. The integrated land and water management practices of informal furrow irrigators upstream are contrasted with the attempts of Nyanyadzi irrigation project beneficiaries to realise their legal claim on river water. During times of water scarcity Nyanyadzi irrigators literally bring the water of the river to their intake, through organised upstream raids destroying intakes of competing irrigation furrows.

Irrigation development in the Nyanyadzi catchment may date back to pre-colonial times, but major developments started early in the 20th century. White settlers took out furrows, and farm labourers, tenant farmers and communal farmers soon followed this example. The government began the Nyanyadzi irrigation project in 1934. By 1938 it had already been discovered that upstream African furrows competed for water with the Nyanyadzi project. The government used the Water Act and Natural Resources Act to squash indigenous irrigation furrows and to declare the wetland cultivation practice of *matoro* illegal. It was believed that informal furrows were wasting water, and that wetland cultivation was destructive, causing siltation.

As the water and agricultural administrative bureaucracy grew in terms of staff, offices and legal instruments, the Water Act and its stipulations had, during the late 1940s and early1950s, become a reality to the white settler furrows as well. The settlers applied for water rights on mass. In 1952 the Water Court sent a team of engineers to investigate the hydrological behaviour of the river (when the first discharge measurements are conducted) and assess the irrigation practices and plans of the white settlers. Again unauthorised African furrows were declared illegal. In addition, the priority right of Nyanyadzi project was made subservient to the upstream water rights of European farms with a more recent priority. Whilst the water administration established a semblance of rigid order (issuing absolute volumes of water, relying on self monitoring of water abstraction by users with help of measuring devices), Nyanyadzi river water and its users did not comply to this order. In the mountainous upper reaches of the catchment, irrigation continued without water rights and measuring devices. The emerging water-network controlling and regulating Nyanyadzi river water did not reach that far.

In 1967 a network of 5 automatic gauging stations was installed to 'calibrate' the decisions of the Water Court with the empirical hydrological behaviour of the river. The immediate necessity for these measuring devices was the possible construction of a dam on the Nyanyadzi River, which would alleviate water shortages in the Nyanyadzi project and allow further expansion of irrigation in the lowveld.

During the late 1970s, at the peak of the liberation war, groups of labour tenants and land hungry communal farmers invaded the empty farms in the

middle range of the catchment and started using the irrigation furrows as well as taking out new furrows. The spatial set-up of these furrows respected the local hydrology. Their management was often mediated by a headman, using the principle of sharing of water during scarcity by means of taking turns, and remaining outside government control.

Water rights were of no concern, until 1983 when the administration was on its feet again. The District Administrator applied for water rights on behalf of many new furrow irrigators in Shinja resettlement scheme and the downstream communal areas. Thus, Nyanyadzi river water was increasingly committed to these water rights, and users were more frequently confronted with water shortages. During such times of water scarcity, the sole river inspector for the entire province of Manicaland could do very little to effect the priority date system of water rights.

In effect, water administration follows the irrigation practices on the ground, rather than the other way round. The Water Act, staff from the Department of Water Development, and flow gauges seem powerless to control and regulate water use. This is evidenced by the fact that more water rights have been issued than the river can deliver in critical dry seasons. V-notch measurement gauges that have been installed at the intakes of some furrows are used as symbols of legality rather than for measuring water abstraction. The official state-engineered water-network surrounding water use is authoritarian but weak, particularly during times of water scarcity.

Due to the upstream developments of informal irrigation furrows, plotholders in Nyanyadzi irrigation project are faced with frequent water shortages. The water administration, however, fails to find a suitable and lasting solution. Hence the plotholders and the project's management have no other option than to take the initiative. They organise raids up the river, destroying the diversion structures of the numerous informal furrows. But the raids have been futile: the effect is minimal in terms of water reaching the project, and the destructive raids are opposed by politicians and extension workers in the middle range of the catchment. The District Administrator has twice brokered a 'fair' water sharing arrangement between the informal and formal irrigators, but these arrangements have proven to be unstable. The deal was that the upstream furrows along the Nyanyadzi River and the Nyanyadzi irrigation project would open and close their intakes on alternate weeks, in this way giving each other equal access to irrigation water. The DA deployed principles of 'sharing' water in a 'fair' manner. Both principles seem to have been derived from the way the informal furrows were being managed in practice, and not from the Water Act of 1976. In fact, 'water sharing' and 'fairness' are concepts foreign to the Water Act, which has been based on an entirely different principle, namely the priority date system. However, the water that left the Nyanyadzi in this arrangement never reached the project intake: the water percolated and evaporated on its way down through the dry riverbed. Consequently, the Nyanyadzi project could not be made to co-operate in this deal. However fair the deal was, it had to fall through.

Interestingly, the new Water Act of 1998 abolished this priority system of water rights, and based itself on principles of equity and proportional allocation. The new Water Act has also established catchment councils constituted by representatives of all water users, who jointly decide on water allocation. The question is whether these legal and institutional innovations are sufficient to

resolve the water conflicts in the Nyanyadzi catchment in a more acceptable and negotiated manner, bridging the gap between legality and practice, and interconnecting the various water-networks. One thing is certain: the new structure will not produce more water or change the characteristics of the riverbed, and shortages are bound to continue. Additional changes will have to be made on the material elements of the existing water-networks, so that diversion weirs, furrows and canals are better tailored to the fluctuating flows and silt loads of Nyanyadzi River.

Trees and irrigators competing for water and land in Chimanimani [5]
The case of competition for water between a transnational forestry company, Border Timbers (a subsidiary of the Anglo American Corporation), and farm labourers engaged in 'informal' furrow irrigation, is set in the Nyanyadzi river catchment, Chimanimani district. The Nyanyadzi irrigation project (the government-managed scheme mentioned in the previous section) also features in the background of this case.

The story starts with white settlers of the Martin trek (1895) carving out large farms in the upper and middle range of Nyanyadzi catchment. In this process, resident African families became farm labourers. The farms were mainly used for cattle ranching, but irrigation infrastructure was also developed for horticulture. However, the area was affected by the liberation war in the 1970s. By 1978 only eight of a total of 105 farms in Cashel and Chimanimani were still occupied by their white owners (Alexander, 1993: 247-48). The rest of them had either been killed or had fled from the freedom fighters infiltrating the area from nearby Mozambique.

This set the scene for John Heynes, one of the few remaining white farmers and chairman of the Cashel Rural Council, to expand his cattle ranching operations to a network of farms which by the end of the 1980s numbered some 80 farms in Chimanimani and his native Makoni district. Heynes was locally known as *Masoori* for his propensity to make farm labourers sorry by using his *sjambok*. Heynes took care of many farms that had been abandoned by their white owners during the war. He put cattle on these farms and employed local *baasboys* and some tenant labourers to look after his steadily growing herd.

After Independence, Heynes and his Hangani Development Corporation (over 7,000 hectares on six farms in the upper Nyanyadzi catchment) did very well economically (mainly cattle ranching). Meanwhile, the government had started the land resettlement programme. Farms designated by the government for resettlement were invaded by more and more settlers from neighbouring overcrowded communal areas. The new squatters managed to make a living by, amongst other activities, taking out irrigation furrows and entering into lucrative tomato and pea-growing contracts with Mutare based canning factories. The Squatter Control Committee of Chimanimani, however, issued alarming reports on the environmental destruction caused by these squatters, but failed to provide an alternative in the absence of more resettlement farms.

In 1995 Heynes decided to sell his Hangani development corporation farms. Border Timbers, the local commercial forestry company and biggest employer of

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[5] This section is based on unpublished material collected by Alex Bolding.

Chimanimani district, expressed interest in these farms, which would enable it to expand operations for the planned chipboard factory in a joint venture with Mozambican investors. In January 1996 a team of officials from the Department of Agricultural, Technical and Extension Services (Agritex) assessed the farms for sale on their suitability for resettlement. The team considered all farms unsuitable for resettlement, since they were too steep and hilly for arable farming - this was despite the presence of numerous irrigation furrows on these farms operated by farm foremen and tenant labourers. Subsequently, Border Timbers hired a consultant to conduct an environmental impact assessment on the planned afforestation, eco-tourism and wildlife ranch developments. In July 1996, the Rural District Council was briefed by the consultant that the afforestation with pine trees (90%) and blue gums (10%) would be done in an environmentally friendly manner, such that the trees would have a next to minimal affect on the run-off of the Nyanyadzi river.

In September 1996 a University of Zimbabwe researcher and a Chimanimani Rural District Councillor informed downstream irrigators of the imminent land transfer and afforestation plans, which could affect their already limited access to water.[6] Most furrow irrigators are keenly aware of the effects of exotic tree plantations on the hydrology of their river. The Zimbabwe Farmers Union in Nyanyadzi irrigation project also expressed displeasure with the Border Timber deal, but failed to mobilise its members effectively. Border Timbers hired another consulting company from South Africa for a second EIA, which projected a 10% reduction of mean annual run-off 12 years after the start of afforestation. The Managing Director of Border Timbers, however, claimed that the run-off might even increase due to a phenomenon called 'mist entrapment' by pine trees. Economic arguments (trees are the most productive use of land), environmental arguments (resettlement can only lead to degradation of valuable resources, wildlife ranching enriches local biodiversity), as well as a newly started gum tree out-growers scheme for resettlement and communal area farmers seemed to carry the day. The Councillor proposed a compromise deal: Border Timbers could proceed with its project provided it build a dam capturing storm run-off from the river for the benefit of the downstream irrigators, thus off-setting the increased upstream water use by the trees. However, the alliance built by Border Timbers appeared to be too strong, despite recent presidential elections that were won by President Mugabe on the back of promises to address the land issue.

In 1997 Border Timbers began planting 500 hectares of pines on one of the farms. Halfway through the year the Mozambican investors decided to pull out of the chip board factory joint venture. Towards the end of November, the government designated two of the six farms included in the Hangani land deal under the Land Acquisition Act. The four remaining farms formed a contiguous block located in the rain-shadow of the upper catchment of Nyanyadzi River, and were considered unsuitable for exotic tree plantations.

This case, which is much more complex than presented here, shows how a number of actors mobilise networks, selectively drawing on political and

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[6] Long term afforestation studies in Erin and Chisengu (Chimanimani district), where Msasa grassland was converted into exotic pine plantations, reduced annual river flow by 26% and 19% respectively. Dry season flow, crucial for irrigation, decreased by 42% and 15% respectively (Andrews and Bullock, 1994).

scientific resources. It is beyond doubt that establishing a plantation of pines and gum trees on the under-utilised farms in the upper reaches of the catchment would significantly decrease the dry season flow of Nyanyadzi river. Border Timbers, however, managed to forge an alliance (both economic and scientific) which succeeded in silencing objections made to its plans. Border Timbers enrolled two companies that produce Environmental Impact Assessment reports indicating that the project would hardly affect the hydrology. It also unveiled a plan to develop eco-tourism and wildlife ranching on the farms considered unsuitable for commercial timber production.

Underlying this story line is the land question. After the presidential elections in 1996, the government of Zimbabwe geared itself towards a second resettlement phase. The white landowner was desperate to sell his farms before they were grabbed by the government under the Land Acquisition Act. Surprisingly, the land speculator and Border Timbers managed to get a declaration of no interest from the government. Objections from the Zimbabwe Farmers Union, the Councillor and the University of Zimbabwe researcher were brushed aside. The livelihoods of scores of labour tenants and their families were sacrificed. However, the final twist in the case showed that a more powerful actor-network, a network of high politics, intervened when two of the farms were finally designated.

The politics of plenty: Pungwe water for the city of Mutare [7]
In 1992, the city of Mutare (130,000 inhabitants) ran out of water. The city council instituted stringent measures, such as water rationing, bans on the use of hosepipes and the filling of pools. Punitive tariffs were also imposed, backed up by awareness campaigns in newspapers and at schools, in a desperate move to curb demand. As a result, water consumption dropped to a third of its level for the previous year earlier. The city was saved at the eleventh hour by rains that replenished the dams from March 1993 onwards. This traumatic experience fuelled local politicians, residents and the Department of Water Development to search for an additional source of water for the city. The additional amount required to quench the thirst of the Mutareans was not an issue that received much attention: the capacity of the city's existing water system (20 Mm^3/yr) simply had to be doubled to cater for it's projected need until the year 2010, by which time the its population would have surged to an estimated 300,000 people.

No questions were raised regarding the demand-side of Mutare's water problems. If the city's water need would be based on, say, half the unrestricted demand, which was still 50% more than consumption during the year of the great drought, the existing system would have sufficed until the year 2010. And what if all efforts would be directed towards reducing system losses? Consumption could either increase to more acceptable levels, or the quest for new supplies could be postponed even further. How much are system losses anyway? Pertinent questions such as these were ignored. The city firmly believed that with more water available, and given its strategic location along the Beira corridor between the Indian Ocean and Harare, the town would attract more businesses and be

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[7] This section is based on unpublished material collected by Pieter van der Zaag.

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poised for an 'economic boom'. The quest for doubling Mutare's water supply had begun.

Three different supply options presented themselves and one was chosen. This option involved taking water from the Pungwe River.

The advantages of this option were:

1. The water would gravitate through a 4km tunnel and a 46km pipeline to the existing treatment works at Odzani, from where it would further gravitate to the city; this option would therefore not require any pumping.
2. The water drawn from the Pungwe would be pure, hardly requiring treatment.
3. The pipeline would be owned by the city.

The disadvantages were:

1. Only some 16 Mm^3/yr could be securely drawn from this source, so it fell short in providing a supply solution for the coming 15 years.
2. It would be expensive to build (US\$ 100 million, nearly three times the next expensive option).
3. It would create problems with Mozambique, and in particular the city of Beira, which depends entirely on Pungwe water.
4. It would negatively impact on the pristine ecology of the Pungwe catchment, located in a popular National Park.

In arriving at its decision, the City Council appeared to have used two major criteria. The first was that it wanted to own the new water system in order to be fully in charge of the scheme, and not depend on central government. The second was obvious; namely that it would prefer the option that was cheapest to the city. The Pungwe alternative, while by far the most expensive in terms of investment, had the lowest running cost. If the city would be able to access government loans on the usual local authority borrowing terms, the interest rate would be lower than the annual inflation rate (~20%) (Zimconsult, 1996). This meant that the best option would always be that option with the lowest recurrent operational costs, whatever the initial investment. The Pungwe alternative was the only option that scored positive on both criteria.

The City Council now had to solve a number of obstacles to get the pipeline constructed. To begin with, the Department of Water Development was in favour of another option. It argued that the Pungwe scheme was too expensive and would yield little water. Since Mutare would require the department's approval for its preferred alternative, it had to make it change its mind. Additionally, the Council had to present the preferred option to the Mutareans as the best, if not the *only* way of solving Mutare's water woes, so the residents would forget to ask difficult questions, such as how much the Pungwe water would cost. The Council would also have to overcome Mozambique's opposition to the Pungwe scheme. And finally, it had to find a suitable financing package.

The City Council managed to overcome these odds within a period of 18 months, through establishing a fruitful relationship with a Swedish construction firm (which backed up the City's preferred option with engineering facts, and mobilised support from Sida, the Swedish International Development Agency), and by carefully exploiting political opportunities within a faction-ridden Manicaland province of the ruling party. But the major feat was that the council

managed to portray the Pungwe project as providing purity (pristine water), security (no more shortages) and prosperity (more business) to its residents, all in one. These powerful positive values became synonymous with the Pungwe scheme, and most people fell for it. Few still wanted to look into the detailed merits and demerits of this option. Once popular support was achieved, the vying politicians could do little else than to follow suit.

One outstanding issue was that a declaration of no objection from the government of Mozambique was required before the project could go ahead. This was a condition set by donors. The Pungwe River, shared by Zimbabwe and Mozambique, is the only fresh water source of the city of Beira (some 500,000 inhabitants). Tedious negotiations at government level finally resulted in an agreement whereby Mutare was allowed to take a maximum of 700 l/s, provided that it would always leave a flow of 500 l/s in the river at the point of abstraction. Engineers subsequently translated this agreement into a specific design of the river off-take. Construction of the Pungwe pipeline started in December 1996, was completed in December 1999 and officially opened by President Mugabe in March 2000.

A group of actors had managed to construct a pipeline that some believed was the least feasible of several options to solving Mutare's water crisis. The group managed to interconnect two river systems, rendering two cities separated by geographical distance and national boundaries, interdependent of each other. They also managed to enrol highly placed ruling party leaders, who for once set aside their differences, and overcame initial opposition from the Department of Water Development. Finally, the group managed to interest a Swedish engineering company and international and local financing institutions. Around the Pungwe, a water-network emerged with a vast span, both geographically and politically. The network proved too strong and effective for the voices of dissent. Mutare residents were blinded by the Pungwe symbol, and made to forget the impending tariff increases. The Mozambican government was made to accept the project. Environmentalists were painted as a 'clique of very few individuals' and small-scale farmers in Honde Valley, who feared they would be affected by Mutare's water abstraction upstream along the Pungwe River, were threatened with eviction. Even Sida staff critical about the project did not dare to come out in the open. All these voices of dissent, clearly with their own different agendas, failed to connect and establish an effective water-network with a global resonance. They did not manage to enrol, for instance, concerned environmental and other groups in Mozambique, Sweden and elsewhere.

By the year 2000, the main proponents of the pipeline were extremely pleased. The Swedish engineering firm could add another engineering miracle to its portfolio (constructed in time, within budget, with minimum environmental impact). Standard Bank was proud to have engineered together with Sida an innovative financing modality, whereby US$ 5 million of aid money could generate another US$ 45 million of local financing from the private sector. (In addition, a Nordic financier provided a US$ 50 million concessionary loan to the Zimbabwe government.) Sida, for its part, was confident it had helped 'to ensure that countries can make their own decisions on their economies and policies and create the conditions necessary for national self-determination'.[8]

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[8] African Business, July/August 1999; http://www.africasia.com/ab/jul99/abfn0701.htm

The City Council was also pleased, as it managed to get the option it wanted. It now owned a pipeline that produced water at very low recurrent cost, and did not have to worry too much about the loan repayments, as the interest rates were less than the inflation rate. After the inauguration of the pipeline, the city engineer closed supply from the old source of water, and exclusively used Pungwe water that hardly required any treatment, saving substantial amounts of money. Water consumption could now continue to grow, and in October 2000 raw water abstraction surpassed the all-time record of January 1991, namely 1.6 Mm^3/month. The council treasurer was happy, because more water delivered meant more revenue. And the politicians could look back on a job well done: a job that first managed to influence the people in what they perceived their needs to be, and subsequently satisfied them.

The only problem was that the pipe network within the city refused to co-operate. Pipes kept on leaking and bursting, and more and more water meters mysteriously got stuck. It was now pure Pungwe water that was disappearing and nobody wanted to know that half of this precious water was going to waste (Gumbo and Van der Zaag, 2001).

Discussion

Despite their differences, the cases presented here show what is entailed when human actors attempt to harness a life-giving water resource. The case studies demonstrate, first, that it matters which water source is at focus, and for what purpose it is intended to be used: whether it is rainwater for agriculture, river flow for irrigation, or pristine river water for a city. Clearly, networks are not built for their own sake, but evolve because of the object that has to be harnessed. Consequently, the physical object of appropriation influences the shape of the water-networks that develop. Harvesting rainwater required a network of a limited span, diverting river water for small-scale irrigation required a network that spanned the river catchment, while abstracting water for a large city from an international river necessarily involved a network that ranged across river basins, countries, and even continents.

Secondly, these cases show that it is not always easy to channel, harvest and use water for its intended purpose. It nearly always requires substantial investments, whether in monetary terms, labour, knowledge or in social relations. All cases presented here required, in fact, all four types of capital. The bench terrace was knowledge- and labour-intensive, while Mutambara irrigators had to mobilise commerce as well as forge new social relationships to access water. In all cases, some institutional regulations were breached or set aside. Some actors carefully exploited the fragmented nature of the institutions involved, drawing on those that suited them most and ignoring the rest. For some, the complex, uncoordinated and fragmented institutional and legal reality thus became a resource in itself.

Thirdly, in all cases there were alternative solutions for an intended water use. Biriwiri farmers could have decided to harvest rain somewhere else, where the land would be more co-operative. The City of Mutare could have decided to get water from the nearby and under-utilised Osborne dam, at a much lower investment cost. This option, however, involved high running costs (pumping,

water treatment), and would have made the city dependent on the Department of Water Development, which owned the dam. The Hangani farms in upper Nyanyadzi could have been used for sustained furrow irrigation and wildlife ranching by officially re-settled, former labour tenants and squatters, at no detriment to downstream water users. Alternatively, Border Timbers could have offset the negative flow impact of afforestation on downstream water users by constructing a dam. Since such alternatives existed, actors had to enrol other actors in their projects, strategically establishing coalitions, and convincing others of the benefits of the preferred solution. So landless peasants made Land Development Officers accept the bench terraces on land too steep to cultivate. The Department of Water Development made a surprise about-turn in the case of Mutare. Similarly, the Honde valley farmers were overpowered by threats of brute force, and environmentalists were largely ignored. Border Timbers mobilised economic and environmental arguments and twisted scientific evidence in order to ward off political claims on more land for destitute communal area dwellers, and to dismiss the dam option.

Fourthly, once a preferred solution had been 'stabilised', the physical world had to be transformed and made to cooperate: stones were re-aligned in Biriwiri; Mutambara irrigation infrastructure was allowed to leak in order to oil water (re-) distribution at night; in the Nyanyadzi catchment, furrows were dug at suitable locations honouring the local hydro-geological behaviour of water, and elsewhere exotic tree plantations were established; at Pungwe the intake structure 'concretised' an agreement between Mozambique and Zimbabwe, 'cementing' the connection between two river basins.

At times, however, the physical world and water's hydrological behaviour resisted to comply with the prevalent legal and institutional framework, and refused to honour the claims and needs of state and other actors. Thus the post-independence Water Court administered water-network issued more water rights than was available in the Nyanyadzi River, and the river could not honour these claims. Irrigators from the Nyanyadzi project could not realise their right to the river's water in times when they needed it most. The riverbed did not comply with the water sharing arrangement brokered by the District Administrator, and river flows disappeared. The informal upstream furrow irrigators argued that the little water available could be utilised by them better, as it was otherwise going to waste (i. e. consumed by riverine vegetation, percolated to the subsoil, or evaporated into the air). So the fair deal collapsed.

Finally, some of the networks of human and non-human actors that emerged were powerful, some of them were durable, and some were both. The water-network emerging around the Pungwe was powerful: it mobilised US$ 100 million, it managed to eclipse common sense, and could enrol actors on a global scale. The network may not durable but is bound to last, at least in terms of the continuous flow of water from the river to Mutare residents, and the flow of repayments of the loans incurred. Other water-networks, like the one's engineered by Biriwiri dryland farmers and Nyanyadzi furrow irrigators, whilst not powerful in the sense of formal legal and institutional backing or spatial extent, have proven to be very durable.

Conclusion

Water-networks can be understood and described as an outcome of strategic action where actors use whatever is deployable in their bid to secure water. The practices of actors featuring in the case studies were largely informed by the physical and other (including social and institutional) resources available to them. In the water-networks described, essential parts of the social dynamics were focussed on, and to certain extents constrained and determined by, material things rather than people. Networks of human and non-human actors emerge around water use that have a sense of order. The water-networks are recursive, emergent forms that enable further action to be taken by some, while constraining the options available to others. The central point of the cases is that these networks include material elements, which are integral, if not central, parts of them. The material context in which human action is enacted is thus a constituent element of that action. The actor-oriented approach (Long, 1984) has, in our view, underplayed the material dimension in social relationships and human action. As a result, its contribution to some important academic debates, such as those centring on the artificial binaries 'nature-society' and 'actor-structure', has been disappointing, while its potential relevance to development practice has so far been limited.

If it is true that water-networks have materials as constituent elements, changing these networks may pose a real challenge. Zimbabwe at one point made the political decision to reform its water sector through changing the water law (which abolishes water rights and converts them into permits), and establishing new institutions, such as the Catchment Councils. These new legal and institutional forms aim at making the availability of water more equitable, its use more efficient, while protecting the environment and involving stakeholders in the decision-making processes of water allocation and use. These are all laudable objectives. However, the question is whether legal and institutional changes are sufficient to effect a change in the existing water-networks, and whether the actors forming part of these will change their practices and attitudes. The physical parts of these networks are most likely to stubbornly remain unchanged. Since the material things are intricately interwoven in these networks, the actors using the water may find it difficult to adapt their action to the new institutional reality, unless they re-adjust the entire assembly of the network, including its material parts. Only then can water use practices be expected to change substantially.

The Mutare pipeline case provides a clear example of this. The pipeline seems to follow the values enshrined in the old water act, which sought to solve water problems in a supply driven, technocratic manner. With the new water act in place, the pipe now appears a misfit: since it provides plenty of water at low recurrent cost there is little need for the City Council to closely monitor water use and attempt to minimise unaccounted-for-water. As a result unaccounted-for-water has increased to unacceptable levels since the commissioning of the pipeline in early 2000 (50% of water diverted from the Pungwe). At the same time, water tariffs have increased in order to service the investment loan, compromising access to this life-giving resource to the poor. The physical parts in this water-network therefore induce practices that lead to inefficiency and inequity.

If the new legal and institutional forms had been in place, would for instance the Mutare and Nyanyadzi cases have resulted in different outcomes? Referring to the latter case, one can expect Nyanyadzi river water management and development to have been subject to scientific, political, and economic debate in a (sub) catchment council with all the stakeholders represented. Would such a user institution have succeeded in negotiating a decision that was more favourable for small-scale producers, in the face of powerful interests that transcend the local polity? And would it have resolved the clash of interest between the 'formal' and 'informal' small-scale water users? Merely establishing a negotiation platform is most probably not a sufficient condition. It would require relations between people and things to be clarified and changed, and thereby relations between people.[9] It would often also require that the relations between things themselves be changed, so that the assembly of artefacts not only better respects the local hydrology but also the new water regulations and the catchment-wide water-network as a whole.

At a more practical level, in the Nyanyadzi catchment the (user) rights to water of all water users need to be clarified, in an open and transparent process of consultations, thus paying respect to the material reality of the Nyanyadzi water front. Simultaneously alternative sources of water could be considered. Groundwater remains a potential alternative to a dam for the irrigators in the downstream Nyanyadzi project, and requires investigation. If groundwater proves to be a feasible alternative, Nyanyadzi project could rescind (part of) its claims to river water. Finally, the design of diversion structures, measuring devices and furrows need to be evaluated on their effectiveness by technical experts, in close consultation with their users/owners. This could be done in a manner that would allow easy monitoring by both users and catchment council staff, thus calibrating and materialising the discourse of proportional water allocation ingrained in the new water Act (WRMS, *n.d.*; see also Van der Zaag and Röling, 1996) with the prevalent practice of issuing and measuring water in absolute volumes (as embodied in the prevailing V-notch water measurement structures).

Similarly, the intervention package required in the case of the city of Mutare would involve a suit of technical, institutional, financial and other aspects (Gumbo and Van der Zaag, 2001). Irrespective of the fact whether Mutare city uses Pungwe water or water from other sources, the present leaking distribution network begs urgent attention. A demand management strategy combined with efforts to upgrade the distribution network, making it water tight and transparent, can mitigate Mutare's water woes to a considerable extent (pre- and post-Pungwe project). Water meters can be repaired, pressure reducing valves at some points in the reticulation network installed, a monitoring and water audit system established, and the water services provided to some high density areas completely overhauled. In addition, the institutional relationships between the treasury and engineering departments within the city council can be clarified, the flow of information between these departments re-directed and intensified, and new city council regulations established to ensure a reasonable and stable maintenance budget. Finally, the environment, for which water reservations have been made in the new water Act, begs for representation on the newly

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[9] Appadurai (1986); for an application to water-networks see Coward, 1986a, 1986b.

established Save Catchment Council. Pristine river valleys, like the Pungwe, do not speak up for themselves, despite legal stipulations favouring their cause.

In both the cases of Nyanyadzi and Mutare we see that holistic intervention packages are called for, if Nyanyadzi and Pungwe waters are to be used equitably, sustainably and efficiently.

In conclusion, a symmetrical treatment of human and non-human actors in the actor-oriented approach has the potential not only to productively engage in some of the important sociological debates, but also to increase the relevance of sociology to the development practice. In addition, such an actor-actant approach would be an open invitation for the non-social scientist to join in, something we would gladly accept.

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