

**PAPER PREPARED FOR THE CHRONIC POVERTY
CONFERENCE 'TEN YEARS OF WAR AGAINST POVERTY'**

**Tracing the 'War Against Poverty' in Rural Ethiopia
since 2003 using a Complexity Social Science
Perspective**

Lessons for Research and Policy in the 2010s.

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(replaces earlier draft sent to CPRC in July)

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'Matter has an innate tendency to self-organise and generate complexity. This tendency has been at work since the birth of the universe, when a pinpoint of featureless matter budded from nothing at all Energy and chemical elements produced by the stars have led to the emergence of intricate structures as organised as crystals and human brains.....(p10) Life is also an emergent property, one that arises when physiochemical systems are organised and interact in certain ways. Similarly, a human being is an emergent property of huge numbers of cells, a company is more than the sum of its pens, papers, real estate, and personnel, while a city is an emergent property of thousand or millions of human beings' (p330) (P. Coveny and R. Highfield, *Frontiers of Complexity: the Search for Order in a Chaotic World*, 1995)

'We can go forward not by importing a whole new set of tools and meta-theoretical specifications from somewhere else, but by reconstructing the tools and theories that we already have in complexity terms' (p98) D. Byrne, 'Complexity, Configurations and Cases' *Theory, Culture and Society* 2005

1. Introduction

In this paper I argue that, during the next decade, the international development social sciences and policymakers and practitioners in the field would benefit from the mainstreaming of a complexity social science perspective, describing one use of the perspective for tracing the 'war against poverty' in rural Ethiopia and some of its consequences since 2003 when the first poverty reduction strategy was put in place.

In section 2 I describe what I mean by 'complexity social science' (CSS) and show how its meta-theoretical foundations provide a particularly useful base for exploring and understanding processes of reproduction and change in developing countries, designing and implementing realistic and co-ordinated interventions, and monitoring, evaluating and adapting them as they proceed.

In Section 3 I describe the use of a CSS framework in the design and implementation of an ongoing donor-funded research project¹ to explore the longer-term effects of all the development interventions which entered six rural communities in Ethiopia between 2003 and 2010, while in Section 4 I present some of the conclusions emerging from the interpretation and analysis process.

Section 5 concludes.

2. Complexity social science of, and for, international development

Complexity science

Parallel and interactive progress in maths, physics, chemistry and biology underpin the development of complexity science whose origins can be traced back to the work in the 1930s and 40s of two mathematicians, Alan Turing and John von Neumann, who initiated the computer technology which made that progress possible. Coveny and Highfield have defined complexity science as 'the study of the behaviour of macroscopic collections of ... units' (e.g. atoms, molecules, computer bits, neurons).. 'that are endowed with the potential to evolve in time' (1995: 7). There are a number of key features of complex open systems. They use and dissipate energy from the environment to stay 'far from equilibrium' and they take in, use, and store information about the environment. Changes in internal states occur in response to changes in the environment; structures can be adapted when necessary. Changes in system behaviour are not linearly related to changes in the environment.

¹ For more information see www.wed-ethiopia.org. The ideas, fieldwork and analysis underpinning this paper have been worked out in close collaboration with Catherine Dom and Alula Pankhurst, who also provided useful comments on an earlier draft.

Viewed synchronically complex systems exhibit different degrees of complexity and non-linearity. Parts are related, inter-dependent and interact in such a way that there is emergence; the whole is not the sum of the parts (it may be more or less). There are interconnections among elements, dimensions and levels and an important aspect of internal relationships is that they are variably non-linear. Different systems have different degrees of connectivity affecting overall resilience and adaptability to external changes. Degrees of connectivity also vary between different system areas and levels affecting the intensity of feedback processes.

Viewed diachronically different types of system have different durations. System trajectories are also potentially non-linear; systems evolve and, through self-organisation, may change qualitatively as a result of the impact of changes in the environment or new ways of dealing with a persisting environment developed internally. They also co-evolve with other systems in the environment. There are positive and negative feedback processes. History matters and there is path dependence in reproducing systems with the system paths moving in 'phase space' (the space of the possible) contained by predictable 'attractors'.

Complexity social science

Complexity theory, complex realism and complexity social science

Ideas about non-human living systems from complexity science have been used as metaphors in writings about 'complexity theory' by philosophers (e.g. Cilliers, 1998) and sociologists (e.g. Byrne, 1998; Urry, 2003; Smith and Jenks, 2006; Harvey, 2009)². Some thinkers (e.g. Reed and Harvey, 1992) have suggested using a combination of ideas from complexity science and critical realism (Bhaskar 1989, Danermark *et al* 1997) in an approach described as 'complex realism' (Byrne, 2002; Harvey, 2009). I am using the descriptor 'complexity social science' to propose an empirical research approach which incorporates meta-theoretical ideas from complex realism but integrates them with substantive theorising, a methodological framework, and a relevant dissemination programme. The key difference between complexity science and complexity social science is that in social systems account must be taken of the reflexive agency of the human actors in the system (Byrne, 2009).

Complexity social science depends on a 'meta-theory' which poses various challenges to empirical research approaches premised on the Newtonian model of predictable cause and consequent event. This model assumes that the social systems under study are simple and closed in the sense that exogenous forces are either controlled experimentally or analytically excluded from causal consideration (Harvey, 2009: 27). It is further assumed that there are universal laws governing such systems and that the combined causal forces do not interact significantly among themselves. In the complexity social science perspective such simple models 'fit only very limited sets of phenomena' (Smith and Jenks, 2006: 91). Byrne argues that complexity theory 'challenges the nomothetic programme of universally applicable knowledge at its very heart – it asserts that knowledge must be contextual'. It also confronts the 'subjective relativism of post-modernism with an assertion that explanation is possible, but only explanation that is local in time and place.' (2005: 97).

Being a relatively new approach critical realists/complexity theorist/complexity social scientists have been concerned that it be built on sound and transparent knowledge foundations and there has been much discussion about ontological and epistemological assumptions (e.g. Sayer, 2000; Cilliers, 1997).

² In a variety of ways complexity approaches have entered disciplines and fields across the board

Ontology

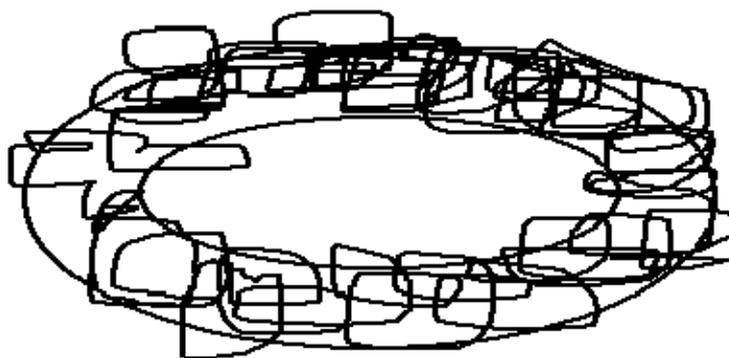
Traditionally, ..[ontology] .. is the field of philosophic enquiry that has to do with things .. or real world objects and their intrinsic structures, properties, causal powers, and so forth. That is to say, it treats them just in so far as they are taken to exist and to exert such powers quite apart from the scope and limits of human knowledge. (Norris 2007, p.335 quoted in Harvey, 2009: 15).

Critical realism provides a view of social reality as structured, differentiated, stratified and changing. Reality is assumed to consist of several domains: the real (mechanisms implicit in the structures and potentials of entities/systems), the actual (when mechanisms trigger an event) and the empirical (when they are experienced/observed by a person). Different kinds of mechanisms belong to different strata of reality including physical, chemical, biological, psychological and social strata. Human and social systems have causal powers whose exercise depends on choice and context. The consequences of the exercise of causal powers are contingent on what else is going on in the context.

If we add to this view the general ideas about complex systems described above we arrive at a complex realism perspective in which, while social reality is conceived in relational, dynamic and processual terms (Emirbayer 1997: 281) it is also seen as organised in different interpenetrating kinds of complex open social systems with structures with variable durability – empires, societies, communities, towns, businesses, households, etc. A viable system has to be able to resist some of the dynamics in its environment; it occupies a temporal space where the past is allowed to play itself out in interaction with the present (Richardson *et al*: 2001).

Open social systems are constituted through the ongoing actions and inter-actions of social actors located in unequal role, relationship and resource structures with material, technological, social, cultural, economic and political dimensions. The density and connectivity of networks is not uniform throughout the system. Complex realists are interested in the trajectories of social systems – in both change and reproduction. Social change can be brought about by changes in the system's context, by internal perturbations or a mix of both. Durable social systems experience internal changes which do not lead to a change in the direction of system as a whole; they are confined within a torus (doughnut) attractor (Figure 1).

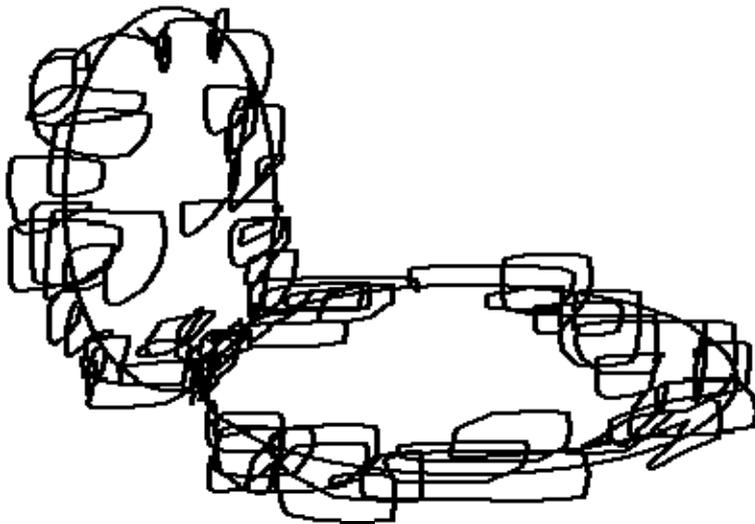
Figure 1: The Torus Attractor



Source: Byrne 2001 p2

Within enduring complex social systems it is possible to identify 'control parameters' – dominating processes or sub-systems which, through a complex of feedback processes, keep the system in the torus trajectory. When systems are very far from equilibrium as a result of internal or external changes they may become 'chaotic' and reach a bifurcation point from which they move in a new direction (Figure 2).

Figure 2: A Lorenz Attractor



Source: Byrne 2001 p3

The changes that make a qualitative difference are 'phase shifts' or 'transformations'; 'the accumulation of continuous change leads to the crossing of a threshold of kind' (Byrne 2005: 105).

The complex realist approach to causality does not involve a search for general laws. The aim is to identify causal components which explain how a particular system or 'ensemble of similar systems' produced the specific phenomenon of interest. The Aristotelian description of four inter-acting kinds of cause is useful here: material, structural, efficient and final. Ragin contrasts the conventional view of causation 'as a contest between individual variables to explain variation in an outcome' with what he calls the diversity-oriented view according to which causation is both conjunctural and multiple – causes combine in different and sometimes contradictory ways such that there may be different routes to the same outcome (equi-finality). There are also processes of multi-finality through which similar interventions in different contexts lead to different outcomes.

Epistemology

The search for knowledge is not equated with the search for truth. All knowledge is made in a time and place but while it is socially produced it is not equally valuable and there are scientific criteria for assessing the ideas, methods and engagement with reality involved in the production of theoretical and empirical conclusions. Context is an important consideration and investigations have to be appropriate to the subject matter; the key issue is finding out what kind of system we are dealing with and producing a representation of it that is isomorphic with it (Byrne 2005: 102).

Identifying complex social systems for research purposes is problematic; since systems are open and cross-cutting there are no hard boundaries. In a recent development there has been a marriage of ideas from empirical researchers working with complex realist ideas in the UK and US social scientists³ involved in small- and large-N case-based research (Byrne and Ragin, 2009). Problems arising in the framing of complex open systems (Cilliers, 1997: 4) resonate with those related to the identification of a case (Ragin and Becker, 1992 - *What is a Case?*). From both perspectives it has been argued that the framework should be selected according to the purpose of the question being asked about the system.

³ Political scientists in the US have a particularly strong tradition of rigorous and theoretically-informed use of case-based methods. See, for example, George and Bennett 2005.

The essence of the case in a complex frame is that cases are in themselves complex systems which are nested in, have nested within them, and intersect with other complex systems. So, for example, a city-region is nested within global and national systems and has nested within it neighbourhoods, households and individuals. Nesting is not hierarchy. Determination runs in all possible directions, not just top down. All these levels potentially have implications for all other levels. However, as well as these elements which might be described by a hierarchical data system, there are other systems which intersect with them, cut across them, constitute part of them and are constituted by them. What is a system of interest at any point in time is defined by observation and action. Boundaries depend on what we are looking for and at. This is not to say that boundaries are arbitrary, relative or unreal. At one level the geography of city region is real. With another focus of attention the global socio-scape of an immigrant household is real. Each matters for the other. (Byrne 2005: 105)

This resonates with Cilliers' statement that 'different descriptions of a complex system decompose the system in different ways' (2005: 258) and that '..a principal requirement of a complexity-based epistemology is the exploration of perspectives' Richardson et al, 2001: 13

Given that no one perspective can capture the inherent intricacies of complex systems, the analysis of complex systems requires us to consider a number of perspectives. The underlying premise for this is that by exploring a number of perspectives, a richer appreciation of the "state of affairs" or "problematic situation" of interest will be developed, resulting in more informed decision making. In considering a variety of perspectives, a negotiation between these perspectives is encouraged that drives the exploration process. The merits and deficiencies of each perspective would be examined in light of both the supporting and contradictory evidence offered by the other perspectives (*ibid*).

Methodological framework

The CSS approach advocated and used here relies on case-based methods which have been the subject of a recent Handbook (Byrne and Ragin, 2009) whose purpose is 'to present the methods that can be employed by case-focused researchers, certainly in such a way as to enable people to employ them in practice, but also as the foundation for a practical social science...which gets beyond the dichotomies of quantitative/qualitative – explanation/interpretation' (Byrne, 2009a:2). Byrne goes on to argue that the turn to case-based methods 'is predicated on an explicit rejection of the utility of causal modelling based on variables', though this is not a rejection of 'quantitative measurement, description and systematic exploration' (op cit: 4). The handbook contains examples of a range of case-based methods and techniques including explanatory typologies in qualitative analysis, cluster analysis, correspondence analysis, classifications, Bayesian methods, configurational analysis including Qualitative Comparative Analysis (QCA), fuzzy-set analysis, neural network analysis, choice of different types of cases for comparison (e.g. most different cases with a similar outcome; most similar cases with a different outcome), computer-based qualitative methods, ethnographic case studies, and a systems approach to multiple case study.

Byrne argues 'quite strongly, that integrated accounts constructed around a complexity frame offer the best narratives for describing change (2001:74)'. In order to achieve such accounts he advocates the use of four processes in a practical complexity social science:

- **Exploring** which involves descriptive measurement of variate traces and examination of the patterns generated by the measurements in conjunction with exploration of qualitative materials (which might be texts, photos, artefacts)
- **Classifying** – sorting of things into kinds on a proto-typical basis (Bowker and Starr, 1999) and (temporary) identification of meaningful boundaries of a system or ensemble of similar systems
- **Interpreting** measures and narratives in a search for meaning
- **Ordering** – things sorted and positioned along the dimension of time and procedures for documenting changes and when they occurred

Quantitative and qualitative data are socially constructed in a fieldwork or administrative process. Quantitative and qualitative data pieces (measurements and narratives) are regarded as *traces* of the operation of the open system under study at the time of data-making. Using variate and narrative traces it is possible to locate a system of interest in a multi-dimensional state space.

A statistical method for locating a system in its state space is cluster analysis. The system's condition at any given timepoint is represented by the cluster (seen as an 'ensemble attractor') to which it belongs at that time point; the ensemble attractor is the area of the state space occupied by a number of systems moving in the same general domain. They are not identical in terms of scores on all the variate traces but they are in the same domain. (Byrne, 2002b).

Cluster analysis enables identification of (proto)types of case/system and can be used to identify future possibilities and impossibilities for the ensemble of cases compared with other ensembles. In a further step the best performer in the cluster can be identified and QCA used to find out what they are doing differently which others might copy. Byrne (2009b: 260) provides a telling example of the use of these techniques on an administrative dataset describing 126 schools in the North East of England. Using QCA he identified a configuration of twelve most-deprived schools (no sixth form and high scores on deprivation, absenteeism and pupils with special needs) where all but one were in the 'inadequate attainment' cluster. Further exploration (through qualitative investigation of OFSTED⁴ reports using NVivo – a qualitative software package) revealed that there was one thing that only the good school did; this was a 'very effective' (OFSTED) targeted staff-led mentoring programme. The introduction of similar programmes in the other eleven schools might be a cheap and effective way of improving educational attainment in these schools.

These methods are also good for exploring the trajectories of complex social systems. Using longitudinal data sets it is possible to explore changes in (ensembles of) trajectories by mapping through time (1) whether classifications have remained the same or changed (2) the membership of the persistent and new classes.

Complexity social science and policy and evaluation

The CSS framework is highly suitable for policy-related research. 'Complexity is essentially a frame of reference - a way of understanding what things are like, how they work, and how they might be made to work..... For me the great advantage of thinking about things in a complexity mode is that it opens up for us the exploration of what futures we might make come to pass. That is what social policies are about - or at least what the best sort of social policy has attempted to do' (Byrne, 2002: 8). An important activity is to establish what is possible⁵ (and not possible) for a particular case/system or ensemble of cases/systems.

The methodology is particularly appropriate to the task of designing interventions for change. '(P)olicy research seeks to discover ameliorative solutions to social problems in which small changes in the initial conditions of the life course of a person, a community, or an institution will produce great changes in the final outcome' (Harvey, 2002).

The approach allows for political choices - '...no universal optimization principle for complex systems... many futures are possible... they differ from each other qualitatively' (Prigogine, 1997) and is against 'one size fits all' as practitioners are aware that the best course of action will be context-dependent. Also the recognition that policy makers and implementers as well as researchers hoping to influence them with their arguments and evidence are themselves actors in open complex systems promotes a reflexive approach.

Considering evaluation Pawson *et al* (2004) recognise that 'social interventions are complex systems thrust amidst complex systems. Attempts to measure 'whether they work' using the conventional

⁴ Office for Standards in Education, Children's Services and Skills.

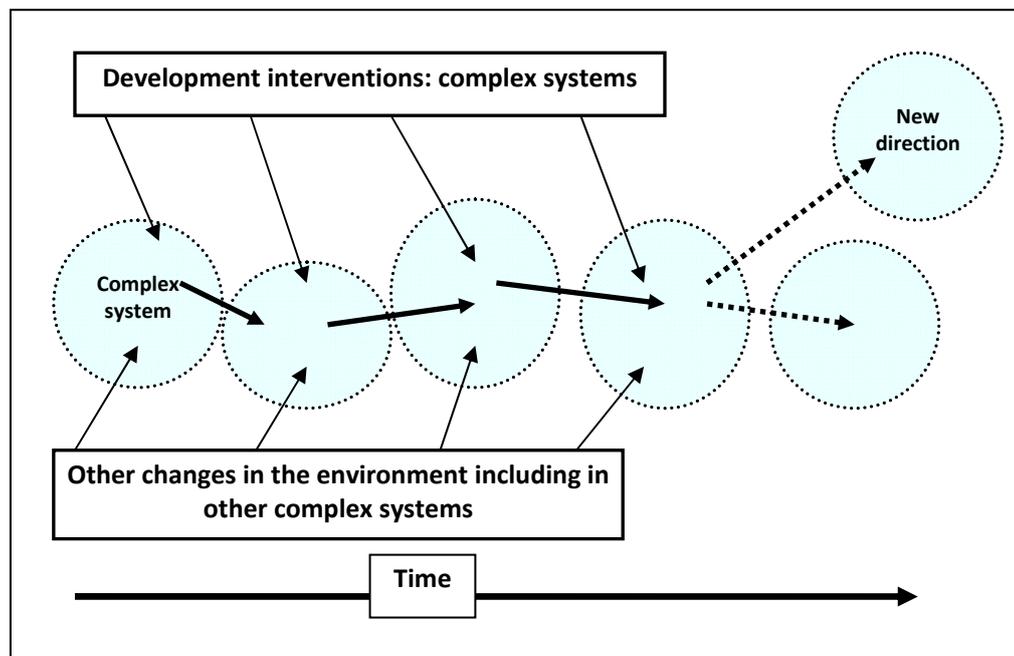
⁵ See Ragin 2009: 530 for more on possibility analysis.

armoury of the systematic reviewer will always end up with the homogenised answer ‘to some extent’ and ‘sometimes’, but this is of little use to policy makers or practitioners because it provides no clue as to why the interventions sometimes work and sometimes don’t, or in what circumstances or conditions they are more or less likely to work, or what can be done to maximise their chances of success and minimise the risk of failure.’ (p?)

Complexity social science and international development

Development is a process which in the longer-run has produced dramatic changes in the way all the people in a society live. Structural changes, which have social, economic, political and cultural dimensions, have been matched by changes in the ways in which people make a living, reproduce themselves, organise, make and implement political decisions, and think. The histories of the countries which are considered developed today show us that there have been different routes to development dependent on how the particular country’s historical trajectory co-evolved with the evolution of the global system. However, whatever the route, the structural changes have been immense.

Figure 3: Development interventions: complex systems entering complex systems



Support for the current aid and development ‘industry’ is predicated on a belief that planned interventions supported by resource transfers can initiate and accelerate development processes in less developed parts of the world. Development interventions are designed to induce changes which, it is assumed, will sooner or later result in a change in the trajectory of the country or community being targeted. Figure 3 shows that any single intervention enters a field where other interventions are likely to be in play and which contains the legacies of prior interventions.

As with other policy areas the CSS approach is isomorphic with the realities of international development policy and practice and this is reflected in the growing interest in ‘complexity’ among development social scientists. These include Uphoff, 1992, Rihani 2002a & b and 2005, Groves and Hinton 2004, Leach *et al* 2008, Mowles *et al* 2008, Eyben 2008a, and Ramalingam, Jones *et al* 2008.

The goal of the last set of authors was to identify ‘what potential value complexity science holds for the busy policy advisors, overstretched managers and time-constrained evaluators and researchers

who work on change and reform initiatives within our sector' (p2). After an exploration of the origins of the complexity sciences and social science applications, and consideration of the implications of a number of key complexity concepts for development and humanitarian policy and practice one important conclusion they draw is that the value of complexity concepts are at a meta-level, in that they suggest new ways to think about problems and new questions that should be posed and answered, rather than specific concrete steps that should be taken as a result. This means that they may be more useful in addressing questions of 'how' international aid work should be undertaken. The potential value and relevance of this is outlined in the following quote, taken from a recent large scale evaluation of relief efforts:

..International agencies need to pay as much attention to *how they do things, and their capacities to do them, as they do to the content of their policies and programmes...* sensitivity to context and the flexibility to adapt to evolving realities are essential, instead of applying predetermined strategies and one-size-fits-all (Telford and Cosgrave, 2006, p 119, emphases added)

This highlights the most important implication of complexity science - that it provides ways for practitioners, policy makers, leaders, managers, researchers, all to stop and collectively reflect on how we are thinking about trying to solve aid problems. Are we using inappropriate mental models and frameworks? Are we continuing to act in inflexible, top-down ways? Are we using too many off-the-peg approaches? Are we driven by naïve expectations of impact? Do we simplify complexities for the sake of convenience? These questions many of which will be familiar are challenging, highly necessary, and can be sharpened and honed using the ideas of complexity science. (p62)

While important aspects of CSS for the development industry are the new perspectives, new questions and new opportunities for reflexivity that they open up, for me the main value of the approach lies in the chance to develop a 'post-disciplinary' and Q- integrated (Bevan, 2005) development social science which looks beyond the 'household' and the 'state', takes account of power and culture, is *empirical* and (locally) cumulative, and whose methods can be incorporated into government and donor monitoring and evaluation systems to provide longer-term perspectives on all the real effects of aid-funded interventions. In the next two sections I turn to a description of a CSS-informed research project in rural Ethiopia which set off with these goals in mind.

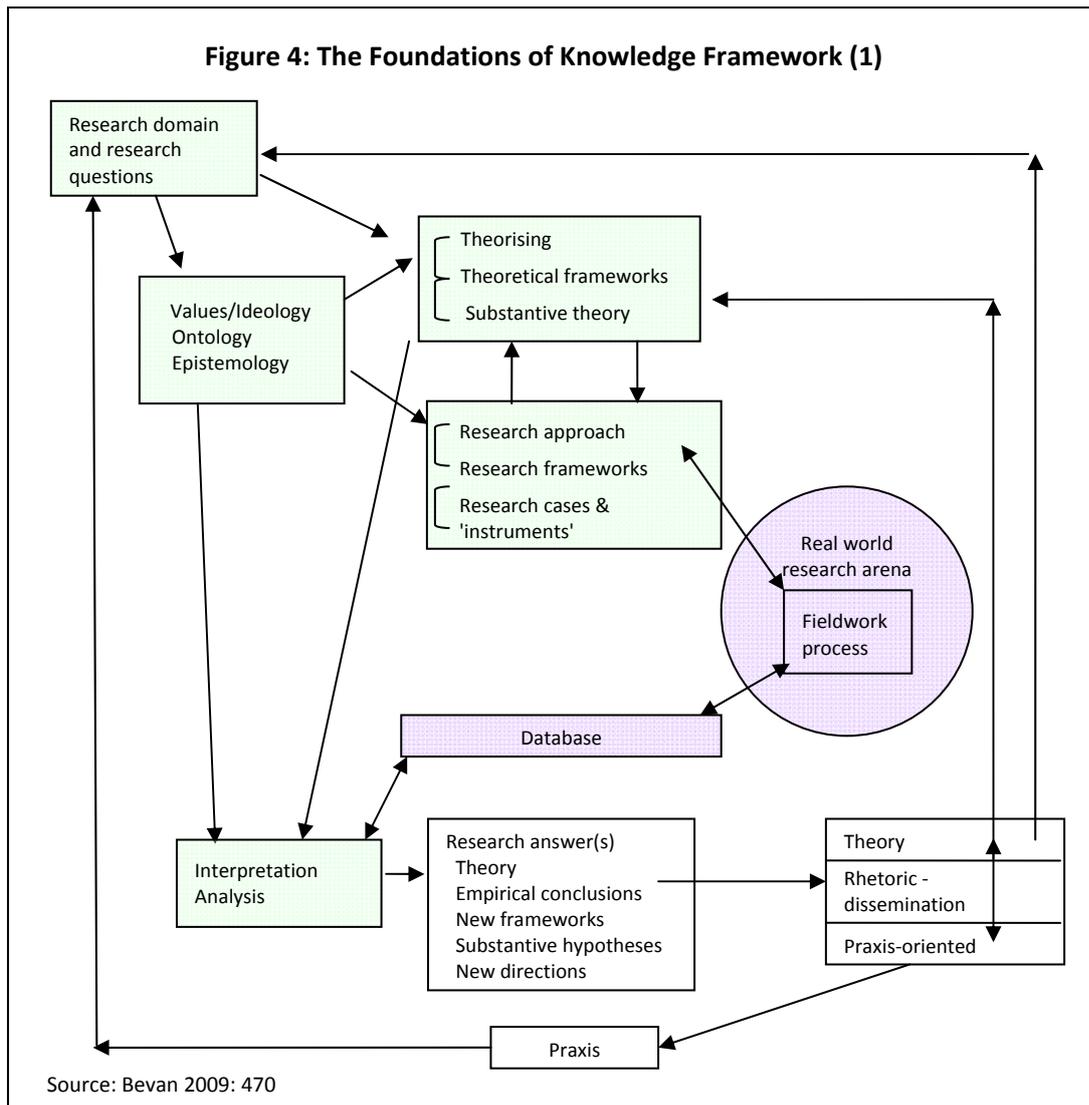
3. Research design and implementation

The Foundations of Knowledge Framework

While empirical researchers working in well-established and conventional fields can, rightly or wrongly, assume that the 'knowledge foundations' underpinning their methods and techniques are unproblematic, those trying to introduce new approaches need to be clear about these foundations.

Accordingly I am using a 'foundations of knowledge framework' (Figure 2 and Bevan, 2009) to order the description of the WIDE research. In this section I first describe the longitudinal database and introduce the new fieldwork to provide the context (those research areas highlighted in mauve in Figure 2) and then look at the WIDE3 research design and fieldwork implementation (those research tasks highlighted in green). The remaining three boxes are dealt with in Section 4.

Figure 4: The Foundations of Knowledge Framework (1)



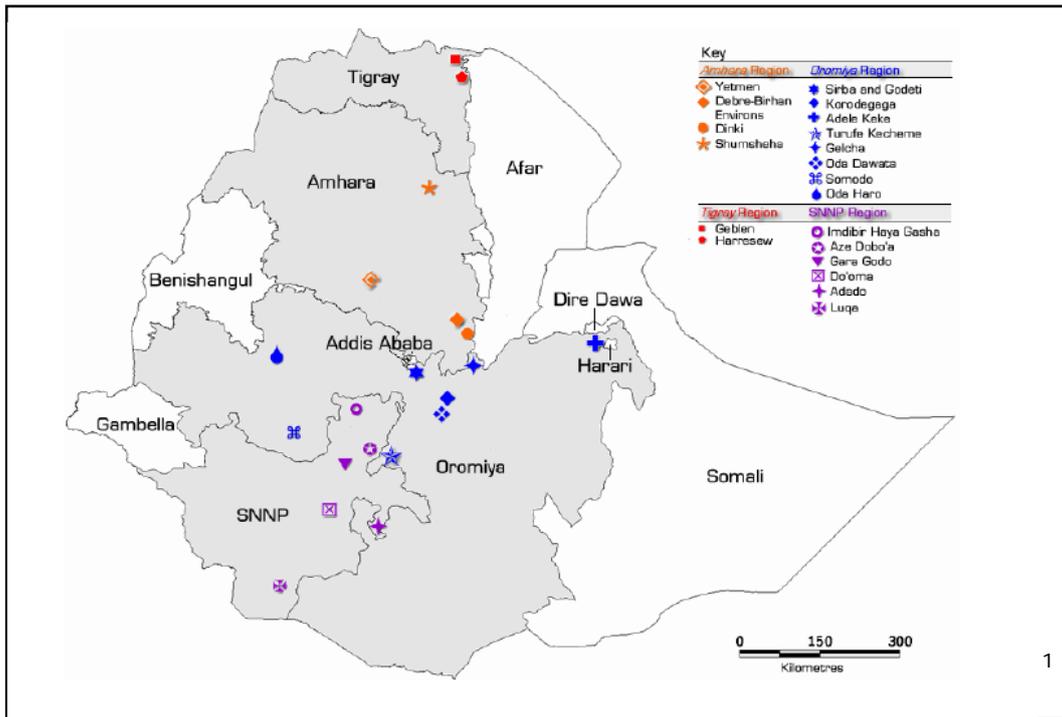
The longitudinal database including the new fieldwork in 2010

Fifteen rural communities in Ethiopia, selected in 1994 by economists at the University of Addis Ababa and the Centre for the Study of African Economies (Oxford, UK) as exemplars of the country's main agricultural livelihood systems, have been the subject of longitudinal study through:

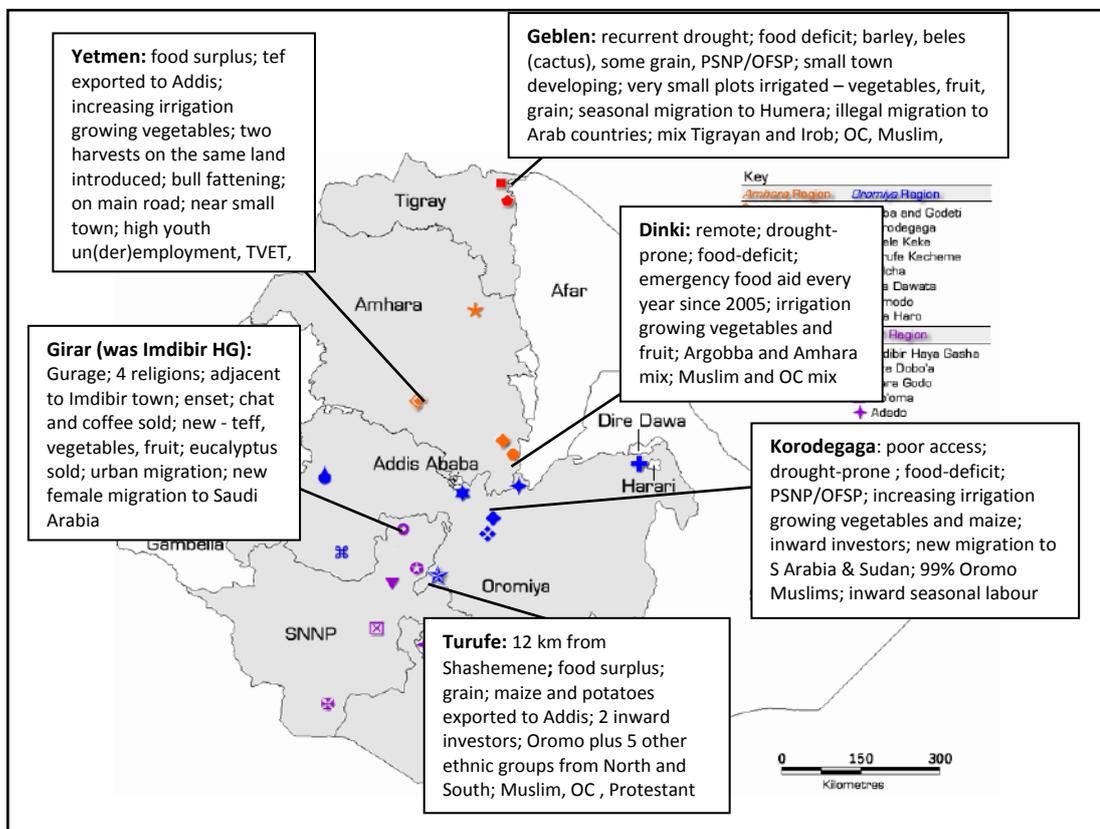
- the **Ethiopian Rural Household Survey**⁶, involving seven rounds of household panel data between 1994 and 2009
 - the Ethiopia **Longitudinal Community Study**, involving
 - fieldwork in fifteen sites in 1994/5 funded by the Overseas Development Administration, UK (WIDE1 - Bevan and Pankhurst, 1996)
 - the ESRC Wellbeing in Developing Countries Programme at the University of Bath (UK): the same fifteen plus five new ones in 2003 (WIDE2) plus sixteen months of in-depth fieldwork in four of the fifteen in 2004/5 (DEEP)

⁶ See www.ifpri.org and www.csae.ox.ac.uk

Map 1: The twenty research communities



Map 2: The six Stage 1 research communities



In 2009 a donor-government group in Addis Ababa convened to fund projects to assess changes in governance agreed to fund a return to six of the original fifteen sites in Stage 1 of a project we⁷ called 'Long Term Perspectives on Development Impacts in Rural Ethiopia'. For Stage 1, which is the subject of this paper, protocol-guided qualitative data made in 1994/5 (WIDE1) and 2003 (WIDE2), viewed as traces of the trajectories of the six communities, were used in conjunction with new fieldwork explicitly designed using a CSS framework (WIDE3).

Research domain and research questions

The policy interface between government and society in rural Ethiopia is found at community level and policies, programmes and projects will only produce development if they lead to widespread changes in local ideas and practices, and community institutions and structures. Rural communities are open complex systems whose workings are not well understood; in particular little is known about (1) what actually happens when government interventions enter communities and (2) why sustainable development processes are established in some contexts but not others.

The focus of the research was the extent of overall change in the community systems since 1994 and the effects on the communities of all the development interventions which had entered them since 2003. Before we started the fieldwork we identified four broad research questions to guide the research design, fieldwork and analysis:

1. What have been the impacts on rural communities and their members of the various development interventions implemented since 2003?
2. What similarities and differences can we identify in these impacts? How do they vary among different types of community and what are the reasons?
3. How does what really happened fit with government and donor models of how development should happen?
4. What do the longer-term trajectories of these communities look like? Where have they come from and where might they be going in the next few years?

As we got into the analysis we decided we needed to contextualise the development interventions in longer-term modernisation processes and developed five empirical questions to put to the database:

1. In each community what were the key features of the development situation in early 2010?
2. In what ways have the development situations of the communities changed since the mid-1990s? What modernisation processes were involved in the (potentially different) trajectories we are identifying?
3. What differences were made to the trajectories and the communities by development interventions and the connections between them between 2003 and 2010?
4. In what ways have recent social interactions, relationships and processes across the development interface affected the implementation and achievements of the various government and donor programmes?
5. What have been the impacts of modernisation as a whole, and recent development interventions in particular, on the lives of the different kinds of people who live in the communities?

⁷ Catherine Dom, Alula Pankhurst and myself in a Mokoro team.

Meta-theory

Values/ideology

We are committed to the idea that development social scientists should undertake empirical research that is (1) relevant for improving the life chances of the poorest and most vulnerable people (2) scientifically important and (3) helps well-motivated practitioners at all levels to understand how their area of intervention really works, including unintended effects of their actions, in order that they can act more efficiently and equitably.

Ontology

The research depends on the complexity social science ontology described above. Regarding that part of the world we are looking at – rural communities and their members – we conceptualise them as complex social and human systems which are open, as they depend on and interact with their environments, and dynamic, as they co-evolve with the open systems which constitute their contexts. Complex social systems have material, technological, social, economic, political and cultural dimensions and are constituted by elements in relationships. Structurally embedded heterogeneous *creative* agents with interests are organised in unequally structured sub-systems: communities contain households, community-initiated organisations, kingroups, formal and informal enterprises, schools, etc. They interact and co-evolve with NGOs, political parties, donors, government at different levels, transnational companies, investors etc. System structures involve unequal role, relationship and resource structures and have varying connectivity in different parts of the system. In some parts networks of relationship may be dense, in others there may be structural holes (Burt, 2001), and some particular types of people may be excluded from participation in many areas of the system.

Epistemology

Our approach to knowledge is that it too is imbricated in historically changing complex systems, so that what we can know is contingent and provisional, pertaining to a certain context and a certain time-frame. However, this does not mean that ‘anything goes’. We are committed to the institutionalised values and methodological rules of social science. Also our intense focus on a small number of rural communities over a period of years has given us a growing understanding of what has been going on and how the communities work.

So our search for knowledge is not equated with a search for truth. All knowledge is made in a time and place but while it is socially produced, often ‘on the shoulders of giants’, it is not equally valuable. There are scientific criteria for assessing the ideas, methods and engagement with reality involved in the production of theoretical and empirical conclusions.

The CSS approach advocated and used here relies on case-based methods (Bevan 2010: 6; Byrne and Ragin 2009). As described above context is an important consideration and investigations have to be appropriate to the subject matter. Quantitative and qualitative data pieces (measurements and narratives) are regarded as *traces* of the operation of the open system under study at the time of data-making. Using variate and narrative traces it is possible to locate a system of interest in a multi-dimensional state space. These methods are also good for exploring the trajectories of complex social systems using longitudinal data.

Theory

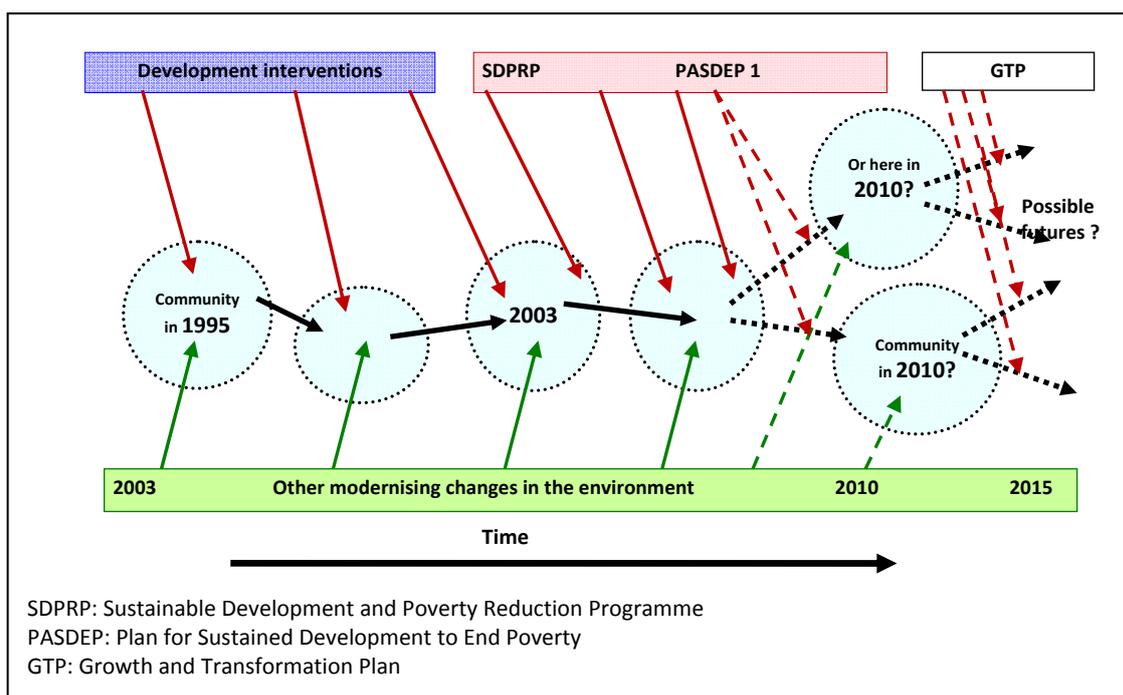
Useful distinctions can be made between: *theorising* – making use of other theorist’s theories; *theoretical frameworks* – conceptual tools suggesting useful ways of looking at social systems; and *substantive theory* – theory as a set of substantive statements telling us something new (Mouzelis, 1995: 1). At the start of the project the emphasis was on the development of theoretical frameworks

for guiding the design of the questions and methods. In that design we did not make use of any specific theories, apart from the complex realism theory described earlier, although past reading across the sociological literature and development social science disciplines provided a vital background.

Theoretical framework 1: community trajectories 1995 – 2010 and beyond

Figure 4 adds some Ethiopia-relevant content to Figure 1 which helped to order the interpretation and analysis of the data. In the early 2000s the MDG-focused donor programme, with its promise of financial and technical aid, began to influence government policies and sector programmes, initially within limits arising from the slowly subsiding tension that had prevailed during the Ethio-Eritrean war. In 2003 the government produced its first poverty reduction strategy paper setting out a three-year Sustainable Development and Poverty Reduction Programme (SDPRP) with a focus on poverty reduction led by the pre-existing Agricultural Development-led Industrialisation strategy (ADLI) and human capital investment in education and health services (ESDP, HSDP). Government-donor dialogue intensified and the successor Plan for the Acceleration of Sustainable Development for the Eradication of Poverty (PASDEP - planned to be replaced with the Growth and Transformation Plan in 2011) built on the SDPRP adding a new focus on the commercialisation of agriculture, and additional governance aspects. Since 2003 aid to Ethiopia has grown considerably increasing from almost US\$2 billion in 2005 to US\$3.3 Billion in 2008 as part of a 'Big Push' to meet the MDGs.

Figure 5: Community trajectories 1995 – 2010 and beyond

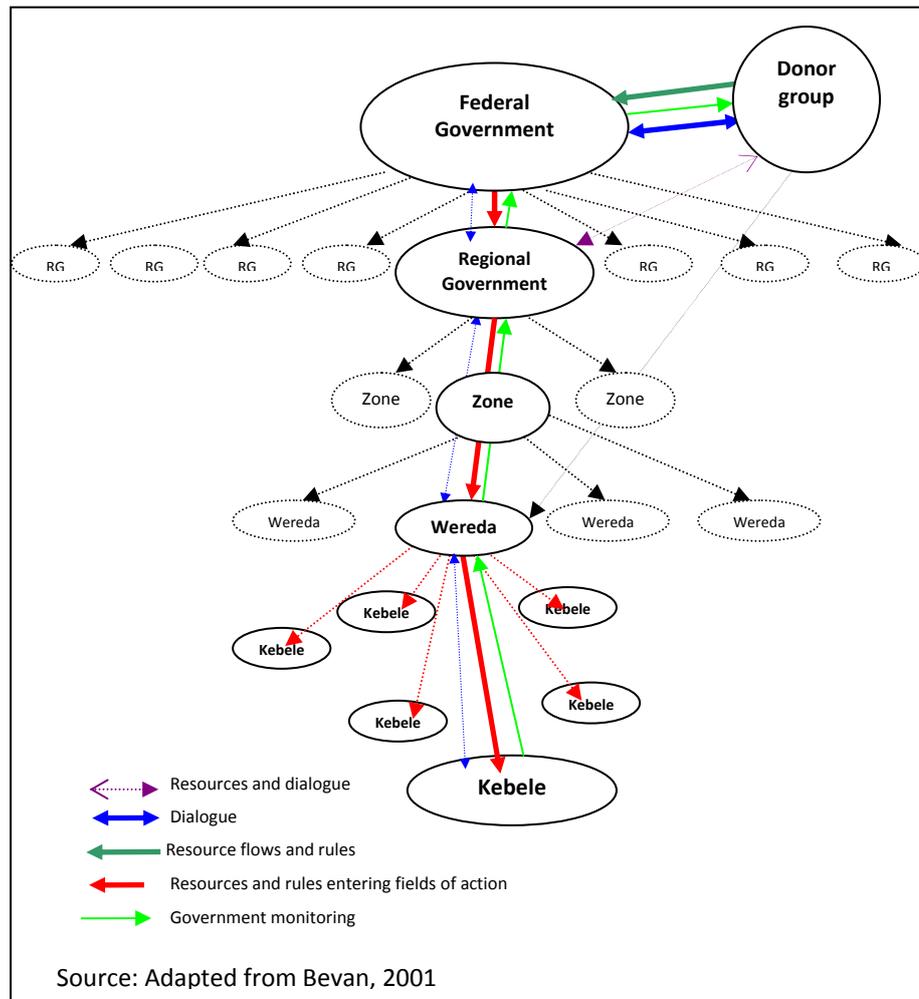


Theoretical framework 2: how aid-funded macro programmes become community-level development interventions

Figure 4 shows how most aid-funded interventions are transmitted to rural communities and how information about their progress is relayed back to them. A few donors have had interventions which go straight to Regions around which there is a dialogue, and there are some wereda visits. Linked to Regionalisation 1994/5 and then accentuated with wereda-level decentralisation 2002/3,

as part of 'building consensus' there has been dialogue between Federal and Regional governments. For example in 2010 Regions were developing their PASDEP 2s as an input in the federal PASDEP 2. There is also meant to be dialogue between weredas and kebeles to enable the latter to make suggestions relating to interventions, though we found only two references to this during the fieldwork.

Figure 6: Aid-funded macro programmes becoming community-level development interventions



Theoretical framework 3: seven perspectives on community systems

From complexity social science we took the notion that more than one description of a complex system is possible; different descriptions decompose the system in different ways. The 'multiple perspectives on community structures' framework involves two different holistic perspectives and five different de-compositions of the community systems.

Two holistic views of the community system

Perspective 1 – the community as a system adapting to its environment. This focuses on each community as a holistic system. How does each community work as a whole? How does it relate to its material and social context? How have community and context co-evolved?

Perspective 2 – the community in the broader Ethiopian context. Here the focus is on the location of, and relationship between, the community and encompassing systems (Tilly, 2008: 114): mainly wereda, zone, Region, country, globe. In order to identify communities with similar relationships to

the larger Ethiopia we have developed a set of typologies which can be nested in different ways to suit the particular policy issue at stake.

Five de-compositions of the community system

Perspective 3 – community macro organisation. This involves the delineation of community structures of inequality along class, status and political power lines. How is the community structured in terms of wealth, income, poverty and extreme poverty? What forms do gender and inter-generational inequalities take? How do other community-specific status differences structure inequality. These might be differences in ethnicity, religion, clanship/lineage, length of time living in the community, and/or occupation. Finally, who are the community elites?

Using *Perspective 4* we look at a key sub-system to which (almost) everybody in rural communities belongs – *the household*. What kinds of household structures exist? What are the important differences among households? What are the local ideal household trajectories and what happens to households which never get on to these trajectories or ‘fall off’ them as a result of social shocks?

Through *Perspective 5 – intermediate social organisation* – we identify five institutional settings (fields of action) in which community members are active and which are frequently foci for sectoral development interventions. These fields are unequally structured and are simultaneously domains of power where different kinds of people have different roles and different decision-making power. The fields/domains, described in more detail below, are: livelihoods, human re/pro/duction, social re/pro/duction, community management, and ideas (cultural re/pro/duction).

Perspective 6 focuses on the *social interactions* which take place within and across the five fields of action. The community system is reproduced and changed through the day-to-day actions and interactions of its members and incomers. The actions of more powerful people usually have more impact, although everyone has the power to resist individually and collectively. For example, there are four types of response that members of a community can make in the face of planned change from above: exit, voice, loyalty and foot-dragging.

Perspective 7 views *social actors* as individuals with life histories. Each social actor has a genderage, class/wealth position, ethnicity, religion, maybe other community-relevant social statuses, a personality, accumulated human resources and liabilities, and a personal history with associated memories related to wider community and country histories. People are inventive and have aims and make choices; they are capable of behaving badly and well. In rural communities they are involved in a dense web of relationships; they are constrained and enabled by the roles open to them in the different fields of action, the density and reach of their social networks, and their relative power positions in local structures of inequality.

More on Perspective 5: intermediate social organisation⁸

1. *The livelihood field* in these rural communities includes smallholder agriculture/livestock and agricultural employment, non-farm business and non-farm employment, and migration and remittances. These are the arenas in which household labour and, in some cases exchanged, shared or employed labour, is used to produce subsistence and cash income. They are also arenas for government development interventions, some of which are (partially) funded through aid programmes.

2. *The domain of human/re/production* includes all institutions and activities involved in the production and maintenance of people. Again the household is the focal unit supported by neighbour and kin networks. Areas and activities involved in the production of people include fertility, birth, maternal and infant health, child-rearing, health and education. The maintenance of people requires housing, household assets, water, sanitation, energy (firewood, dungcakes,

⁸ We used this perspective in previous analytic work for a paper prepared for the Empowerment Team in the World Bank (Bevan and Pankhurst, 2007)

kerosene, electricity), domestic work, food and other consumption, and appropriate caring by others. People also get 'reduced' through ageing and other processes.

3. *Social re/pro/duction* is achieved through social networks, social institutions, and social organisations. Networks are formed on the basis of neighbourhood, kin (blood-related and affinal), and friendship relationships and often go beyond the community. In some cases clan or lineage membership brings obligations. Important social institutions order life-passages including birth, in some cases transitions to adulthood, marriage, divorce, widow(er)hood, death and inheritance. Other institutions set rules for different aspects of social life, for example resource-sharing and exchanges such as work groups and share-cropping, and social exchanges such as attending funerals and visiting the sick. Social organisations include religious organisations and groups, workgroups and business organisations, community-initiated organisations providing social protection, credit and insurance, government-sponsored organisations such as service co-operatives and women and youth organisations, and community-based organisations sponsored by NGOs for particular projects.

4. In the domain of *community management* four types of structure are important: (1) community structures, e.g. for some decision-making and dispute resolution; (2) locally-specific wider lineage or clan structures, ethnic and/or religious structures, and political structures; (3) kebele structures including cabinets, councils, committees and social courts, and (4) wereda structures. More powerful people include local elites, kebele officials, kebele managers, extension agents, and wereda officials and we are interested in the overlaps among, and networks between, people occupying local and government positions. Local elites include people who are rich, elders, educated, religious leaders, and leaders of informal and some government organisations. The election of kebele officials involves factional politics based on local corporate groups (e.g. clans) and informal networks including kin. Extension agents in 2010 included Development Agents, Health Extension Workers and Health Promoters, teachers and community police.

5. In the *field of ideas* local people have access to seven types of cultural repertoires or models: (1) conservative customary ideas; (2) local modern ideas involving new life-styles and in favour of various moves towards individualism and egalitarianism; (3) repertoires of ethnic belonging; (4) externally financed religious mobilisations; (5) government modernisation models related to revolutionary democracy/the developmental state via wereda and kebele officials, party members, the media and word of mouth; (6) donor models via NGOs, the media and word of mouth; and (7) selected global repertoires via urban connections and diasporas. Ideas within one model are more or less contradictory to ideas in others. Some people are highly active in promoting particular models which may lead to social conflicts. People may draw on different models for different purposes and make longer- or shorter- term 'cross-repertoire' alliances.

We used this intermediate structures framework to order our 2003 societal and policy baseline data and to contribute to the calendar of macro level policies and programmes which entered rural communities in the period 2003-09 which was used in the Policy Paper. There are also 'cross-cutting' interventions designed to reduce inequality (Perspective 3) and develop community 'public goods' (Perspective 1). This is one useful way of making linkages between macro policies and processes and outcomes at community level.

More on Perspective 2: community typologising for policy analysis

Previous analysis of the ELCD data in 2003 suggested five useful community typologies based on hypothesised control parameters which could be used for different analytical and policy purposes.

Table 1: Initial Typing of the Twenty Communities 1995/2003

Region	Livelihood System	PSNP	Urban linkages	Ethnicities	Religions
Tigray					
GEBLEN*	Vulnerable cereal	Yes	Remote	Tigrayan, Irob	Orthodox Chr, Islam, Catholics
Harresaw	Vulnerable cereal	Yes	Remote	Tigrayan	Orthodox Christian (99%)
Amhara					
Shumsheha	Vulnerable cereal	Yes	Peri-urban	Amhara	Orthodox C 98%
Debre Berhan	Food cash crop exported		Peri-urban	Amhara	Orthodox Chr
YETMEN*	Food cash crop exported		Integrated	Amhara	OC, few practice animism
DINKI*	Vulnerable cereal		Remote	Argobba 60+% Amhara	Islam, OC
Oromia					
Sirbana Godeti	Food cash crop exported		Integrated	Oromo	Orthodox Christian, Islam, traditional
KORODEGAGA*	Vulnerable cereal	Yes	Remote	Arssi Oromo (99%)	Islam
TURUFE*	Food cash crop exported		Peri-urban	Oromo Tigrayans Amhara Wolayitta Kembata	Islam Orthodox Chr Protestantism Catholicism
Somodo	Food cash crop + coffee exported		Integrated	Oromo (Arssi and Shewa) Yem A few Kulo, Kembata Amhara	Sufi Islam Wehabi Islam Orthodox Chr Protestantism Ritual beliefs
Oda Haro	Food cash crop exported		Integrated	Oromo	Islam, Protestant, ritual beliefs
Odadawata	Food cash crop exported		Integrated	Oromo (Arssi and Shewa), Amhara Few Gurage, Silte	Orthodox Chr Islam Protestantism
Adele Keke	International cash crop	Yes	Integrated	Oromo Few Amhara	Muslim Few OC
Gelcha	Pastoralist in transition	Yes	Very remote	Karrayu	Traditional Islam
SNNP					
IMDIBIR/GIRAR*	Highly-populated enset		Peri-urban	Gurage	Orthodox Chr Catholicism Few Muslims+ Protestants Traditional
Aze Debo'a	Highly-populated enset	Yes	Remote	Kembata	Orthodox Chr Protestants Catholics
Gara Godo	Highly-populated enset	Yes	Remote	Wolayitta	Orthodox Chr Protestants Catholics
Adado	International cash crop		Remote	Gedeo	Protestants 90% Islam., OC, Gedeo beliefs
Do'omaa	Vulnerable cereal	Yes	Remote	Gamo 60% Wolayitta 40%	Protestants 70% OC 20% Syncretic
Luqa	Pastoralist in transition	Yes	Very remote	Tsamako	Tsamako beliefs Protestants

* Stage 1 sites

First there were Regional variations in policy and implementation. The twenty sites come from the four big *Regions*: two from Tigray, four from Amhara; eight from Oromia; and six from SNNP.

Second, the communities fell into five main *livelihood categories* of broad relevance for policy. There were six vulnerable cereal sites regularly dependent on food aid, three highly-populated enset sites, six sites which exported food cash crops to urban areas; two international cash crop sites (chat and coffee), one site which exported food and coffee, and two pastoralist sites which were 'in transition'.

Fourth, in terms of *urban proximity* and access to markets, services and information two sites were very remote, eight remote, six relatively integrated and four peri-urban. However many of the communities considered less remote overall had remote pockets.

Fifth and *sixth* in terms of *ethnic mix* and *religious mix* across the twenty sites there were fourteen ethnic groups: Tigrayans, Amhara, Argobba, Oromo (Arssi Muslims, Shewa Christians), Wolayitta, Kembata, Yem, Kulo, Gurage, Silte, Karrayu, Gedeo, Gamo, and Tsamako. Fourteen of the communities were ethnically homogenous but only seven of these had only one religion. Three sites had two ethnic groups, while three were both ethnically and religiously heterogeneous. The religions to be found were Orthodox Christianity, Islam (Sufi and Wehabi), Protestantism (various sects), Catholicism, and customary beliefs, ceremonies and practices.

During the WIDE3 inception phase we added a *sixth* typing parameter to identify economic dependency: since 2005 ten sites have been in PSNP woredas and ten not. Table 1 shows how the twenty communities vary on these six typologising categories.

Methodological framework

Research approach

For all three WIDE projects we used a protocol approach; fieldworkers in each site asked the same semi-structured questions of the same kind of key informant specified according to the topic of the protocol. In WIDE1 we employed only male researchers; in WIDE2 and WIDE3 in each site one male and one female fieldworker worked together. The fieldworkers were social science graduates from Addis Ababa University, many with Masters' degrees.

Research frameworks

There was a process of using the seven perspective theoretical framework to assist in the design of thirteen Modules containing protocol research instruments and instructions about the kinds of people the fieldworkers should interview. There was a consultative workshop with experienced fieldworkers to inform the design of the Modules and protocols.

Research instruments

Twelve of the thirteen modules listed here are available on the WeD Ethiopia website (www.wed-ethiopia.org) and there is more information in the Appendix; Module 13 which is not yet on the website was piloted in Amhara Region in April.

Fieldwork 1

- Module 1: Wereda perspective on the kebele 2003-9
- Module 2: Kebele perspective on development interventions and the wereda
- Module 3: Community trajectory 2003-9
- Module 4: Community experiences of government development interventions – men and women
- Module 5: Revisit to the wereda

Fieldwork 2

- Module 6: The impact of interventions on different kinds of household
- Module 7: The impact of interventions on dependent adults and young people
- Module 8: Organisations involved in, and affected by, development interventions
- Module 9: Interviews with key development actors
- Module 10: Two common issues: (i) gender relations in practice and (ii) HIV/AIDS and interventions
- Module 11: Site-specific follow-up
- Module 12: Research Officer Designed Modules
- Module 13: Regional Module

Real world research arena – fieldwork process

The fieldwork was conducted in two phases (15 and 20 days) with a gap between for a debriefing workshop and feedback to inform the design of the Phase 2 Modules. Most fieldworkers had some access to mobile phone reception allowing interactions with the fieldwork manager.

Making the database

The research officers used their field notes to complete 'Report Documents' which paralleled the Module structure but were in a form that made interpretation and analysis easier. A few initially submitted handwritten documents but most provided soft copies. The male and female reports were merged and edited and put into a Word database; the plan is also to make an NVivo database.

Interpretation and analysis

The three researchers each took lead responsibility for two sites, producing detailed Community Situation reports which brought together the perspectives of different kinds of community member and different kinds of 'government official' and were structured using a template based on the seven perspectives and five fields of action described above.

We also developed a range of matrices through which various kinds of comparison were made to assist in the drawing of conclusions about modernisation processes since 1994, the overall impact of all development interventions between 2003 and 2010, and the past and potential future trajectories of the communities. A key rule was that descriptions and conclusions in reports and matrices were linked to a set of Annexes which in turn were linked to a more detailed Evidence Base referring directly back to the database.

The data from two communities was entered into an NVivo database. Experimental use of the qualitative software proved to increase the efficiency and depth of the interpretation /analysis process and there are plans to extend the use in Stage 2.

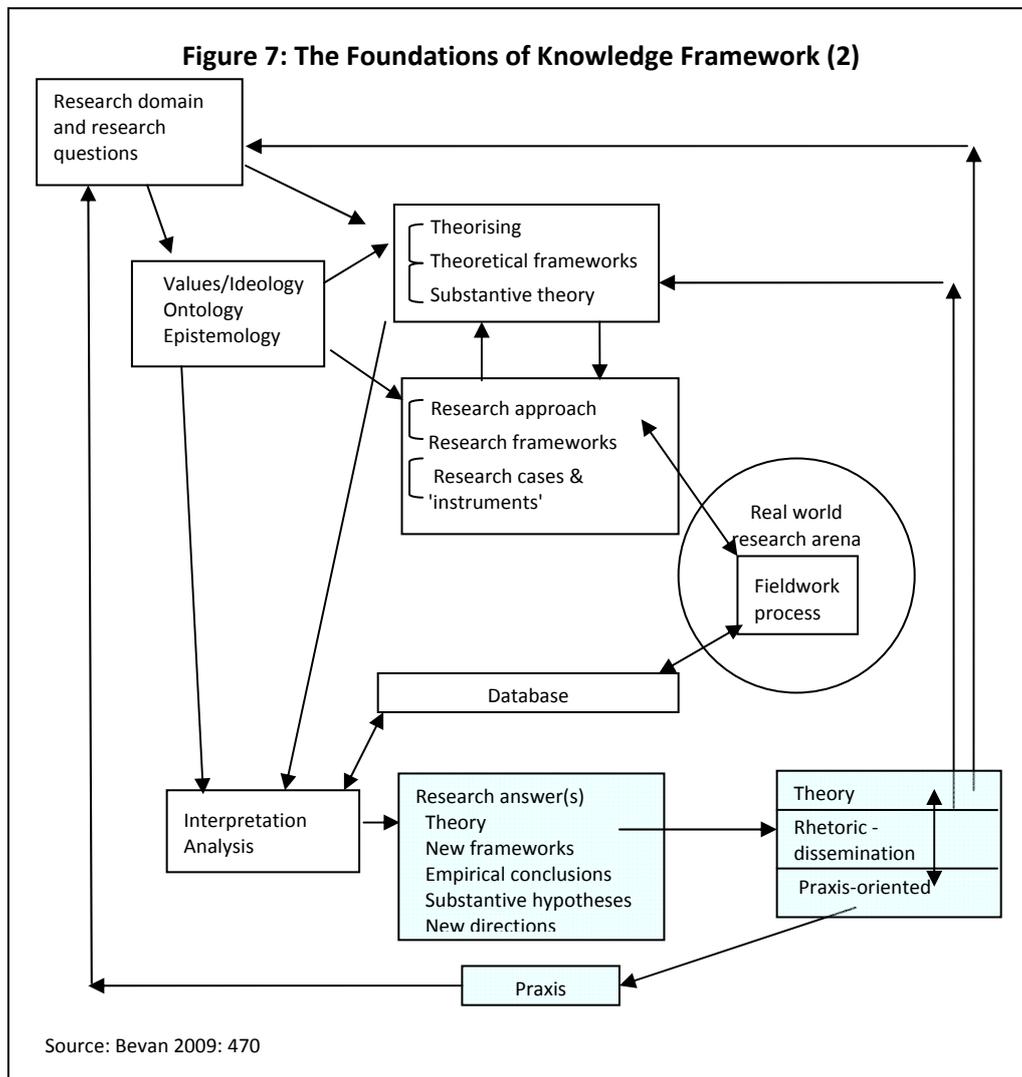
4. Some research answers and their dissemination

The research 'answers' described in this section include some theoretical ideas, new theoretical frameworks to inform research elsewhere, the main empirical conclusions drawn from the study so far, two substantive hypotheses about Ethiopia's development path for further exploration, and an outline of the new directions suggested by the study. The dissemination process which was a part of the project from its inception is also described.

Theory

During periods when complex social systems (such as these communities) do not really change it is possible to identify 'control parameters' – dominating processes or sub-systems which may be

internal to the community or elements of the community context – which, through a complex of feedback processes, ensure that the system reproduces itself in much the same way.



Ethiopia's rural livelihood systems are extremely diverse, even within weredas, posing deep problems for the macro- design and implementation of policies and programmes appropriate to particular local conditions, especially since there is little easily accessible information about the systems and the relative prevalence of different types. Case-based approaches such as the one adopted here can be used to establish descriptions of different 'exemplar' livelihood system types and to identify control parameters and outcomes of interest for each type or 'ensemble' of communities. With a larger number of cases it would be possible to extend the number of exemplars to include new types such as international cash crop and agro-pastoralist economies.

A sample of 20 'exemplar' cases would make it possible to develop a typological theory of rural communities by making comparisons across communities with the same outcome (e.g. rapid development or decline) leading to the identification of *different routes* (combinations of parameters) to the same outcome⁹ each requiring a different solution.

⁹ This analytic procedure has recently been named 'typological theorising' (George and Bennett, 2005).

To establish the prevalence of different community types and locate them spatially the next step would be to develop simple measures of the key parameters identified through the qualitative research to use with a larger sample of communities using community surveys and/or administrative data to generate a mapping of types of community. The data could also be used to refine and improve the emerging typological theory of Ethiopia's rural communities.

If data are available longitudinal comparisons can be used to explore continuities and change in communities and control parameters. For community systems on stable trajectories guided by control parameters there are a number of ways in which change may occur. One is a huge and sudden event or intervention from outside such as a war, land-grab or the discovery of gold leading to dramatic changes to the community, including its possible extinction. At the other extreme myriad cumulative small changes over a long period may, in complexity social science language, push the community further 'from equilibrium' until it is ready to be sent in a new direction by a relatively small new event or intervention. In between one or more 'meso' changes in context may lead to relatively rapid moves towards disequilibrium and change, for example green revolution changes combined with irrigation potential and activities and increasing market demand.

Identification of control parameters requires the kind of rich data traces which we accumulated in the 1995 and 2010 research. By comparing the parameters found in 1995 and 2010 for each community we have been able to draw some conclusions about the extent to which they have moved towards or beyond disequilibrium and the processes involved.

When complex systems are far from equilibrium and potentially ready to move in a new direction there is a period of 'chaos' where they seem to dither between potential alternative futures or 'attractor states' before settling for one. Accumulation of knowledge and understanding about transitions in communities that have already made them could be used to design interventions promoting potential good transitions and deterring bad ones. Using this notion it is possible to imagine that Ethiopia as a whole is currently in a chaotic phase being pulled in different directions by a number of alternative attractor states including a Chinese model, an African ethnic conflict model, and a new international-capitalist-colonial model.

Different types of community are on different development trajectories and what may be a possible development future for one type will not be possible for another. Typologies and typological theorising can be used to identify ensembles of communities in similar situations and their control parameters and to explore what the more successful are doing that might be copied by the others, which might be something relatively simple.

'New' theoretical frameworks

In the process of interpretation and analysis of the data we developed three theoretical frameworks depicted in diagrams; two to guide synchronic exploration of data for each of the communities, particularly related to questions about what was going on in early 2010, and the other to guide the diachronic exploration of community trajectories. These resonate with existing sociological and anthropological literatures and can be used to guide empirical research on intended and unintended longer-term impacts of development interventions in other contexts.

Figure 8 shows the interface between the wereda and the community with top-down policies and programmes entering the communities, monitoring reports being sent from the kebele to the wereda for upward transmission, and potential dialogue between community/kebele and wereda. The interchanges between wereda and community are affected by cultural differences or 'disconnects' which lead to complex social interactions in the development interface space. Also the considerable number of different interventions which are designed and implemented in silos have the potential to interact and interfere with each other in unforeseen ways. Figure 9 shows that the wereda which contains one of our research communities has offices to deal with eleven different types of intervention.

Figure 8: Exchanges between wereda and kebele

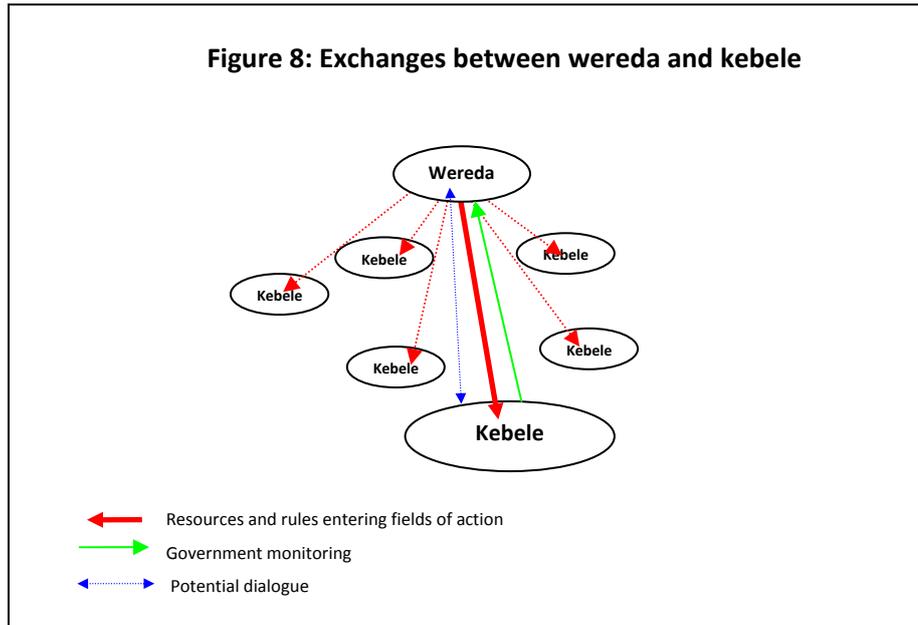
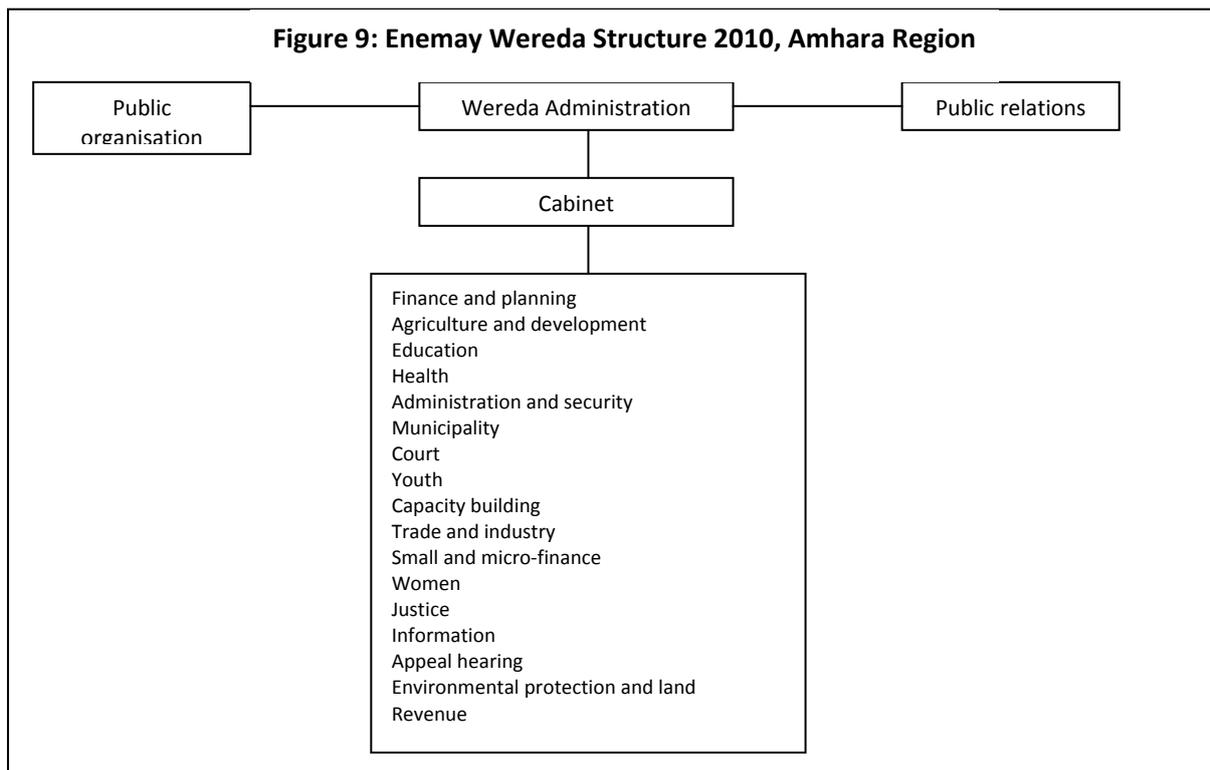


Figure 9: Enemy Wereda Structure 2010, Amhara Region



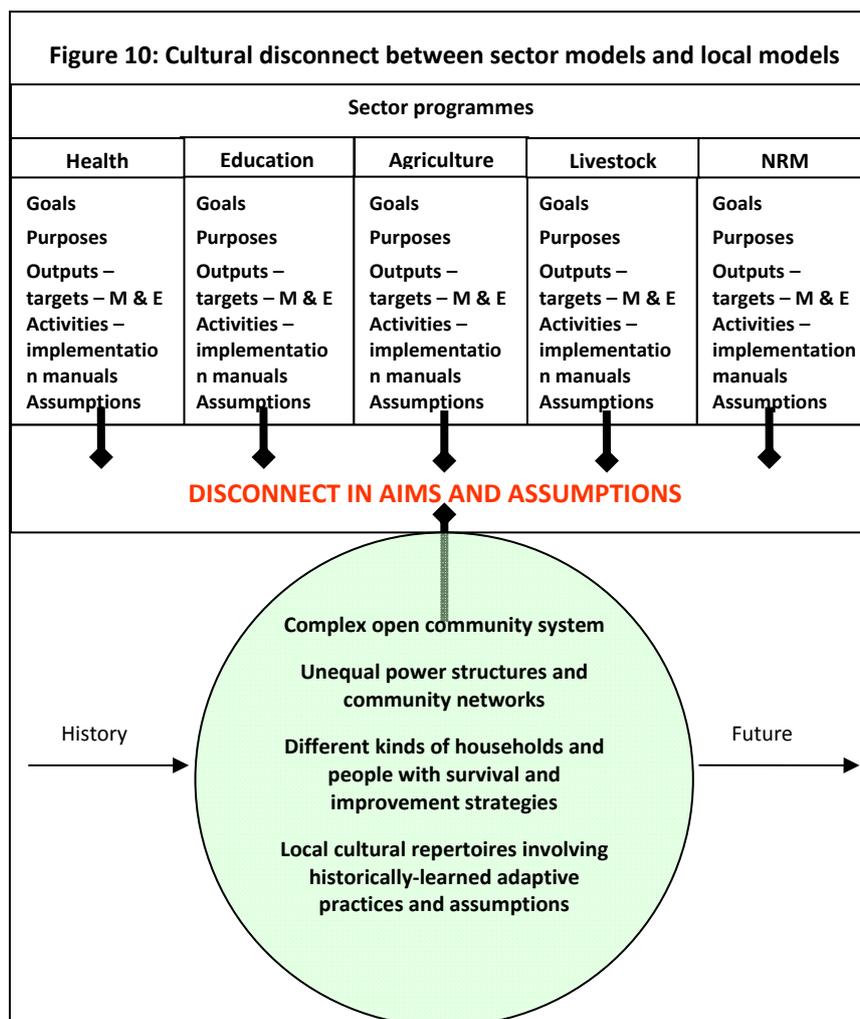
Synchronic framework 1: cultural disconnects between top-down sector models and local models

Before embarking on the research we identified three ideal type cultural models of ‘development’ with potential influence on community-level social inter-actions around development interventions¹⁰: the government model (revolutionary democracy/developmental state), the donor

¹⁰ These ideal-types abstract key dimensions of the different ideologies. In practice within both government and donor groups, while there was broad agreement about abstract goals, there was contestation about priorities and means of achieving goals.

model (a mix of economic neo-liberalism, western-style democracy and human rights, in proportions varying among donors) and the community local model (with variations among communities and different degrees of contestation within communities). These models contain some incommensurate aims and assumptions; in sociological language there are cultural contradictions which may be papered over for periods of time (as happened with the two macro-level models for some years) but are likely to cause problems at the social interaction level at some point. Comparing goals, values and assumptions in the donor and government models informing policy design and implementation (Dom, 2009) with those in the six local communities (Bevan, Dom and Pankhurst, 2010) we found disconnects (see Dia, 1996; Scott, 1998) in goals, values and assumptions in all the sectors in which interventions had taken place.

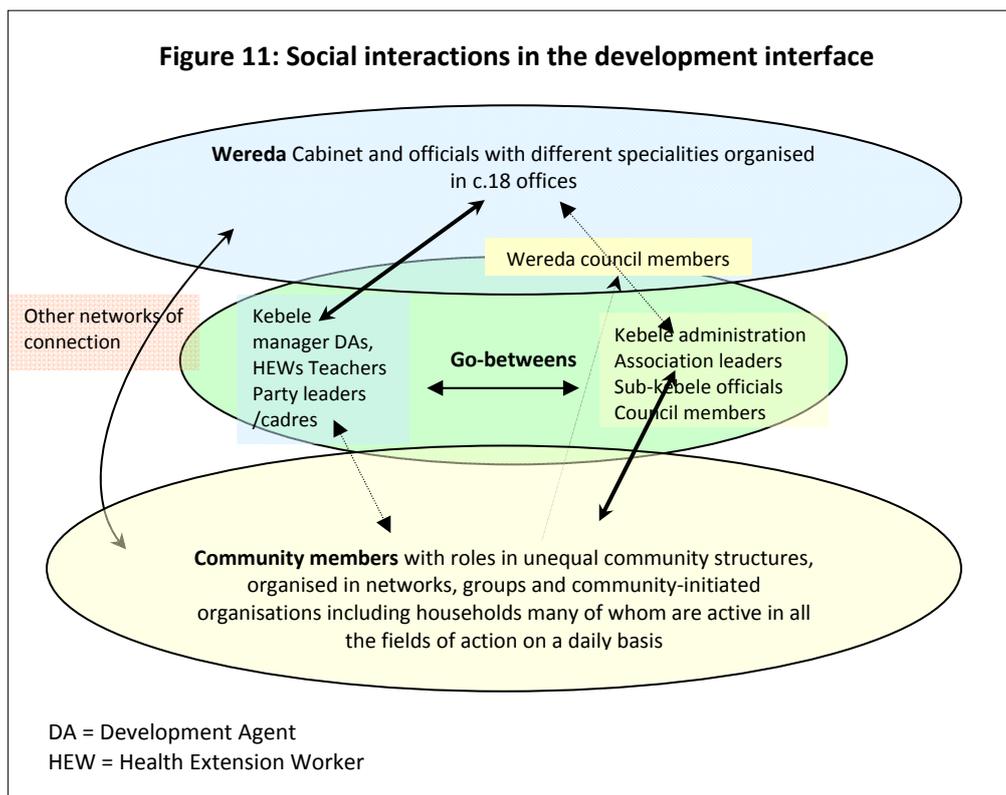
Figure 7 depicts a framework for analysing the cultural disconnects between the aims and assumptions implicit in key top-down sector programmes and those found in local community contexts showing the contrast between the cultural assumptions underpinning wereda-level sector programmes, some donor-funded, and those which are made by people living in rural communities. Both government and donors use goals and targets, provide project implementation manuals to guide wereda officials, and have regular formal reporting procedures. Performance in relation to government targets may be used to select people for further training and promotion. This culture is quite at odds with local community ways of doing things.



Synchronic framework 2: social interactions in the development interface space

Having identified a set of sector cultural disconnects the next question we asked of the community databases was what actually happened when the interventions entered each community? Who was involved? What did they do? And how did things play out in the different fields of action in the different communities?

In the process of answering these questions we developed a theoretical framework for guiding data-making and analysis to explore social interactions in the development interface space and found that the cultural contradictions between top-down and community development models have not been papered over; rather they have caused considerable problems for those in positions where they have to try to bridge the cultural divide. Figure 7 depicts the key development players in the wereda, kebele, and communities and identifies a set of 'go-between' who work in the development interface¹¹ space and interact with wereda officials and community members. Kebele managers, Development Agents (Agriculture, Livestock and Natural Resources), Health Extension Workers, teachers and community police mostly come from outside the community; they are employed by the wereda and given targets which, if not met, may have repercussions for their careers. A second set of 'go-between' – kebele and sub-kebele officials and kebele Council members are (s)elected from within the community and embedded in community networks and structures. The evidence was that many of them in the research sites were EPRDF party cadres¹² with varied levels of enthusiasm for the party including some who wanted to leave office but did not dare to.

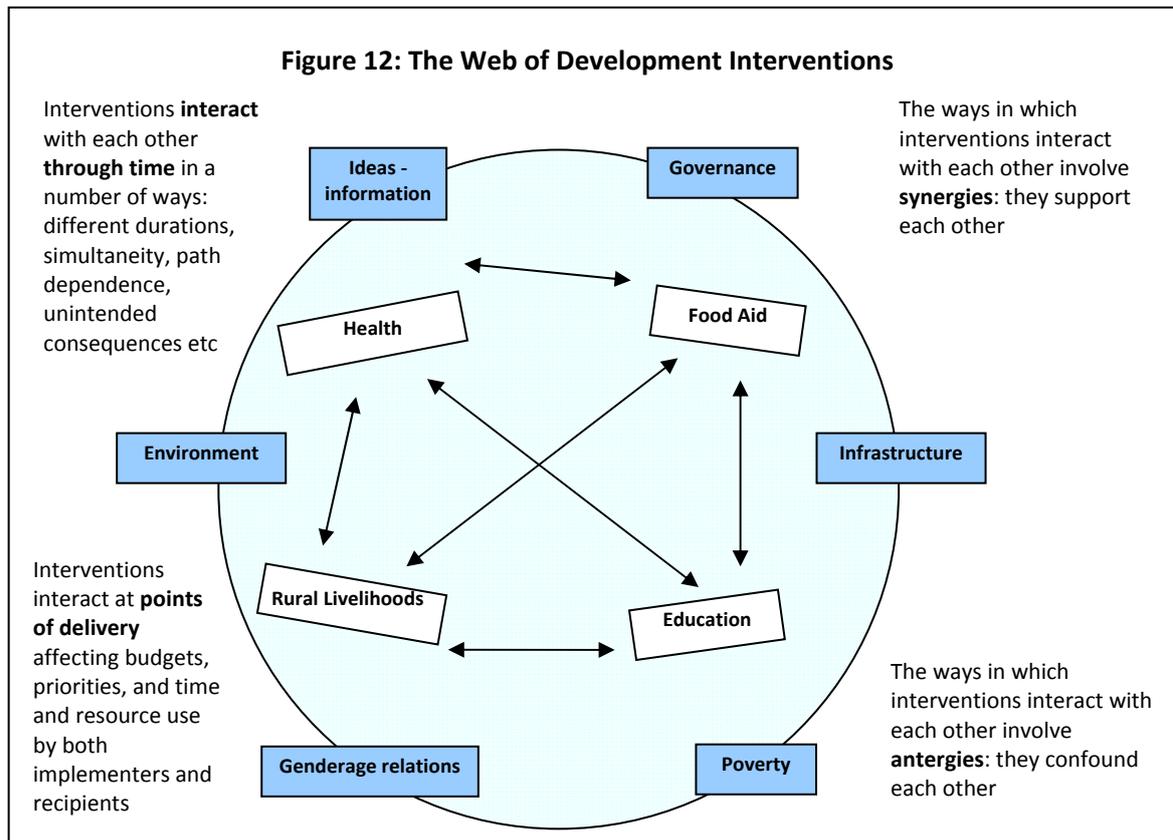


¹¹ A concept which has been used and argued about by sociologists (e.g. Long) and social anthropologists (e.g. Mosse, 2005)

¹² In the build-up to the 2010 election there was a big push to increase party membership and activity in the communities; in one site it was said that almost everyone was a party member.

Diachronic framework 1: the web of development interventions

Those designing, implementing and evaluating sector programmes and projects are prone to see them as self-contained. Figure 10 presents a framework based on the argument and evidence that when a new field-focused or cross-cutting intervention enters a community it is affected by, and has consequences for, a pre-existing web of development interventions. As interventions proceed they have consequences beyond those intended by the intervention designers and implementers which may take some time to make themselves felt.



Some empirical conclusions

An important goal of the project was to identify parameters of importance in determining the situations of the communities in 2010 and their trajectories from 1995 to 2010 and into the future.

Community typing in 2010

Through an inductive process from the 2010 data we identified ten parameters whose condition was important for determining the community situations in 2010. These were:

1. Regional variations in policies and implementation
2. Urban linkages of various kinds
3. Development services
4. Core livelihood system
5. Diversification
6. New agricultural technologies
7. Cultural differences
8. Social inequality

9. Social integration

10. Government-society relations

Comparing this with the simple community typing done in 1995 there were three in common: Region, livelihood system and urban linkages. In the 2010 typing livelihood system is split into Core livelihood system and Diversification and Ethnicities and Religions are replaced by the more complex Cultural differences and Social integration. Only when social relationships are bad do ethnic and religious cultural differences lead to social disarray, and such disarray can result from other relationships such as class or inter-generational conflicts. However, in the context of 'ethnic federalism', a system with the potential to encourage political entrepreneurs to use ethnicity to pursue state resources, cultural heterogeneity is a parameter which has the possibility of being triggered from outside. The 1995 parameter of 'food aid' is replaced by the broader category of 'development services'. There are three new parameters: New agricultural technologies, Social inequality and Government-society relations. Table A1 in the Appendix summarises the key aspects for each of the six sites.

A typology of process parameters affecting community trajectories between 1995 and 2010

Using data from 1995, 2003 and 2010 we identified nine process parameters relevant for the community trajectories of some or all of the communities:

- Regional policy change
- Urbanisation and connectivity
- Development service change
- Agricultural technology change
- New and thickening markets
- Diversification of livelihoods
- Processes related to social dis/integration
- Class formation
- State-building
- Changes in Government-society relations

Table 4 in the Appendix summarises the states of the process parameters for each community.

Community trajectories

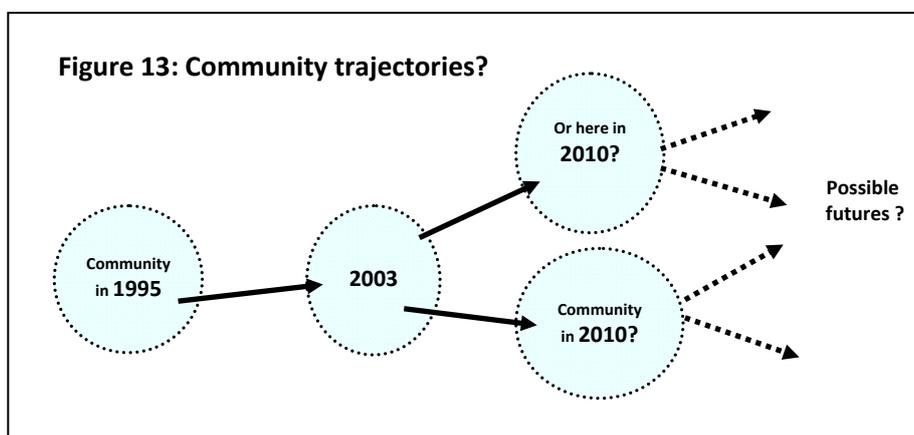


Figure 13 shows an extract from Figure 5 which raised the question of whether any of these communities have set off in a new development direction and if so what it might be. Using the data in speculative mode we suggest that all of the communities continued on much the same course between 1995 and 2003 and beyond to 2008 or so, with minor and cumulative changes which pushed them further from equilibrium but no important changes to the control parameters. However, by 2010 internal and external changes in three of the communities had pushed them to states of disequilibrium or 'chaos' (in the language of complexity (social) science) such that they are very unlikely to remain on the same trajectory.

Three communities setting off in new directions?

Not far from half the households in **Geblen** are headed by women and in the last few years there has been an acceleration in youth exits involving a number of migration strategies. Given poor land quality and recurrent drought most remaining residents are reliant for survival on work outside the kebele and/or PSNP food aid. The two control parameters from Table 3 responsible for the shift in direction are the failure of the core livelihood system and diversification as a result of new opportunities available outside the kebele. In extremely speculative mode imagining an 'attractor state' towards which Geblen might be heading parts of rural France spring to mind: de-population, an ageing population, many fewer farmers. A possible new parameter that might enter the scene and could be encouraged through development interventions is tourism, although Geblen is uncomfortably close to the Eritrean border.

Very recently a small part of **Turufe** was removed and added to Kuyera town which itself has become part of Shashemene town and it seems unlikely that the rest will not follow in the next few years. Average landholdings are very small and in the last few years landless youth have increasingly commuted to work in Shashemene or casually migrated for work elsewhere. The important change had been to the control parameter of 'urban linkages' and the imagined attractor state might be one of the suburbs of Addis.

The landlord in **Korodegaga** in the 1960s made use of the irrigation potential of the river Awash by getting local tenants to water his orange trees using buckets and the Derg Producer Co-operative grew vegetables and fruit in the later 1980s using a donor-provided pump. There was little irrigation activity during the 1990s but in 2000 an NGO provided a pump to irrigate 60 hectares and assisted in the establishment of an irrigation association which was still in place in 2010. Drought-prone Korodegaga became a PSNP site in 2005 but in the ensuing years various cumulative changes related to the use of irrigation increased local incomes to the point where wereda officials said that they were graduating the whole community from PSNP with the exception of 77 households. In 2010 farmland was being irrigated in six modes: the NGO pump run by diesel; a pair of government pumps run by electricity (if it had been repaired as promised during the fieldwork); farmers using privately-owned small pumps; youth and women co-operatives using government-subsidised small pumps; an inward investor using a larger pump on 10 hectares of land; a foreign inward investor using drip irrigation on rather more than 20 hectares. There was also talk of bringing spate irrigation to part of the kebele. Here we have seven potential attractor states and it is unlikely that they will co-exist side by side for very long. The control parameter changes which have led us to conclude that Korodegaga is in a state of 'chaos' and ready to move in a new direction are a change to the core livelihood system to include irrigation and the end of PSNP.

Three communities still on the same course

In 1995 **Yetmen** was a relatively wealth community as a result of food cash crop exports and these are still at the heart of its livelihood system with increased productivity as a result of green revolution technologies. One small change which may have pushed the community further from equilibrium is diversification into irrigated vegetables but the main effect seems to have been to increase the wealth of those whose land is irrigable without inducing further changes. Looking to the

future if the small town of Yetmen expands rural Yetmen will shrink and if large commercial farms take off in the area the whole community is under threat.

While inhabitants of **Girar** are better off than they were in 1995 the shape of community is not very different from how it was in 1995. The core livelihood system of enset plus urban migration remains in place. Migrants now have more opportunities for upward mobility than they did in 1995 and the small chat and eucalyptus sales of that time have grown considerably as markets have expanded. The site of Imdibir Haya Gasha which was researched in 1995 disappeared when part of it was incorporated into Imdibir town and the rest joined with another kebele to form Girar. Now part of Girar is indistinguishable from Imdibir town and it is likely that the process of gradual incorporation will continue as the town grows bigger.

While there have been a number of changes in **Dinki** there has been no change in direction. The biggest change is an increase in the use of irrigation from less than 10 households to more than 50, with improved agricultural technologies which have increased productivity and greater market demand. Even so the Dinki community is still dependent on emergency food aid, a service which was first provided in 1985. Looking to the future new parameters which could bring change to the community are the development of a commercial route along the road through Afar and/or development of tourism in the area.

None of the three diverted communities have changed direction as a result of development interventions, which is not unexpected given that ADLI is designed to produce more of the same more efficiently. This has worked in Yetmen although it is hard to establish how great a contribution was made by government extension; if there had been none would Yetmen farmers have responded to market forces anyway?

Substantive hypotheses

There is considerable controversy over Ethiopia's trajectory since 1991, especially related to what has really been happening in the last five years. In one version there have been continuous years of 'double-digit' growth (Meles 2010) with related poverty reduction, and big improvements in roads, telecommunications, health services and education with related improved welfare outcomes (Ohashi 2010), while other versions describe chronic malnutrition (Epstein 2010: 1), drought, famine and fiddling of statistics (Alemayehu 2010), growing corruption (Abbink 2009: 5) and aid-subsidisation of a 'regime that is rapidly becoming one of the most repressive and dictatorial on the continent' (Epstein 2010: 2). An important bone of contention is whether western governments should continue to provide increasing levels of aid given human rights violations.

Our data and analysis suggest that while both these characterisations are too extreme and simplistic they both contain elements of truth. One major substantive hypothesis that emerges is that the Big Push MDG-focused aid entering Ethiopian government coffers since the mid-2000s has contributed to (1) a big increase in service provision generally and social protection in drought-prone areas and progress towards the MDG targets but also to (2) the funding of implementation by the EPRDF of its developmental (one-party) state programme. A second hypothesis is that the community-level propaganda and ideological training project which forms part of the developmental state programme is bound to fail as it is built on a poor understanding of human nature, social dynamics and Ethiopian cultures.

New questions: more types and more trajectories

Stage 1 of the research focused on six rural communities but our longitudinal database contains fourteen more for a Stage 2 (see Table 1). Remembering that there are likely to have been changes since 2003 which may have produced new core livelihood systems there are at least three new types which would extend the set of exemplars. These are (international) cash crop sites growing coffee (Adado, Somodo) and chat (Adele Keke), a (voluntary) resettlement site (Do'omaa), and two

'pastoralists in transition' sites (Gelcha in Oromia and Luqa in SNNP). There are also two sites with a big majority of Protestants (Adado and Do'omaa)

There are eight PSNP sites in a number of new contexts: one near a big tourist attraction (Shumsheha near Lalibela); one in a chat-exporting site (Adele Keke); 2 in highly-populated enset livelihood systems (Aze Debo'a and Gara Godo); 1 in a re-settlement site (Do'omaa) and 2 in pastoralist sites (Gelcha and Luqa). We will also be able to make some comparisons which will assist in the process of typing and the development of a typological theory. Here are some initial thoughts:

1. Harresaw in Tigray looks very similar to Geblen. Is the same youth exit process in place? If not why not?
2. Shumsheha in Amhara can be compared with Turufe and Imdibir (peri-urban); Yetmen (Amhara); Geblen, Dinki and Korodegaga (vulnerable cereal, food aid).
3. Debre Berhan rural kebele is similar to Yetmen in livelihood system but under threat of suburbanisation like Turufe
4. Sirba na Godeti compares with Yetmen in livelihood system and location on a major road.
5. Somodo shares some features with Girar (SNNP, cash crop) and Turufe and Odadawata (a number of different ethnicities and religions)
6. Oda Hara can be compared with Yetmen and Somodo
7. Adele Keke grows chat (Girar, Somodo) but is also PSNP vulnerable cereal site (Geblen, Harresaw, Shumsheha, Do'omaa, Korodegaga)
8. Gelcha and Luqa, the pastoralist sites, can be compared with each other, but also with sites which were settled by pastoralists in the past (Do'omaa, Korodegaga, Turufe, maybe others in Oromia)
9. Aze Debo'a and Gara Godo, food-deficit enset sites, can be compared with each other, and also with Girar and Adado which are both enset sites
10. Adado, also exports coffee and can be compared with Somodo (coffee), Girar (chat) and Adele Keke (chat)

Dissemination

WIDE3 Stage 1 began in November 2009 with the production of Community Baselines 2003 for the twenty communities, trajectory reports from 1994 for the six selected for Stage 1, a paper on the methodological approach and fieldwork, and a Policy paper describing the macro-level policies, programmes and models, some donor-funded¹³, which entered rural communities between 2003 and 2009. Related presentations were made to donors and fieldworkers to get feedback on who was particularly interested in which aspects of the project and specific intervention-related questions they would like us to ask. Following this we set up a worknet of people to whom we sent the inception papers and three Briefing Notes as the project proceeded. In June 2010 the team met a number of donor stakeholders in various agency- or programme-based groups, which were presented selected sets of findings and emerging conclusions tailored to the groups' specific interest and asked for feedback to assist in writing the final report. During this process we were asked to prepare a note for the donor Development Assistance Group as background for their consideration of the draft of the Government's third poverty reduction strategy paper, the Growth and Transformation Plan. The team also presented six papers at the 8th International Conference of the Ethiopian Economics Association.

¹³ Over a third of the government budget is currently aid-funded.

5. Conclusions

Complexity social science approaches of the sort described here, offer a number of avenues for the improvement of development social science and practice in the next decade. The WIDE3 project has been described in some detail to illustrate the fecundity of the approach which has generated new theory and theoretical frameworks and empirical conclusions and substantive hypotheses about development in Ethiopia. The project with its rigorous methodology, focus on what has really been happening in communities and the longer-term (intended and unintended) impacts of development interventions, and easily-comprehensible narrative style, has also roused considerable interest among donors in Ethiopia.

For social scientists and practitioners generally CSS offers new perspectives, new questions and new opportunities to escape from the disciplinary and sector silos which currently structure the development industry (complex open social) system and in our use of the approach we are piloting a new way for researchers and practitioners to engage with each other. Also the methodology relies on long-term engagement with rural men, women and children who are being 'developed' and provides a route through which they can send messages about what that is like to government and donors.

By taking a longer-term view we have provided a new perspective on the 'impact' of development interventions. There are currently two main ways in which interventions within one country are assessed for local policy-making purposes¹⁴. On the one hand, individual sector development programmes and projects are subjected to detailed monitoring and evaluation within their short lifetimes, being judged in terms of success in achieving goals set at the outset of the intervention. On the other, differences in administrative and survey-generated statistical measures between different years are used as indicators of general economic development and sector progress over time. While the first provides a view of some of the immediate impacts of a particular intervention and the second some very simple conclusions about long-term progress (which may be challenged if country statistical office capacity is not so good) there are a number of practical policy-related questions that cannot be answered using these two standard and institutionalised approaches to development impact assessment. In particular there seems little awareness that interventions in one domain interact with others and that for some outcomes to be achieved there must be parallel changes in other domains. For example, are education policies synchronised with economic development and employment policies, and if not what are the consequences? Or, at a more mundane level what are the consequences of wildlife conservation policies for agricultural productivity?

Using a longer-term perspective on development interventions it is possible to explore the unfolding through time of real, rather than measured outcomes, and to assess whether interactions through time between interventions in different sectors have produced synergies promoting valuable development or interfered with each other, with antergies leading to new problems for one or other of the development fields. It is also possible to assess the longer-term positive and negative contributions of (ensembles of) interventions in the context of wider modernisation processes such as the spread of modern communications, the thickening of markets, and the building of the state.

Given the growing power and speed of computer systems and information technology the main contribution of a CSS approach to development over the next ten years could be to underpin a growing, integrated, post-disciplinary and cumulative body of easily accessible country-focused and international knowledge about co-evolving and multi-level development-relevant complex and dynamic open social systems at different levels and their trajectories. With the main commitment being to science and understanding how things work, rather than to a particular value-based model

¹⁴ Cross-country comparisons of interventions are increasingly being used to draw general conclusions about General Budget Support and individual Sector Programmes.

of what international development *ought* to look like or a particular singular disciplinary perspective, the way is open for a reduction in the diversion of energy and resources into what sometimes seem to be short-lived and unproductive development 'bubbles'.

The demand for evidence- and results- based policy and practice which may affect what happens to the 'war on poverty' in the next decade is often construed as a demand for (more) sectorally-confined quantitative indicators and statistical analyses founded on linear assumptions and focused on the short-term fates of individuals or households. The complexity-informed Ethiopian case study described here offers another kind of evidence base suggesting that real results unfold over weeks, months and years and that better real results might be achieved more efficiently if conclusions derived from longer-term knowledge-rich perspectives were used in the design and implementation of both donor and government interventions.

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Appendix: WIDE3 Stage 1 Modules and Typologising Tables

Module 1: Wereda Perspective on the Kebele 2003-9	
Protocol 1.1: Locating and describing the community	Protocol 1.2: Brief wereda and kebele development history 2003-09
Protocol 1.3: History of wereda development interventions in WIDE3 kebele 2003-9	
1. Land	16. Curative health services
2. Resettlement	17. Primary Education
3. Irrigation and water harvesting	18. Secondary Education
4. Agricultural Extension and packages	19. Post-secondary
5. Livestock extension and packages	20. Alternative basic education
6. Non-farm extension and packages	21. Government pre-school education
7. Co-operatives	22. Good governance package
8. Government micro-credit programmes	23. Security, policing and justice
9. Food aid	24. Taxes and other contributions of cash and labour
10. Nutrition	25. Presentation of government models of development
11. Family Planning	26. Getting government services to poor and vulnerable people
12. Pregnancy and childbirth	27. Gender laws, policies, programmes and implementation
13. Drinking water	28. Youth policies, programmes and implementation
14. Sanitation	29. Community work including FFW and non-government work
15. Preventive Health services	30. Electricity and communications
	31. Harmful traditional practices

Module 2: Kebele Perspective on Development Interventions and the Wereda	
Protocol 2.1: Key community members	Protocol 2.2: Map locating (sub) kebele in wider community context
Protocol 2.3: Kebele and sub-kebele structures and relations with the wereda	
Protocol 2.4: Kebele perspectives on government development interventions 2003-9	
1. Land	17. Primary Education
2. Resettlement	18. Secondary Education
3. Irrigation and water harvesting	19. Government TVET
4. Agricultural Extension and packages	20. Government universities and colleges
5. Livestock extension and packages	21. Alternative basic education
6. Non-farm extension and packages	22. Government pre-school education
7. Co-operatives	23. Good governance package
8. Government micro-credit programmes	24. Security, policing and justice
9. Food aid	25. Taxes and other contributions of cash and labour
10. Nutrition	26. Presentation of government models of development
11. Family Planning	27. Getting government services to poor and vulnerable people
12. Pregnancy and childbirth	28. Gender laws, policies, programmes and implementation
13. Drinking water	29. Youth policies, programmes and implementation
14. Sanitation	30. Community work including FFW and non-government work
15. Preventive Health services	31. Electricity and communications
16. Curative health services	32. Harmful traditional practices
	33. NGO interventions
Protocol 2.5: Interactions among policies	
Positive synergies; Negative contradictions	
Protocol 2.6: Key issues specific to each community	
Korodegaga	Irrigation – Government, Self-Help, private investors, smallholder farmers
Dinki	Food aid/For Work, education, health services
Yetmen	Culture - not working on holidays, death ceremonies; women’s issues – contraception, circumcision, land rights, men drinking and prostitution in urban area
Turufe K	Electricity, water, NGOs, mission influences
Geblen	Female-headed households, migration
Imdibir	Female-headed households, migration

Module 3: Community Trajectory 2003-9	
Protocol 3.1: Spatial and social map locating neighbourhood types and services	
Protocol 3.2: Community event history	
3.3 Trajectory : Environment	3.24 Trajectory : ‘Harmful traditional practices’
3.4 Trajectories : Infrastructure	3.25 Trajectory : Community education levels
3.5 Trajectory : Population	3.26 Trajectory : Education-seeking behaviour
3.6 Trajectory : Migration and remittances	3.27 Trajectory : Social networks
3.7 Trajectory : Land	3.28 Trajectory : Social institutions
3.8 Trajectory : Smallholder agriculture	3.29 Trajectory : Local social protection
3.9 Trajectory : Livestock	3.30 Trajectory : Community-initiated organisations
3.10 Trajectory : Agricultural labour	3.31 Trajectory : NGOs
3.11 Trajectory : Non-farm own account enterprise	3.32 Trajectory : Government-linked organisations
3.12 Trajectory : Non-farm employment	3.33 Trajectory : Mobilisation of the community
3.13 Trajectory : Livelihood innovations	3.34 Trajectory : Elites and community leaders
3.14 Trajectory : Access to credit	3.35 Trajectory : Understandings of government policies
3.15 Trajectory : Access to markets	3.36 Trajectory : Political mobilisation
3.16 Trajectory : Prices of inputs and outputs	3.37 Trajectory : Conscription and de-mobilisation
3.17 Trajectory : Local commercial investment	3.38 Trajectory : Ideas about development and wellbeing
3.18 Trajectory : Other non-government acts affecting livelihoods	3.39 Trajectory : Community wealth and household inequality
3.19 Trajectory : Domestic work	3.40 Trajectory : Ethnic/religious/clan relations
3.20 Trajectory : Housing, hh assets and consumption	3.41 Trajectory : Women’s status and gender relations
3.21 Trajectory : Child-related practices	3.42 Trajectory : Youth status and inter-generational relations
3.22 Trajectory : Illnesses	3.43 Trajectory : Elderly status and inter-generational relations
3.23 Trajectory : Health-seeking behaviour	3.44 Trajectory : The status of excluded groups

Module 4: Community Experiences of Government Development Interventions – Men & Women	
4.1 Livelihoods – Land	4.21 Human Production – Government universities/colleges
4.2 Livelihoods - Resettlement	4.22 Human Production – Alternative Basic Education
4.3 Livelihoods – Irrigation	4.23 Human Production – Government pre-school education
4.4 Livelihoods –Water harvesting	4.24 Social Re/pro/duction – Community-government interactions
4.5 Livelihoods - Agricultural extension and packages	4.25 Social Re/pro/duction – Models, champions, promoters - roles
4.6 Livelihoods – Livestock extension and packages	4.26 Social Re/pro/duction – Extension workers - roles
4.7 Livelihoods – Non-farm extension and packages	4.27 Community management – Good governance
4.8 Livelihoods –Co-operatives	4.28 Community management – Interactions with woreda
4.9 Livelihoods – Government Micro-credit	4.29 Community management – Security, policing and justice
4.10 Livelihoods&Human Re/pro/duction– Food aid	4.30 Community management – taxes; other cash and labour
4.11 Human n Re/pro/duction – Nutrition	4.31 Community management – Government-sponsored Associations
4.12 Human Reduction – Family planning	4.32 Ideas – Presentation of government models of development
4.13 Human Production– Pregnancy and childbirth	4.33 Inequality – Exemptions for the poor
4.14 Human Reproduction – Drinking water	4.34 Inequality – Gender laws, policies , programmes, implementation
4.15 Human Reproduction – Sanitation	4.35 Inequality – Youth policies, programmes and implementation
4.16 Human Reproduction – Preventive health services	4.36 Cross-cutting – Community work
4.17 Human Reproduction – Curative health services	4.37 Cross-cutting - Transport
4.18 Human Production – Primary education	4.38 Cross-cutting – Electricity and communications
4.19 Human Production – Secondary education	4.39 Cross-cutting – ‘Harmful traditional practices’
4.20 Human Production – Government TVET	4.40 Cross-cutting – Interactions among policies

Module 5: Wereda Perspective on Kebele Development	
Protocol 5.1: Potential and Challenges	
Protocol 5.2: Interactions among policies	Positive synergies; Negative contradictions

Modules 6a and 6b: The impact of interventions on different kinds of household	
Protocol 6a.1: Household head – household histories since 2005	6a.1.1 Members’ history 6a.1.2 Event history 6a.1.3 Wealth/poverty history
Protocol 6a.2: Household head – the impact of development interventions on the household since 2005	6a.2.1 Continuity and change in livelihood activities and the impact of development interventions 6a.2.2 Continuity and change in social relations and the impact of development interventions 6a.2.3 Continuity and change in community participation 6a.2.4 Impact of recent development interventions 6a.2.5 Continuity and change in the way people in the household think about development 6a.2.6 Comparison with 2005
Protocol 6b.1: Senior woman – continuity and change in livelihood work	6b1.1: Agricultural work on the farm 6b1.2 Livestock work on the farm 6b1.3 Agricultural and livestock work off-farm 6b1.4 Non-farm business activity 6b1.5 Non-farm employment
Protocol 6b.2: Senior woman - the impact of development interventions on the household since 2005	6b2.1 Continuity and change for the people of the household and the impact of development interventions on their wellbeing 6b2.2 Continuity and change in the domestic sphere and the impact of development interventions 6b2.3 Continuity and change in social relations and the impact of development interventions 6b2.4 Continuity and change in community participation 6b2.5 Impact of recent development interventions 6b2.6 Continuity and change in the way people in the household think and the impact of development interventions 6b2.7 Comparison with 2005

Module 7: The impact of interventions on dependent adults and young people	
Protocol 7.1 Personal history since 2005	7.1.1 Personal details 7.1.2 History from 2005 until now
Protocol 7.2 Community participation and the impact of development interventions since 2005	7.2.1 Community participation 7.2.2 Impact of development interventions
Protocol 7.3 Aspirations for the future	7.3.1 Aims and hopes 7.3.2 Improvement in government development interventions
Protocol 7.4M Young males’ experiences of government development interventions FGDs	7.4M.1. Young male adults 7.4M.2. Adolescent boys
Protocol 7.4F Young females’ experiences of government development interventions FGDs	7.4M.1. Young female adults 7.4M.2. Adolescent girls

Module 8: Organisations involved in, or affected by, development interventions	
Protocol 8.1 History of organisations in the last 5 years	<ul style="list-style-type: none"> 8.1.1 Primary school 8.1.2 Health post 8.1.3 Health centre 8.1.4 Producers' co-operative 8.1.5 Service co-operative 8.1.6 Women's Association co-operative 8.1.7 Youth Association co-operative 8.1.8 Farmers' Training Centre 8.1.9 Credit association 8.1.10 Farmers' Association 8.1.11 Women's Association 8.1.12 Youth Association 8.1.13 Water Users' association 8.1.14 Irrigation association 8.1.15 Iqub 8.1.16 Iddir 8.1.17 Religious organisations 8.1.18 NGOs 8.1.19 Militia 8.1.20 Community police 8.1.21 Peace Committee 8.1.22 Social courts 8.1.23 Local party 8.1.24 Kebele organisation 8.1.25 Kebele sub-committee 8.1.26 Sub-kebele organisation 8.1.27 Pre-school 8.1.28 Other
Protocol 8.2: Observation and photographs	<ul style="list-style-type: none"> 8.2.1 Observation 8.2.2 Photographs

Module 9: Key development actors	
Protocol 9.1 Key development actors	<ul style="list-style-type: none"> 9.1.1 Kebele chair 9.1.2 Former kebele chair 9.1.3 Kebele vice chair 9.1.4 Kebele manager 9.1.5 Wereda councillor male 9.1.6 Wereda councillor female (or second male) 9.1.7 Head of Women's Association 9.1.8 Head of Youth Association 9.1.9 Development Agent Crops 9.1.10 Development Agent Livestock 9.1.11 Development Agent Natural Resources 9.1.12 Head, Farmers' Training Centre 9.1.13 Health Extension Worker 9.1.14 Health Promoter 9.1.15 Health Centre Head 9.1.16 Head Teacher 9.1.17 Teacher 9.1.18 Other

Module 10: Two common issues: (i) gender relations in practice and (ii) HIV/AIDS and interventions	
Protocol 10.1 Women's status and gender relations – what is really happening?	10.1.1 Economic empowerment 10.1.2 Personal and social empowerment 10.1.3 Political empowerment
Protocol 10.2 HIV/AIDS – the impact of donor resources?	10.2.1 The story of HIV/AIDS in the community 10.2.2 The story of Government, donor and NGO interventions to prevent and treat HIV/AIDS in the community

Module 11: Site specific follow-up	
Protocol 11.1 Dinki	11.1.1 Food aid and credit packages 11.1.2 Livestock including beehives – credit-drought-death-debt 11.3 Improvements in the use of water for irrigation 11.4 Argobba women 11.5 Election notes 11.6 The death of the bees
Protocol 11.2 Geblen	11.2.1 The productive Safety Net Programme 11.2.2 Livestock including beehives – credit-drought-death-debt 11.2.3 Migration to the Middle East 11.2.4 Migration for work to Humera 11.2.5 Election notes 11.2.6 The death of the bees
Protocol 11.3 Girar	11.3.1 The Catholic church agricultural experimentation station 11.3.2 Child trafficking 11.3.3 Migration to the Middle East 11.3.4 The difference that having electricity has made to people's lives 11.3.5 Election notes 11.3.6 The 150 farmers given land by contract 11.3.7 Tree planting for the Millennium 11.3.8 Latrines
Protocol 11.4 Korodegaga	11.4.1 The Productive Safety Net Programme 11.4.2 Land distributed to the <i>jirata</i> 11.4.3 Migration to the Middle East and Sudan 11.4.4 The investors 11.4.5 Election notes
Protocol 11.5 Turufe Kecheme	11.5.1 Migration for work on the flower farms 11.5.2 Migration to the Middle East 11.5.3 The theft problem 11.5.4 The difference that having electricity makes 11.5.5 Any more news about the investor?
Protocol 11.6 Yetmen	11.6.1 Conflict between the rural and urban areas 11.6.2 Relations with the wereda and kebele 11.6.3 Use of iddirs to get people to participate in development activities 11.6.4 The difference that having electricity has made to people's lives 11.6.5. Malaria and bednets 11.6.6 Local Investment Grants 11.6.7 Agricultural Growth Programme

Module 12: Research Officer Modules	
Protocol 12.1 Dinki male	Peace and security in Dinki – the relationship between Amhara and Argobba
Protocol 12.2 Dinki female	Domestic water scarcity due to irrigation
Protocol 12.3 Dinki female	Livelihood strategies; pregnancy, delivery and early infancy
Protocol 12.4 Geblen male	Causes of the high proportion of female-headed households in Geblen
Protocol 12.5 Geblen female	Gender relationships
Protocol 12.6 Girar male	The preventive health policy and implementation of health extension
Protocol 12.7 Girar female	Changing roles and impacts of women's co-operatives
Protocol 12.8 Korodegaga male	Community participation
Protocol 12.9 Korodegaga female	Polygamy
Protocol 12.10 Turufe Kecheme male	Iddirs and religious disputes

Module 12: Research Officer Modules	
Protocol 12.11 Turufe Kecheme female	Exposure of women to HIV/AIDS; pre-marital sex affecting adolescent girls; attitudes to health service provision
Protocol 12.12 Yetmen male	How 'Derg bureaucrat' farmers who lost land still remained prosperous
Protocol 12.13 Yetmen female	Explaining parental commitment to education

Module 13: Regional Module – piloted in Amhara Region in April 2009	
Protocol 13.1: Regional patterns and the WIDE3 communities	<ul style="list-style-type: none"> 1.1 Key changes since 2003 1.2 Spatial mapping 1.3 Environment, ecology and livelihood zones 1.4 Governance structures 1.5 Infrastructure, technology and communications 1.6 Locating WIDE3 weredas in wider social patterns
Protocol 13.2 :Livelihood interventions	<ul style="list-style-type: none"> 2.1 Economic history including development interventions 2.2: Regional plan 2.3: Smallholder agriculture and livestock 2.4: Commercial farming/horticulture and livestock 2.5: Non-farm small enterprises 2.6: Infrastructure development and environmental protection 2.7: Local employment 2.8: Migration and re-settlement
Protocol 13.3: Human development interventions	<ul style="list-style-type: none"> 3.1: Human development history 3.2: Regional plan 3.3: Social protection 3.4: Preventive health 3.5: Curative health 3.6: Nutrition 3.7: Pre-school education 3.8: Primary education 3.9: Secondary education 3.10: Post-secondary education
Protocol 13.4: Governance interventions	<ul style="list-style-type: none"> 4.1: Social and political history including governance interventions 4.2: Regional plan 4.3: De-centralisation, re-structuring, capacity-building and BPR 4.4: Budgeting and community contributions 4.5: Mobilising, good governance package, accountability and responding to local demands 4.6: Elections 4.7: Crime, resistance and violence 4.8: Working with community-related organisations 4.9: Targeting: spatial and social 4.10 Monitoring and evaluation – benchmarking, FTAPs etc
Protocol 13.5: Social relations, inequality and interventions	<ul style="list-style-type: none"> 5.1 History of unequal relations and social interventions 5.2 Regional plan for fighting social inequality 5.3: Class relations and poor people 5.4: Gender relations and women 5.5: Inter-generational relations and youth 5.6: Inter-generational relations and children 5.7: Inter-generational relations and old people 5.8: Relations with excluded groups
Protocol 13.6: Regional development models	<ul style="list-style-type: none"> 6.1: Cultural history including cultural interventions 6.2:Regional plan for cultural change 6.3: Interventions to change customary practices and attitudes considered harmful 6.4: Regional translations of government and donor models

Table A1: Community Typing – the Six Stage 1 Communities in 2010

Region	Urban linkages	Development services	Core livelihood system	Diversification	New agri technologies	Cultural differences	Social inequality	Social integration	Government – society relns
Geblen (Tigray)	Urbanising centre; scattered popn. Big town accessible from centre.	PSNP OFSP HP and HC Primary school	Livestock + vulnerable cereal	Daily labour; small business; migr'n: casual urban; seasonal agricult; Gulf (mostly illegal); education	Modern beehives - failed	Tigrayan, Irob OC, Islam, Catholics	Rich – poor Older adults – youth Men-women	No suggestion of ethnic or religious conflicts. Inter-generational tensions over land and youth exit.	Community dislikes forced package taking but kebele leadership unwilling to take to higher level
Yetmen (Amhara)	Small town; big town accessible; villagised	ADLI + NRM packages HP and HC Primary school	Grain export + livestock	Irrigated vegetables, more barley&chickpeas; medium and petty trade; education.	Selected seeds, fertiliser; irrigation; Two harvests BBM plough; breed cattle	None Amhara OC	Rich – poor Older adults – youth Men-women	Homogenous and tightly knit. Inter-generational tensions over land.	Post 2005 party recruitmt ex-Derg bureaucrats; refusal to be mobilised; demonstrations against decisions
Dinki (Amhara)	Urbanising centre; big town distant scattered population	Regular emergency food aid - FFW ADLI + NRM packages HP and HC Primary school	Vulnerable cereal + irrigation + livestock	Daily labour, some youth casual migration, petty trade	Experiments with spices in nursery; selected seeds + fertiliser on irrigation	Argobba 60+% Amhara Islam, OC	Rich – poor Older adults – youth Men-women Amhara bit richer; Argoba pol majority	Argobba-Amhara uneasy relation. History of conflicts with Afar. Inter-generational tensions over land	Govt mobilisation hindered by democratic right of non-participation. Kebele leaders 'between 2 fires'
Korodegaga (Oromia)	Big town accessible from growing centre (not vehicles); scattered popn	PSNP OFSP HP and HC Primary school	Vulnerable cereal + irrigation + livestock	Daily labour. Youth loading co-op. Illegal migration to Sudan.	Irrigation, selected seeds, fertiliser; investor's tractor	Arssi Oromo – clans; Islam	Rich – poor Older adults – youth Men-women Exclusion of non-residents	Historic conflicts with nearby pastoralists. Clan political competition	Government mobilisation involving threats. Foot-dragging. All are party members.
Turufe (Oromia)	Big town peri-urban, some suburban. Villagised	ADLI and NRM packages HP and HC Primary school	Potato and grain export + livestock	Commuting and casual migration for business +daily labour; flower farms; Gulf migrn; Education	Selected seeds, fertiliser; few breed cattle; manual thresher	Oromo + 6 Islam OC Protestants Catholics	Rich – poor Older adults – youth Men-women Oromo pol majority	Proximity to multi-ethnic Shashemene assists social integration	Community able to mobilise against unwanted things: closing of hospital, full day school
Girar (SNNP)	Small town peri-urban. Big town accessible. Scattered popn	ADLI + NRM packages HP and HC Primary school	Highly-populated enset + urban migration	Chat and eucalyptus exports; daily labour; education	Selected seeds, fertiliser; tractor hire	Gurage, OC, Catholics, Protestants few Muslims+	Big gap very rich – very poor. Men - women	Inter-clan and sub-clan competition and joking relationships	Post-2005 election violence. Party penetration less advanced.

Table A2: Changes in Contextual Parameters Important for Economic Trajectories

Region	Urbanisation etc	Improved development services	New technologies	Thickening markets	Diversification of livelihoods	Social integration	Class formation	Governance	Government – society relns	Current economic situation
Geblen (Tigray)	Easier road access important	PSNP VI* OFSP problematic Education important	Irrigation – not VI	Urban and Arab country labour markets important	Considerable youth long- and short-term exits	No emerging serious problems	Landholders and landless youth	Longstanding govt and party penetration	Not much more interaction - fear of raising problems	Aid-dependent; re-structuring of economy - agricultural decline
Yetmen (Amhara)	Road maintenance and mobile phones important	Devt Agents important Education important	Green Revn technology VI Irrigation – important	National grain market -VI Local vegetable market important	Agricultural diversification; some long-term youth exits	No emerging serious problems	Landholders and landless daily labourers	Govt and party penetration started after 2005; some active resistance	Much more interaction - regular resistance to unpopular measures	Independent; good recent economic growth partly due to food price rise
Dinki (Amhara)	Increased marketing opportunities important	Emergency food aid important	Irrigation VI Green Revn technology VI	Local vegetable market VI	Agricultural diversification; some short-term youth exits	No emerging serious problems	Landholders and landless youth	Govt and party penetration started after 2005	Much more interaction - community desire to be left alone	Aid-dependent; recent growth in irrigation sector
Korodegaga (Oromia)	Poor road access problematic	PSNP VI	Irrigation – VI Green Revn technology VI 1 investor's tractor	Local vegetable market VI	Agricultural diversification	No emerging serious problems	Landholders and landless youth and immigrant daily labour	Govt and party penetration started after 2005	Much more interaction – dislike of frequent meetings; foot dragging	Aid-dependent; recent growth in irrigation sector
Turufe (Oromia)	Rapid growth Shashemene VI	DAs not VI	Green Revn technology VI	Output and labour markets VI	Non-farm diversification	No emerging serious problems	Landholders and landless daily labourers	Govt and party penetration after 2005 (less than average)	More interaction - seemed to be few complaints	Independent but needed aid in 2008 drought
Girar (SNNP)	Internal roads important for loading eucalyptus	Devt Agents not VI Education important	Some tractor hire	Chat and eucalyptus markets VI Urban labour markets VI	Agricultural and non-farm diversification	No emerging serious problems	Landholders and landless youth	Govt and party penetration after 2005 (less than average)	Rioting in 2005; reduced interest in politics since. Increasing interaction	Independent

* VI = very important