Website Methodology page

The WIDE research approach

Since 1994 the WIDE research approach has been characterised by:

- A long-term perspective
- A focus at community level
- A qualitative and case-based methodology
- A complexity social science approach *read more*

Communities

were conceptualised as open and dynamic complex socio-material systems moving through time and co-evolving with other nested, encompassing, and over-lapping complex systems *read more*

This complexity social science approach encouraged attention to:

- what the communities were like and how they worked in 1994/5, 2003, and 2010/13
- change and continuity in the trajectories of each community in the period 1995-2010/13
- the potential different trajectories of the communities into the future

Complexity approach – seven perspectives on the evolving communities

Complex systems can be described from multiple perspectives; we used seven to guide the questions that we asked. One looked at the community as a whole, and another at the community in its wider context. The other five 'de-constructed' the communities in different ways:

- The evolving community eco-system: the socio-material system of place and people - *read more*
- Five evolving and inter-penetrating functional sub-systems which are simultaneously domains of power, institutional settings and fields of action – family, society, economy, culture, politics - *read more*
- Different kinds of open and dynamic complex household system following household life cycles- *read more*
- Different kinds of open and dynamic people – genderaged biologically-constituted social actors growing older – *read more*
- Different kinds of social interaction in the context of durable structures of inequality – *read more*

Complex systems evolve through time and their past is co-responsible for their current state; in interpreting and analysing the longitudinal data we used synchronic and diachronic perspectives

Synchronic		Synchronic		'Synchronic'
WIDE1 - 1995	→ Diachronic	WIDE 2 - 2003	→ Diachronic	WIDE 3 - 2010/11/13
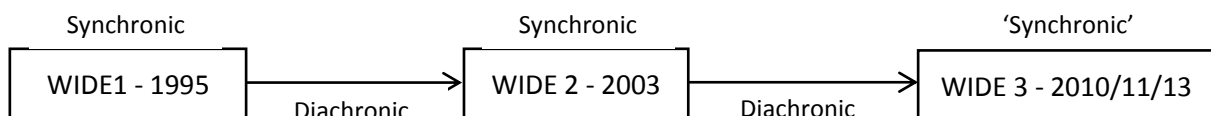
The synchronic approach to communities

- Theoretical frameworks arising from the seven perspectives were used to design the set of research instruments, the choice of fieldwork respondents, and the analytic frameworks for interpreting and analysing the qualitative data.
- Each research visit to the WIDE communities produced 'snapshots' focusing on a short period of time, providing *thick descriptions* of each of the communities, and the chance to use *comparative case-based analyses* of the *data*
- In comparative analyses we have explored similarities and differences in a range of community features, allowing us to (1) identify common mechanisms at work in all the communities; (2) classify the communities into different kinds or types depending on the topic of interest; and (3)

pick out the factors underlying the differences among the types.

- The data were also used to consider the way the communities worked as a whole under the influence of community-specific configurations of internal and external control parameters *see below*
- The synchronic analysis of the WIDE3 data has also produced many [policy relevant research outputs](#)

The diachronic approach to communities

- Communities are spatially, economically, politically, culturally and historically located in wider complex systems. Community trajectories can change direction as a result of internally-initiated changes, linked internal and contextual changes, or big changes in context.
- Control parameters of complex systems are those aspects of its internal structure and context which, working together as a *configuration*, have a governing influence on its state at a particular point in time. Different parameters are dominant in different kinds of communities and can change through time. A significant change in one parameter is likely to lead to adaptation in others.
- We identified ten control parameter areas as important for guiding the trajectories of these rural communities and used the framework with the WIDE data to assess the trajectories of each of the communities *[read more](#)*
- We have also used the framework to draw some conclusions about how significant rural social change happens *[read more](#)*
- In addition to supporting conclusions about community trajectories the data from the three fieldwork rounds has been used to explore many aspects of community change and continuity between 1995 and 2010/13
- For example, changes in the family, society, economy, culture and politics; changes in people's ideas and practices; changes in control parameters guiding the path of the communities in 1995, 2003, and 2010/13; changes in development interventions... *[see the twenty Final Reports for more](#)*

Development interventions

were conceptualised as dynamic open complex socio-material systems which are inserted into fluid community systems with the intention of bringing changes to people, institutions and the physical landscape.

In 2013 we identified 103 different interventions potentially entering the WIDE3 communities *[see list](#)*

They combine macro-level design and monitoring and evaluation with an implementation chain which fans out from the Federal Government, through Regional Governments, zones, wereda and kebeles.

They intersect and co-evolve with government bureaucracies at different hierarchical levels, and with other development interventions, community sub-systems, and in some cases with donor and NGO bureaucracies.

The complexity social science approach to development interventions encouraged attention to:

- how the purpose of interventions is to change community control parameters
- the development interface where paid government officials, unpaid volunteers in official government positions, and different kinds of ordinary community members interact in relation to each intervention
- the ways in which at the community level each development intervention system inter-sects and

co-evolves with the community system, relevant functional sub-systems, and the other development intervention systems operating in the community.

- how interactions among different interventions can involve synergies and antergies
- how the success of an individual intervention depends partly on how well it connects with the place, people, and functional sub-systems in the particular community; development interface disconnects may be material, cultural and/or related to time rhythms
- how theories of change implicit in an intervention include assumptions about: what social actors will do; institutional contexts; the human, material social and cultural resources available; which mechanisms of change will be effective; what the outcomes will be
- why development interventions are never implemented as planned

Read more

Research instruments and fieldwork

- The theoretical frameworks for place, people, family, economy, society, culture, polity were used to produce a list of modernisation variates which were the focus of the research instruments *read more*
- The instruments were organised in modules which in all three stages of WIDE3 provided wereda and kebele perspectives; community histories since 2003; in-depth household interviews; interviews with young people; and interviews with key informants. Other modules varied across the three stages *the modules will be available in due course*
- In each community trained male and female social scientists conducted separate interviews, many providing different perspectives on the same questions. Interviewees included rich, middle-wealth and poor men, women and youngsters, government employees working in the *wereda* and *kebele*, government volunteers from the community holding *kebele* Cabinet, Council, Committee and other official positions, leaders of community-initiated organisations, elders, religious leaders, clan leaders, model farmers, investors, traders, other business people, skilled workers, daily labourers, returned migrants, ex-soldiers, traditional health workers, and various kinds of vulnerable and excluded people.

Case-based interpretation and analysis of the data

Examples of different kinds of case include:

- Complex social systems as cases: e.g. communities; households; people; *iddir*; clans
- Domains of power/functional sub-systems as cases: e.g. livelihood systems; cultural repertoires; community management systems
- Complex social processes as cases: e.g. female circumcision; migration;
- Modernisation features as cases: e.g. irrigation; urbanisation
- Development interventions as cases: e.g. internal road programmes; local education interventions

The interpretation and analysis process began with the writing of individual book-length community case studies *Click here for the community reports*

Comparison of community and other types of cases involved sorting them into types on the basis of the data about the case of interest. This process produced many interesting results about similarities and differences among the communities and the factors lying behind them.

A further step was to look for patterned connections with parameters identified as potentially important through theoretical argument, for example community remoteness, livelihood system, religion, household poverty etc.

Research answers

Over the three Stages these have included:

1. Many empirical conclusions – as the Summary Reports for Stages 1 *link*, 2 *link* and 3 *link* show
2. Many policy discussion documents and powerpoint presentations *link*
3. New theoretical frameworks *see the [Methodology Annexes in the three Final Reports](link)*
4. Some new conceptual directions – for example in Stage 2 considering policy-relevant variates such as irrigation and internal roads as cases which can by typed and taking this insight further in Stage 3
5. Recognition of the importance of durable structures of inequality in these rural communities
6. The development of substantive theory in relation to rural social change *see above*
7. Improvements to research methods and fieldwork practice after each Stage
8. New research questions

WIDE-related methodology publications

Stage 3 Final report Annex on Methodology April 2014
Stage 3 Inception Methodology paper April 2013
Stage 2 Final report Annex on Methodology February 2013
Stage 2 Inception Methodology paper January 2012
Stage 1 Final report Annex on Methodology August 2010
Stage 1 Inception Methodology paper December 2009

Bevan, P. 2014 '[Researching Social Change and Continuity](link): a Complexity-Informed Study of Twenty Rural Community Cases in Ethiopia 1994-2015', in (ed) L. Camfield, *Methodological Challenges and New Approaches to Research in International Development*, London: Palgrave.

Bevan, P. 2014 Powerpoint presentation '[Change and continuity in rural Ethiopia 1994](link) (and before) to 2013 (and beyond): a longitudinal study of twenty communities using complexity methods' ESRC Seminar Series: Complexity and Method in the Social Sciences.

Guide to using the WIDE data

Download here

Guide for implementing a similar longitudinal complexity community study

Download here

The 'read mores'

The WIDE research approach

The WIDE research can be characterised by three main features: 1) a long-term perspective, 2) a focus at the community level and 3) a qualitative data and case-based methodology. The conceptual framework is based on the complexity social science approach described below. To date the research methods have evolved over three phases from 1994 to 2013, notable changes being the involvement of female researchers from WIDE2 in 2003, and a greater focus on the role of development interventions in WIDE3.

Why a long-term perspective on the impacts of development?

There are four reasons why we have taken a long-term perspective on development in Ethiopia, comparing communities in 1995, 2003 and 2010-13. *First*, we have been able to identify and

describe substantive and inter-dependent changes in the local economies, polities, societies and cultures of each of these communities. *Second*, by analysing the communities using a complexity system lens, as described below, we have been able to develop ideas about where each of these communities might be heading in the next few years. *Third*, by focusing on the period since 2003, which has seen a considerable increase in government activities and related aid-funding, we have been able to explore the impact on the communities of the combined and interacting contributions of a stream of interventions in the infrastructure, livelihoods, environment, social protection, health, education, governance, justice and social equity sectors, some of which is explored in chapters in this book. *Fourth*, we have also been able to explore the combined impact of these interventions on different kinds of community member distinguished by genderage, wealth, and other locally salient status markers (see Pankhurst and Bevan 2007 and the chapter on inequalities in this book).

Most country-specific assessments of development interventions depend on one of three approaches. The *first* is monitoring and evaluation of individual sector development programmes and projects in relation to goals set at the outset. This can provide a view of the relatively immediate impacts of a particular intervention at a particular time. The *second* involves measuring, and sometimes extrapolating, differences in administrative and survey-generated statistics between different years used as indicators of general economic development and sector progress. Recently there has been growing interest and investment in a *third* approach at project level: the Random Controlled Trial. Here potential beneficiaries are randomly assigned to a 'treatment group' and a 'control group' and quantitative analyses of the outcomes are used to establish the degree of difference made by the intervention. All these approaches have their uses. However, they do not provide information and analysis that is useful for the strategic planning of future interventions in country contexts marked by considerable internal livelihood diversity and rapid change. This is the gap that research like ours is designed to fill.

We have been exploring how, in a variety of places, different kinds of planned intervention have interacted with each other, and with other ongoing events, deep community structures, and wider modernisation processes, such as the spread of modern communications and ideas, the thickening of markets, and the building of the state. Our data have also been used to identify gaps and problems with current interventions, synergies when interventions in different sectors support each other, 'antergies' when one intervention confounds another, and short and longer-term unanticipated consequences of interventions considered individually and as sets. Also, our tracking of the trajectories of the communities into the future is related to an agenda for policy design which takes account of potential change or stasis at community levels during the period when the intervention is in place. With the right information policymakers could intervene to prevent, encourage or compensate for the anticipated changes. Where stasis is predicted the use of the framework can support identification of the factors involved in blocking desirable change.

Why a focus on communities?

Community systems are spatially-defined entities. The thousands of rural community systems found in the mountains, valleys, plains and deserts of Ethiopia are sub-systems of Ethiopia's macro system. Ethiopia, with a population of over 90 million, has around 30,000 *kebele* which are the smallest administrative unit and the site of intervention implementation. The boundaries of the community systems in which we conducted the WIDE3 fieldwork coincided with local kebele or sub-kebele boundaries in 2013[1]. The three stages of WIDE provide data on the community structures and histories in 1995 (for fifteen communities), 2003 and 2010-2013; each piece of qualitative and quantitative data can be viewed as an *evidence trace* of the trajectory of the community at the time it refers to.

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[1] In some cases these were not totally coincident with the boundaries of the communities studied in 1995 and/or 2003. In one case, Dinki, the 1995 *kebele* had become a *got* in a much larger kebele by 2010.

We adopted a focus on communities for six main reasons. *First,* in the absence of dramatic changes in the wider context, this is the level at which development does, or does not, happen in poor rural societies. *Second,* the policy interface between government and society in rural Ethiopia is found at community level; policies, programmes and projects will only produce development if they lead to changes in local ideas, practices, community institutions and structures. *Third,* communities work as complex open social systems constituted by inter-acting economic, political, social, cultural and human sub-systems. A significant change in any of these sub-systems will cause adaptive change in the others, resulting either in positive feedback effects which reinforce the original change or negative feedback effects, which dampen the momentum of the original change. Such negative feedback mechanisms are key factors in 'poverty traps'. *Fourth,* communities are on individual trajectories and the aim of development interventions is to re-direct them onto developmental paths. *Fifth*, while in recent years development interventions have been aimed at the economic development of households and the human development of individuals, these interventions are all delivered by government structures through the prism of the community, in which different kinds of household and individual evolve in social, economic, cultural and political relationships and interactions with each other, often involving inequality, adverse incorporation and exclusion (see chapter on inequalities).

Finally, Ethiopia's rural livelihood systems, as noted earlier, are quite diverse, even within *weredas*, posing deep problems for the macro-design and implementation of economic policies and programmes appropriate to particular local conditions, especially since there is currently little accessible information about how local livelihood systems and communities work and the relative prevalence of different types. While there are regular criticisms of 'one-size-fits-all' approaches to development interventions, such approaches actually fit well with the current analytical framework used by government and donors. This mostly relies on quantitative data on households and individuals, and seeks to generalise rather than identify the differences which matter. We have not yet seen the development of a rigorous practical methodology for developing a set of 'sizes' to fit the different types of livelihood, *kebele*, and *wereda* which constitute the 'all'. A national research and evaluation focus on communities would allow for the accumulation of knowledge, which could be used to develop and monitor a portfolio of programmes in the different sectors appropriate to the different initial conditions found in differing types of community.

Why qualitative data and a case-based approach?

Improvements in computer capacities and speeds have led to rapidly growing interest in case-based approaches to empirical research, a related useful literature, and software programmes for linking interpretations of qualitative data with analyses of quantitative data.

The complexity social science approach which underpins the WIDE3 programme relies on case-based methods which have been the subject of a Handbook (Byrne and Ragin 2009), which contains examples of a range of case-based methods and techniques[2] . Byrne argues '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, classifying, interpreting and ordering.

A possible charge that will be made by those who are not convinced by the conclusions we have drawn from the research is that they are 'anecdotal' because the data lying behind them (1) only refer to twenty sites which are not 'representative' of Ethiopia's rural communities and (2) have been 'collected' through procedures which have not 'controlled for' interviewer bias.

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[2] These include 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.

With regard to the first charge we fully accept that these communities are not 'representative' in the way that an appropriately-sized sample selected randomly would be. However, they were chosen by economists designing a conventional random sample household survey[3] for quantitative analysis as 'exemplars' of different types of rural community, and we have applied some well-accepted case-based methods to the data. Through a process of case analysis and comparison we have provided narratives for each community,[4] looked for commonalities and differences across the sites in relation to modernisation processes and the impact of interventions on the communities and people within them, and located each of them in the wider Ethiopian context through a process of typologising, which we hope can be expanded.

With regard to the charge of interviewer bias we would argue that empirical data are not 'given' or 'collected'; whether they are based on surveys, interviews, or participant observation they are always made and recorded by people involved in a process of interaction with other people. Furthermore, all data analysis, including the most technical of econometrics, relies on processes of interpretation involving many judgments. During the process of making our data the skilled, experienced and trained fieldworkers had to translate questions and probes in English into the appropriate local language, informants had to interpret and answer the questions in the light of their particular experiences, the fieldworkers had to engage in dialogues with the informants to follow-up on potentially interesting topics, translate the answers into notes and the notes into written narratives. Finally, we, the report writers, had to make some sense of a vast set of narratives coming from the perspectives of a range of different people involved in the development of the community including *wereda* officials, *kebele* officials, elders, militia, women's association leaders, ruling party members, opposition party supporters, farmers and their wives, women heading households, rich, middle wealth, poor and very poor people, health centre employees, extension workers and teachers, old people, young men and women, and children.

Given this complexity, how have we worked to maximise the validity of our conclusions? *First,* our qualitative data were made using protocols which contain instructions about the broad questions to be asked discursively with probes to make sure important aspects are not missed, details of what kinds of people should be asked to respond, and a space for the interviewer to follow-up interesting responses and add observational data and comments. The design is theory-based. Protocols produce narrative data about the case in question. Protocols can be applied in any number of cases and the narrative data can be coded and quantified. Types of respondent appropriate to the question are selected e.g. rich/poor, teacher/student/parent and asking the same questions of people of different types provides multiple perspectives and allows comparative analysis.

Second, we set in place a data interpretation/analysis process where first we built descriptive evidence bases combining answers from all the modules and which referred back to them. These evidence bases were revised after the fieldworkers had read and commented on them and were used in a process involving a first stage of interpretation and abstraction to construct Final Report annexes. Drafts written by each of the report writers were read by the others; when facts or conclusions were challenged the writer had to refer back to the data in the modules and if necessary make changes to the annex

Why a complexity social science methodology?

Using ideas from complexity science and theory our complexity social science approach[5] pays attention to ontology – what is the world *really* like? and epistemology – how can we know about it? In relation to that part of the world we are looking at here – rural communities and their members –

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[3] The Ethiopian Rural Household Survey https://www.ifpri.org/publication/ethiopian-rural-household-surveys-erhs-1989-2009 accessed 28/09/16

[4] See twenty Community Reports on the Ethiopia WIDE website http://ethiopiawide.net/publications accessed 29/09/16.

[5] For more on this see Bevan 2009.

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 make them up, constitute their contexts, and overlap with them. 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 particular 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 which include establishing an Evidence Base to which we can return if questions arise.

From complexity ontology we take a number of key messages. Initial conditions matter and trajectories are path dependent. Systems and their elements have different timeframes and co-evolve. Systems can change rapidly but systems with strong 'control parameters'[6] (see below) are resistant to change. 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. In the development world these sub-systems include households, communities, kingroups, formal and informal enterprises, NGOs, political parties, donors, government, transnational companies 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, and some people may be excluded from participation in many areas of the system.

Complexity theory tells us a number of things of relevance about ways to know about complex systems. Research is usually exploratory rather than confirmatory, the aim being to identify common processes and mechanisms rather than 'laws' or generalisations. Frameworks and methods depend strongly on the research question. There is continuous interaction and iteration between ideas and the field. Quantitative and qualitative data are seen as different kinds of 'traces' of the passage of the communities through time/history. Quantitative data tells you *how much* of the research object of interest there is while qualitative data tells you *what kind* of thing it is. More than one description of a complex system is possible; different descriptions decompose the system in different ways.

Complexity social science is particularly useful for informing policy.[7] It is essentially a frame of reference for understanding what things are like, how they work, and how they might be made to work better. 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.

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 type. 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.

Communities co-evolving

Figure 1 depicts a community co-evolving with its households and people and wider context. Communities do not have life cycles as households and people do. The trajectory followed by each community system is the result of interactions among (1) a stream of external happenings to which

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[6] In the case of rural communities these might include the weather, a well-entrenched culture, and/or a hierarchical unequal power structure.
[7] See for instance Bevan 2010a.

people organised in household sub-systems have to respond and (2) creative activities generated from within the community.

Figure 1: Co-evolution of communities, country, households and people

COUNTRY REPRODUCING/CHANGING

COMMUNITY REPRODUCING/CHANGING

OTHER HOUSEHOLD

HOUSEHOLD AGEING

PERSON MATURING/AGEING

2003

new households   new people

YEARS PASSING
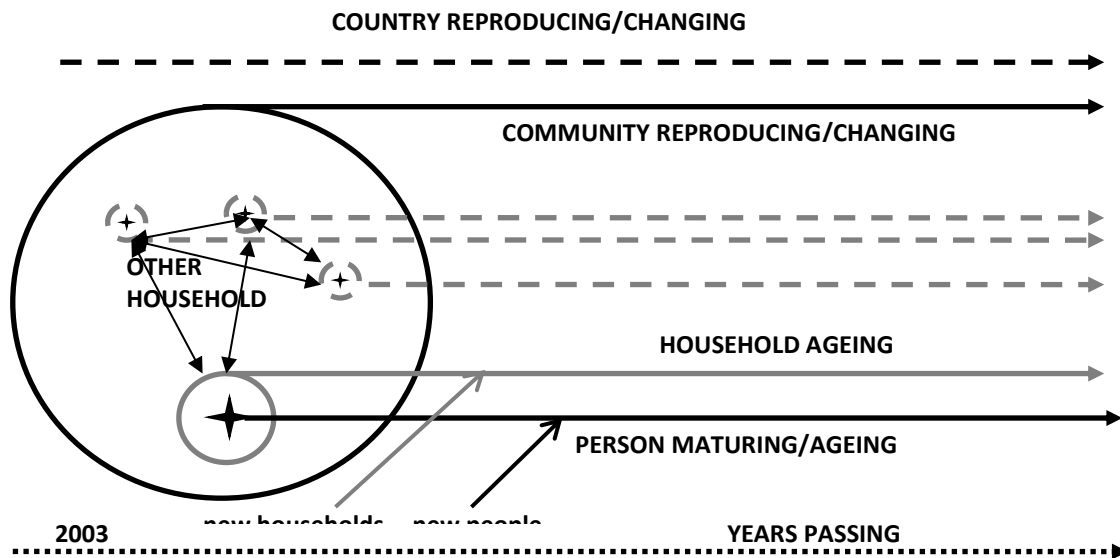
The core analytic framework which lies at the heart of WIDE3 data-making and interpreto-analysis processes de-constructs the community systems into (1) material systems of place and people (2) five intersecting functional sub-systems also viewed as fields of action and domains of power and (3) nested household systems with nested people. The functional sub-systems or domains are unequally structured; different kinds of household and person participate in, and benefit and suffer from, them, in different ways. All the sub-systems operate together inter-actively and with aspects of the community context which include both encompassing systems and external elements of the five functional sub-systems. At any point in time, key aspects in the ten control parameter areas listed in Table 2 and the relationships among them determine the current state of the community system.

The framework in Figure 2 shows how development interventions related to government strategy

Figure 2: Community trajectories

Development interventions   SDPRP   PASDEP   GTP

Possible

Here in 2013?

Or here?

Possible

Or here?

1995

2003

1995   Other changes affecting   2003   the community   2013

Time

10
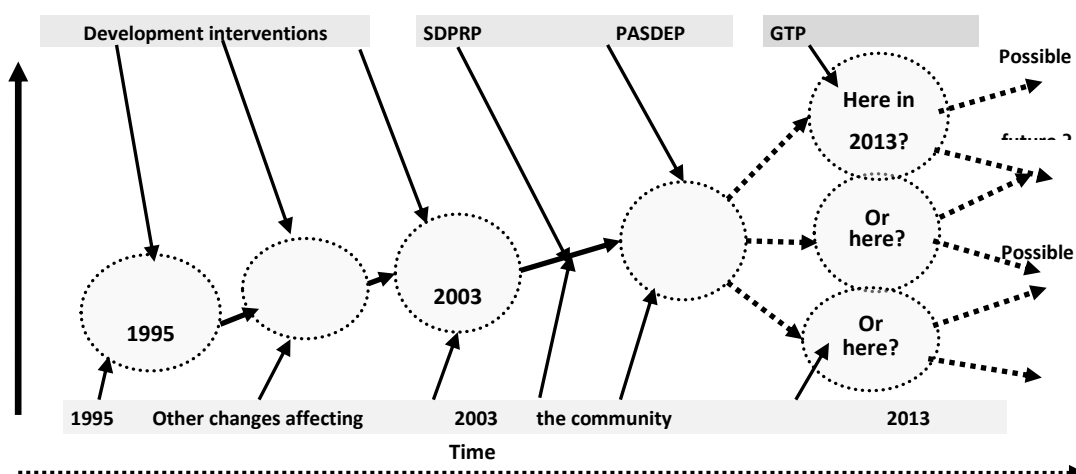
plans (the SDPRP, the PASDEP and the GTP[8]) and wider changes in context have interacted with ongoing community processes since 1995.

The material eco-system

The community ecosystems are constituted by living organisms (plants, microbes and animals including human beings) and the structured non-living elements of the environment including rocks, minerals, soils, water, and air. The base of the community system is its unique piece of geographical territory. This territory contains a material system which has boundaries established as a result of politico-administrative decisions although these may have been affected by features of the landscape such as rivers, escarpments and gullies. Within the boundaries at any point in time the place system is constituted through:

(1) interactions among local manifestations of larger material systems - altitude, climate, topography, geology, and ecology and

(2) material legacies of previous human interactions with the territory including land and water use, environmental degradation or re-habilitation, settlement patterns, roads, buildings and technological infrastructure.

The people system is constituted by the population of material historically-constructed human beings and their current embodied physical and mental human resources and liabilities.

Five domains of power

Community members are active in five institutional settings or functional sub-systems. Through them community members act to perform the different functions required for the community system to remain in business. The sub-systems structure and guide activities in the fields of livelihoods, human re/pro/duction, social re/pro/duction, community management, and ideas (see Table 4).

Table 1: The five domains of power / fields of action / functional sub-systems

	Smallholder agriculture and agricultural employment
Livelihoods	Non-farm business and non-farm employment
	Migration and remittances
	'Producing' people: pregnancy, birth, child-rearing
	'Producing' people: learning, training, formal education
Human re/pro/duction	'Reproducing' (maintaining) people: domestic work, food consumption
	'Reproducing' people: housing, household assets, water, and sanitation
	'Reducing' people: illness, conflict, ageing
	Social networks
Social re/pro/duction	Social institutions: marriage, circumcision, inheritance, land/labour/oxen exchanges
	Social organisations (including households)
	Community-initiated structures for decision-making and implementation
Community management	*Kebele* (community government) structures
	Wereda (district) structures
	Local customary repertoires
Ideas	Local modern repertoires
	In-coming ideologies, religions, cultures and other ideas

From one perspective these five functional sub-systems are *fields of action* in which different kinds of community member are active in different ways. In these communities most farmers are adult men; the most-important human re/producers (baby-makers, small-child-rearers, and people-

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[8] The first government plan, the Sustainable Development and Poverty Reduction Programme 2003-5, was followed by the Plan for Accelerated and Sustained Development to End Poverty 2005-10 and the Growth and Transformation Plan 2010-15.

maintainers) are female albeit often operating to a degree under the authority of a husband; leading elders are older men; leading religious leaders are male; important political leaders are male.

The fields of action are also *domains of power*; all are hierarchically and unequally organised. In the economy there are rich, middle-wealth and poor smallholders, landless labourers, rich traders, petty traders, commuters, migrants etc and considerable differences in household wealth and incomes. Households into which children are born and raised are hierarchically organised in terms of genderage and resources and opportunities are not equally distributed among family members. Social structures include organisations with hierarchies which are also strongly linked with differences in genderage. Cultural ideas about superiority and inferiority may be attached to ethnicity, religion, craftwork, descendancy from 'slaves', and poverty. Control and influence over many decisions affecting the community are in the hands of adult male landowners. Richer men are likely to be the active leaders in most or all of the five systems with some elite members having key roles in more than one of the sub-systems.

These systems are not fully contained within the community territory as they depend upon interactions and relationships with wider systems including for example value chains, kin or clan systems, party hierarchies, national development programmes and world religions. While these functional systems are not directly visible to the human eye the day-to-day actions and social interactions among community members which constitute them are in principle visible, and further traces of their existence are found in, for example, fields of wheat, primary schools, funerals, elections, and religious sermons (Figure 1).

Figure 3: The five functional sub-systems / domains of power / fields of action
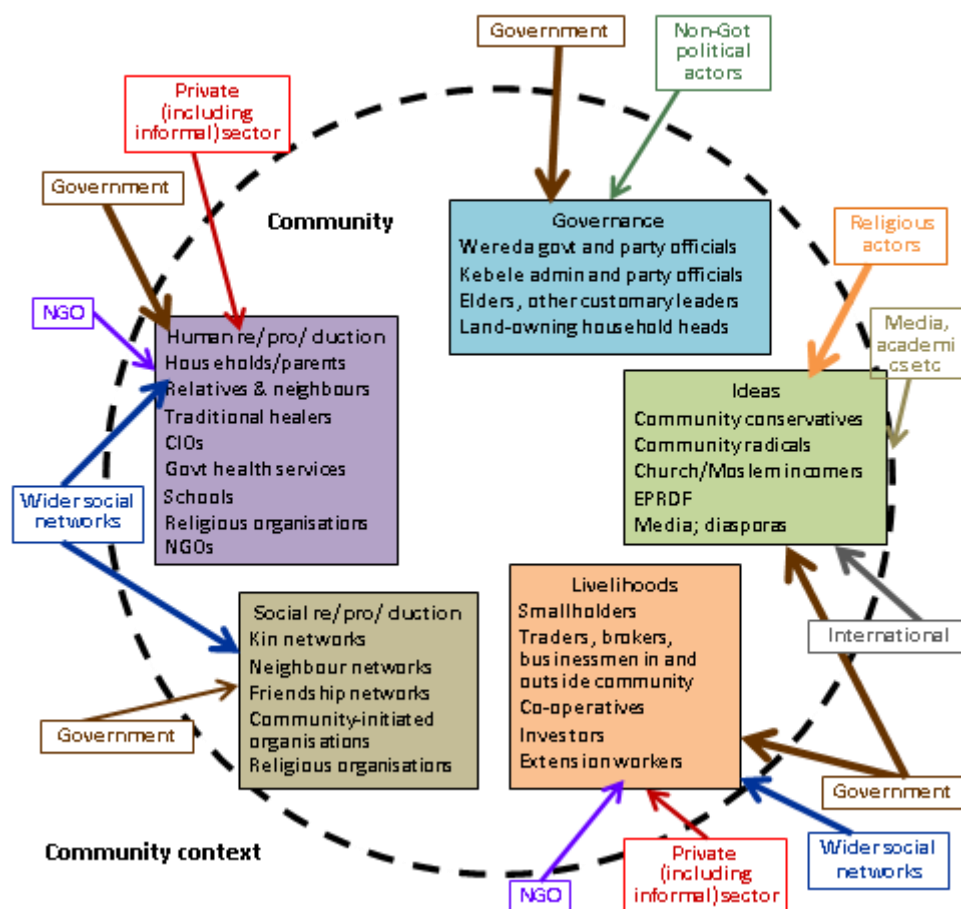
In the *livelihoods* field people are organised to work to produce, exchange and consume various goods and services. Rural *livelihood systems* extend beyond the spatial boundaries of the community as various inputs are brought in from outside and products distributed through external markets and other networks. People work in the *human re/pro/duction* field to produce new people, and invest in and service existing ones; contributions from/to the community context involve wider kin networks, health and education services, domestic technology producers etc. The *social re/pro/duction* system is where people invest in their social relationships creating, reproducing, adapting and sometimes destroying organisations, networks and institutions for various purposes; many of these extend beyond community boundaries. The creation, reproduction and adaptation of the system of *cultural ideas* requires thinking and dissemination work related to ideas, values, norms and more formal rules; many new ideas come from outside and some of those generated within the community are exported. Finally in the *community management* field people work in the areas of decision-making , implementation of government and community decisions, everyday governance, security and justice. They also work to maintain or change the ways these things are done in the community and beyond and/or the leaders in charge of doing them.

The functional sub-systems overlap and inter-penetrate synchronically as a result of two mechanisms. *First*, a *real action* never takes place in only one of the fields. For example, a man ploughing in a livelihood role is also playing a societal role as for example smallholder, share-cropper, ox-sharer. A woman feeding her newborn infant butter is using the local customary repertoire of ideas. *Second*, these sub-systems are also energised through *social interactions* which always have implications for more than one sub-system. For example for a smallholder to produce and harvest crops labour must be organised for different tasks at different times of year through the societal system; the farmer might use household labour for some tasks, maybe a group labour-sharing arrangement with established norms for others, and someone in his/her network who is willing to do daily labour for yet others.

Household systems

The two important nested dynamic open complex systems constitutive of the community are *household systems of different types* spatially located in different parts of the territory, which themselves are constituted by *human systems or people of different genderages playing different roles in the functional sub-systems*. Households are important social organisations in the social re/pro/duction or society domain of power; people invest considerable time and energy in creating new households and managing social relationships within them as they pass through the household cycle and evolve. Household survey research undertaken in four WIDE sites during the WeD programme in the mid-2000s showed similarities in household structure patterns across the sites, and that, on average, only 62% of households were on the culturally-ideal track. This was defined as a progression from young couple, through young nuclear family, mature nuclear family, in some cultures polygynous families, emptying nest, old couple, male-headed 3-generations, and nuclear family with old parent (Pankhurst and Bevan 2007). The remaining 38% included female-headed households, sibling households, men and women living alone, and some more unorthodox combinations of people.

Households play an important role in co-ordinating the activities of members in the five functional fields to fulfil the economic, human re/pro/duction, , cultural, political and extra-household social re/pro/duction functions required for the particular type of household system to remain in business. Figure 1 shows the different participation of household members in the different functional domains.

Figure 4: Participation in the different fields of action by different kind of household member
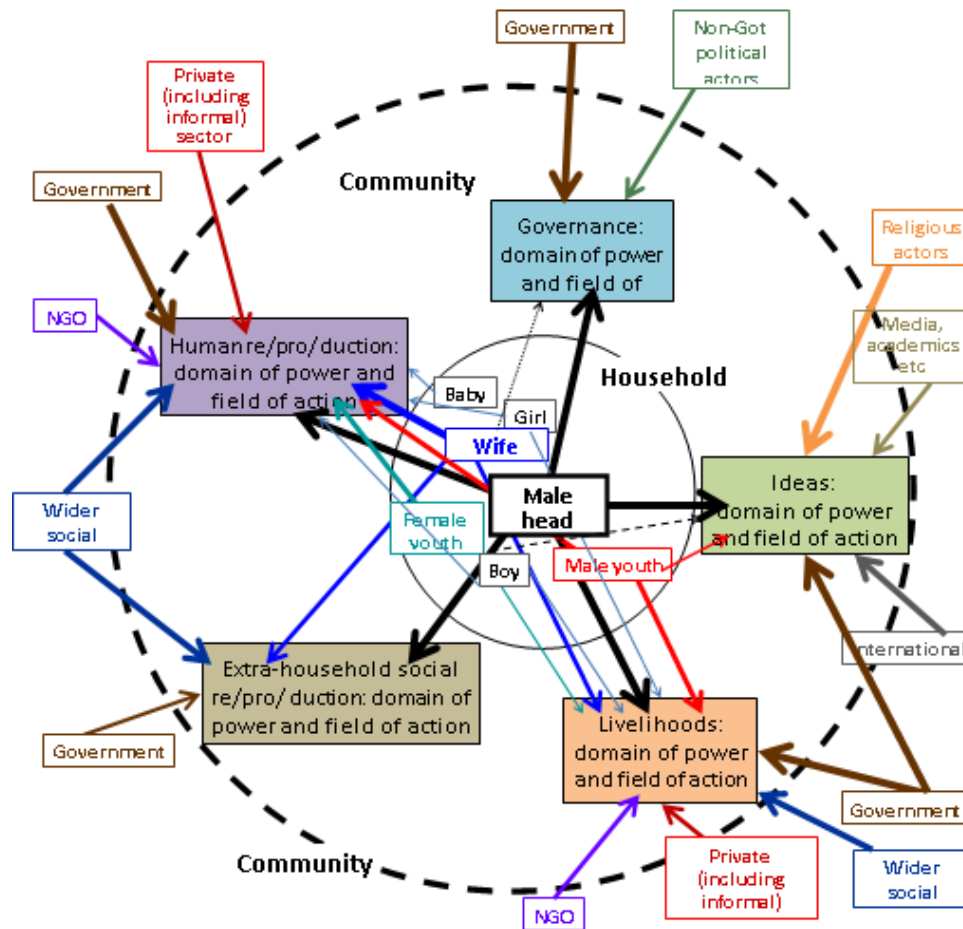
Households can be seen as involved in a 'struggle for existence' through which they occupy an economic niche for longer or shorter periods. Those with greater wealth, status and political connection are likely to do better in the competition for positional advantage and leverage; those that are poor, socially marginalised, and politically irrelevant are likely to remain excluded and/or adversely incorporated. However, given the uncertainties of rural life, customary institutional arrangements for co-operation, and the important contribution to success of individual character, motivation and skills, there are varying levels of intra-generational and inter-generational social mobility both upwards and downwards.

Pankhurst, A. and P. Bevan 2007 'Unequal Structures, Unbuffered Shocks, and Undesirable Strategies' Paper for World Bank Social Protection Department accessed 29/09/16.

Different kinds of people

Each person is a biologically-constituted social actor with a genderage, class/wealth position, ethnicity, religion, maybe other community-relevant social statuses, a personality, accumulated human resources and liabilities, and a personal history. Men and women, youth and children 'co-evolving' with other people, their households and their communities are affected by what happens to each. Individual consequences depend on community trajectory, household trajectory, social networks, genderage, class-wealth, status, political connection, education, health, personal characteristics and chance. The complex of choices different kinds of people make individually and collectively in response to what happens to them also has consequences for them as well as the future trajectory of each community and, taking all communities together, for the country.

Social interactions in the context of durable structures of inequality

The structures of interest here included class, status and power structures and elite formation. How is the community structured in terms of class, wealth/poverty, and income? What kinds of community elites exist and how integrated are they? Who is most powerful? What forms do genderage inequalities and relations take? In what ways are adult and youth gender relations changing? What is the state of gendered inter-generational relations? What other community-specific status markers structure inequality?

Control parameters

The material, functional and nested sub-systems and the encompassing systems contain potential 'control parameters' which are those aspects of the community system and its context that, working together as a *configuration*, have a governing influence on its trajectory at the point in time when the synchronic snapshot of the state of the system is taken in an empirical research process[9]. The communities are contained within, and contribute to the constitution of, larger encompassing systems, including wereda, zones, Regions, the country as a whole, and the global system. From the perspective of each community system these are contexts; events and actions originating in them have the potential to set off change processes within the communities. Events and actions in community systems can also set off change processes in the encompassing systems that constitute part of their environment/context.

Internal to the community there are important community-specific parameters related to the material systems of Place and People and the five functional sub-systems. There are also external control parameters in the community *context*, which includes elements in encompassing systems like the wereda and non-spatial systems like the international coffee value chain which intersects with livelihood systems in coffee-producing communities. Table 5 identifies the control parameters which were important in guiding the trajectories of the fourteen communities studied in Stages 1 and 2. At a point in time the empirical content and contribution of each parameter to the governing configuration will vary across different community types.

Table 2: Parameters guiding rural community trajectories

Control parameter areas		Parameters identified as potentially important for the communities studied
Internal parameters	1. Place	Terrain, settlement, climate, ecology
		Remoteness - connections with wider world
	2. People	Current human resources/liabilities Aspirations Personal relations
	3. Lives	Human re/pro/duction institutions
	4. Livelihoods	Farming system
		Livelihood diversification
		Economic institutions
	5. Social relations	Community fault-lines Organised collective agency
	6. Cultural ideas	Customary cultural repertoire Modern cultural repertoires
	7. Politics	Political settlement Government-society relations Opposition party organisation
Contextual parameters	8. External aspects of intersecting functional systems	Economic – e.g. international coffee prices
		Lives – e.g. contraceptive provision, food aid systems
		Social – e.g. diasporas
		Cultural imports –e.g. religious, political, modernisation ideologies
		Political – e.g. EPRDF party

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[9] In times of rapid change configurations can change rapidly.

Control parameter areas		Parameters identified as potentially important for the communities studied
	9. Encompassing meso systems	State of meso system: economy, society, culture, politics Government plans for the wider area
	10. Encompassing macro systems	State of country system: economy, society, culture, politics State of Horn of Africa systems State of global systems

In different types of community actual manifestations of these abstractly-described control parameters take different forms. Also in different types of system, or at different times in the life of one system, a different selective mix or configuration of control parameters may be important in guiding trajectories. For example in a crisis period in a 'fragile community' relationships and activities in the political domain may be very important, while in a remote but stable community customary cultural ideas may play a leading role.

How significant rural change happens

One implication of the overlap and inter-penetration of sub-systems and their particular control parameters is that a significant change in one of them has potential consequences for others and may set off a chain of knock-on effects which reverberate through the system in the form of second, third and subsequent order feedback effects. Negative feedback loops dampen the longer-run impact of the change while positive feedback loops increase it.

As time passes community systems evolve through myriad day-by-day actions and interactions in the five fields some confined within the community and some involving outsiders. Some of these are '*habitus* actions' and some are 'agency actions'. In most places at most times most inter/actions are routine and reproduce the system but as time passes new actions, events and/or patterns of collective behaviour may trigger a change process reverberating through the community system's sub-systems. The impact of these reverberations on the overall control parameter pattern and trajectory of the community depends on the magnitude of the changes generated from within or outside and the operation of feedback loops among the sub-systems/control parameters.

One source of potential change lies in internal or nearby material system processes: volcanos and earthquakes, unusual weather, people and livestock epidemics, new roads, urbanisation etc have secondary and subsequent knock-on effects on people and the operation of the functional social systems. Considering the people system population growth or decline over the years and changes in demographic structures, for example large youth and/or male migration, can also set of change processes in the social systems. Structures are also subject to transformation as a result of human agency, for example charismatic leadership and/or collective agency. Changes may also originate in any of the functional sub-systems or externally.

During periods when complex social systems do not really change any changes in control parameters and/or context are dealt with through a complex set of feedback processes that lead to the system reproducing itself in much the same way. For community systems on stable trajectories for some while there are a number of ways in which change may be triggered. One is a huge and sudden event or intervention from outside such as an imperial conquest, the imposition of military socialism, the provision of large pieces of land to investors, a pandemic, or the discovery of oil. At the other extreme myriad cumulative small changes in one or more of the control parameters over a long period may, in complexity social science language, push the community further 'from equilibrium' until it reaches a 'tipping point' and is ready to be sent in a new direction by a relatively small new event or intervention. In between these two extremes meso changes to one or more control parameters may lead to relatively rapid moves towards disequilibrium and change, for example green revolution changes combined with irrigation potential and increasing market demand or rapid urban expansion eating away at the borders of an adjacent rural *kebele*.

Thinking in this dynamic and non-linear way has led us to re-consider the concept of 'outcomes' and draw a distinction between *real outcomes*, whose identification in a longer-term historical process requires some theoretical work and argumentation, and *measured outcomes* which emerge from fieldwork data made using questions about what is happening 'now' or was happening five years ago whose answers may or may not coincide with a real outcome. In our study of the trajectories of whole communities over twenty years or so we have been faced with a stream of large numbers of real outcomes of different kinds, for example a bad harvest, a new kebele cabinet, a decline in the birth rate. This stream of inter-acting outcomes serially affected the community places, people and the five different fields of action, in a process through which, as time passed, 'outcomes' became contributing 'causes' in processes leading to later outcomes.

Most of our data refer to 1995, 2003 and 2013 giving us snapshots of outcomes in the control parameter areas in these three years. We have used these snapshots together with the patchy reports we have of happenings in the years in between to create narratives of continuity and change between 1995 and 2013 and identify important causes of significant changes.

There are five real and very significant potential outcomes of interest in 2013 relating to the trajectories of the communities since 1995. *First* the community may have undergone some changes during the period leading up to the outcomes but the overall pattern and trajectory remained roughly the same(Outcome 1); *second* the overall pattern may have changed in some way but the trajectory remained roughly the same (Outcome 2); *third* the overall pattern had changed so much that it was clear that the direction of the community was bound to change but not clear in what way (Outcome 3); *fourth*, there had been a transformation to a new state with a new overall pattern and trajectory (Outcome 4); *fifth* the system has ceased to exist in any recognisable form (Outcome 5). We have used the control parameter framework to identify the larger consequences or outcomes for the Stage 3 community trajectories of the complex outcome-cause-outcome…etc streams they experienced between the early 1990s and 2015.

A comparison of dominating control parameter configurations in 1995 (3 communities), 2003 and 2013 allowed us to identify forces for change and continuity, including development interventions, in the Stage 3 communities and this analysis could be extended to all twenty WIDE communities (Table 3).

Table 3: Forces affecting control parameters 1991-2013

Control parameter areas	Potential parameters identified as important for the communities studied	Forces for continuity/change to control parameters in each community 1991-2013
11. Place	Terrain, settlement, climate, ecology	
	Connections with wider world	
12. People	Current human resources, aspirations, personal relationships	
13. Lives	Human re/pro/duction infrastructures & institutions	
14. Livelihoods	Farming system	
	Livelihood diversification	
	Economic institutions	
15. Social relations	Community fault-lines Organised collective agency	
16. Cultural ideas	Customary cultural repertoire Modern cultural repertoires	
17. Politics	Political settlement Government-society relations Opposition party organisation	
18. External aspects of intersecting	Economic – e.g. international coffee prices	
	Lives – e.g. contraceptive provision, food aid systems	
	Social – e.g. diasporas	

Control parameter areas	Potential parameters identified as important for the communities studied	Forces for continuity/change to control parameters in each community 1991-2013
functional systems	Cultural imports –e.g. religious, political, modernisation ideologies	
	Political – e.g. EPRDF party	
19. Encompassing meso systems	State of meso system: economy, society, culture, politics	
20. Encompassing macro systems	State of country system: economy, society, culture, politics	

List of potential interventions in 2013

Table 4: A list of development interventions potentially entering rural communities in 2013

Interventions related to the community place	
Land use and infrastructure	1. Community land planning: villagisation, smallholder farming, communal grazing/forest, kebele centre/town, markets, investors
	2. Investment in public buildings
	3. Investment in internal roads: new roads; bridges, maintenance
	4. Investment in external roads: new roads, bridges, maintenance
	5. Feeder roads: new roads, bridges, maintenance
	6. Electricity: from the grid to the community, within the community
	7. Phones: masts and maintenance, network capacity
	8. TV/radio: masts, programmes and restrictions *; regulation*
	9. Investment in irrigation: infrastructure, wells, pumps, drip irrigation, etc
Environment	10. Watershed management including erosion and flood prevention, water for people & livestock, irrigation
	11. Interventions aimed at the local ecology: tree-planting, animal protection
	12. Interventions specifically related to climate change
	13. Soil interventions: fertilisers, lime, compost, crop rotation, mixed crops
Interventions to change people's opportunities and wellbeing	
Interventions to improve young people's lives	14. Youth co-operatives, extension advice, inputs, targeted credit, training (mostly aimed at young men)
	15. HIV/AIDS clubs; youth clubs,
Interventions to improve young men's lives	16. Boys school clubs
	17. Male sports opportunities
Interventions to improve young women's lives	18. Banning of female circumcision: awareness-raising, legislation, implementation
	19. Adolescent reproductive health
	20. Girls clubs at school
	21. Positive discrimination education and govt jobs;
	22. Female sports opportunities
	23. Interventions related to marriage age, choice etc
Interventions to improve adult women's lives	24. Women's livelihood interventions: women's co-operatives, extension advice, inputs, targeted credit, training
	25. Women's empowerment: Women's property rights: widows, divorcées, daughters
	26. Women's security: rape, abduction, domestic male violence – legislation and implementation
Livelihood interventions	
Land	27. Smallholder land access regulation: registration, leasing, share-cropping rules, inheritance, compensation
	28. Investor access to land: Regional, zonal, wereda, kebele procedures and implementation
	29. Urban land access: rules and implementation
Farming	30. Irrigation-related interventions
	31. Other farm technology interventions
	32. Crop extension advice and resource provision: use of inputs, farming technologies & techniques etc
	33. Livestock extension & vet services: fattening, dairy cows, cross-breeds, vet, chickens, bees, etc
	34. Grazing land management and fodder interventions
	35. Inputs regulation & Service Co-operatives: fertilisers, improved seeds, pesticides, SC regulation
	36. Output sales regulation & Service/coffee co-operatives
	37. Interventions to promote labour co-operation: 1-5s

	38. Interventions affecting agricultural employment
	39. Producer co-operatives: potentially - mobilisation, registration, land access, credit access, training
Non-farm interventions	40. Non-farm packages
Migration	41. Migration policies: advice on migration; measures to control illegal migration; management of legal migration
Credit	42. Credit and saving: Regional MFIs, RUSACCOs, other - rules
Taxes	43. Land taxes: setting of differential rates; tax collection
	44. Licences & income tax: registration; individual decisions about annual tax; tax collection
	45. Market taxes: rates; collection
Interventions to change the human re/pro/duction system	
Social protection and inclusion	46. Social protection interventions: food aid; oil & sugar subsidies; targeted orphans, very poor, disabled, etc
	47. Interventions to help landless, very poor, orphans, disabled people, old people etc
	48. Interventions to help un(der)employed people
	49. Social exclusion interventions: craftworkers, 'slaves'
Education	50. Pre-school interventions: kindergartens, Grade 0s
	51. Primary school interventions: buildings, teachers, equipment, attendance, accountability, community contributions, exams, 1-5s
	52. Secondary school interventions: buildings, teachers, equipment, accountability, community contributions, exams, 1-5s
	53. TVET and private colleges: buildings, teachers, courses, government financial support for students, regulation of private colleges, Certificate of Competence exams
	54. Universities: buildings, teachers, courses, government financial support for students, regulation of private universities, certificate of competence
	55. Functional adult literacy interventions
Domestic work interventions	56. Interventions to improve domestic technologies: grain mills, improved stoves, access to fuel
Leisure	57. Leisure-related interventions: reducing saints' days; watershed management programme completion parties
Population control	58. Family planning: pills, injections, implants, condoms
Mother, infant and child health	59. Pregnancy, birth, infant care: ante- and post-natal care; clean and safe deliveries; other mother and child services
	60. Child nutrition: malnutrition interventions; breast-feeding to 6 months; general nutritional education;
	61. Children's health: vaccinations,
Nutrition	62. General nutrition: food aid/subsidies: subsidised sugar and oil; teaching
Safe water	63. Safe water: protected springs, wells, reservoirs, pipes, taps – construction and maintenance
Preventive health services	64. Health Post and extension orgn: building, equipment, staff and their skills, packages, drugs,
	65. Hygiene and environmental sanitation: latrine, hand-washing, cleanliness, solid and liquid waste packages
	66. Disease prevention & control: malaria, TB, HIV/AIDS etc
Curative health services	67. Interventions regulating private and traditional practitioners
	68. Health centres and hospitals including reproductive health services
Interventions relating to politics	
Governance structures	69. Kebele cabinet: Criteria for kebele chair and voluntary cabinet, selection, instructions, reporting, *gimgema*, buildings, resources
	70. Party organisation: core leadership, cells, party membership, selection of officials, instructions, reporting, *gimgema*, party newspaper
	71. Kebele committees: which committees, selection of chairs and members, follow-up
	72. Kebele council: selection of candidates for election, elections, accountability?
	73. Model farmers: selection, duties, privileges
	74. Other models: selection, duties, privileges
	75. Sub-kebele organisation: sub-kebele structures, selection of officials, instructions, *gimgema*
	76. Household head Development Teams: Selection of DT areas and officials, instructions, *gimgema*
	77. Women's Development Teams: Selection of officials, instructions, *gimgema*
	78. HH head 1-5s: mapping of members; instructions to 1-5 head, reporting, *gimgema*
	79. Women's 1-5s: mapping of members; instructions to 1-5 head, reporting, *gimgema*
	80. Women's organisations: Association, League and Federation organisation; choice of leaders; instructions; monitoring; duties and privileges
	81. Youth organisations: Association, League and Federation organisation; choice of leaders; instructions; monitoring; duties and privileges
Community contributions	82. Contributions in cash & kind: regular cash contributions to the kebele; one-off cash and in-kind contributions for kebele, wereda, regional, federal expenditures

	83. Work contributions: Public Works, work for kebele officials busy in meetings
Accountability	84. Elections: organising elections; mobilising community members to register and vote; warning off Opposition parties
	85. Accountability: targets, reporting, gimgema
Community planning	86. Planning for the community: wereda-kebele interactions; wereda-community interactions; kebele-community interactions
Army recruitment	87. Conscription: mobilisation of army recruits; organisation of support for families
Interventions to change aspects of society	
Security and justice	88. Policing - militia, community & wereda police – staffing and implementation
	89. Security – peace and security committee, controlling dissent; party cells & 1-5s
	90. Justice - social court: building, staff, stationery etc; use of elders, *iddir* – see below
	91. Wereda court: building, staff etc
Elite creation	92. Elite creation interventions: selection of kebele officials, champion and model farmers, customary leaders to work with govt
Involvement of community-initiated organisations in government work	93. Involvement of elders in interventions by government
	94. Involvement of iddir in interventions by government
	95. Involvement of religious leaders in interventions by government
	96. Involvement of other leaders in interventions by government
Policies related to religion	97. Policies related to religion: preaching religious tolerance; managing religious conflicts; controlling religious extremism
NGO management	98. NGO involvement: activities; consequences of controlling international funding; managing NGO involvement
Interventions to change people's ideas directly	
Government and party awaring activities	99. Government awaring activities: trainings; kebele and sub-kebele meetings; messages sent to 1-5s via DTs; annual plan meetings assessing last year and planning next one; use of *iddir* and religious meetings; via schools
	100. Party propaganda & meetings: cell meetings; party newspaper
Government management & regulation of other information sources	101. Government activities to reduce incoming dissenting voices
	102. Government radio & TV; regulation of other broadcasters
Interventions to reduce HTPs	103. Interventions to reduce HTPs

Development intervention frameworks

We developed four frameworks to help us think about development interventions:

- How they were designed to change community control parameters, some of which would be easier to change than others;
- A framework for assessing the appropriateness of federal-level intervention designs;
- A framework for establishing the theory of change implicit in an intervention design;
- A framework for understanding why development interventions are never implemented as planned

Development interventions and control parameters

Government development interventions are designed to change community control parameters with the aim of triggering a development process within the community. Table 5 links the major interventions with the relevant control parameters.

Table 5: Community control parameters and selected development interventions

Parameter areas	Control parameters	Main community development interventions
21. Place	Terrain, settlement, climate, ecology	1. Watershed management, zero-grazing, tree-planting, land use 2. Irrigation infrastructure, soil interventions

Parameter areas	Control parameters	Main community development interventions
	Connections with wider world	3. Internal, feeder and external roads Electricity 4. Mobile phones 5. TV & radio infrastructure Small rural town interventions
22. People	Human resources/liabilities Aspirations Personal relations	Youth interventions 6. Women interventions 7. Interventions for poor & excluded Child-focused interventions (other than primary education)
23. Lives	Human re/pro-duction infrastructures and institutions	Safe water Health extension 8. Primary education Pre-school, secondary, post-secondary education; 9. Functional adult literacy Child health, curative services
24. Livelihoods	Farming system	10. Crop extension Access to farming land Livestock extension & vets
	Livelihood diversification	11. Migration regulation 12. Non-farm extension
	Economic institutions	Credit Taxes & contributions Co-operatives (PCs & SCs)
25. Social relations	Community fault-lines Organised collective agency	Govt engagement with elites, ROs and CIOs Physical security Political security Justice
26. Cultural ideas	Customary cultural repertoire Modern cultural repertoire	13. Government 'awaring' and party propaganda 14. Government regulation of other ideas Interventions to reduce 'Harmful Traditional Practices'
27. Politics	Political settlement Government-society relations Opposition party organisation	15. Kebele and party organisation 16. Elections 17. Accountability measures including reporting upwards Planning for the community
28. External aspects of intersecting functional systems	Economic – e.g. international coffee prices	18.
	Lives – e.g. contraceptive provision, food aid systems	19.
	Social – e.g. diasporas	20.
	Cultural imports –e.g. religious, political, modernisation ideologies	21.
	Political – e.g. EPRDF party	22.
29. Encompassing meso systems	State of meso system: economy, society, culture, politics Government plans for the wider area	23.
30. Encompassing macro systems	State of country system: economy, society, culture, politics State of Horn of Africa systems State of global systems	24.

Local appropriateness of federal-level designs

Development interventions are attempts to change the way in which people behave and the physical and social landscapes within which they live and work. Their success partly depends on how well they connect with the place, people, and functional sub-systems in the particular community. In the Stage 3 research for each intervention we asked how appropriate the design was for the different types of community. We focused on material (dis)connects, timing (dis)connects and cultural (dis)connects in government and community aims and assumptions related to the field in which the interventions were implemented.

Material (dis) connects

How well do place-related interventions chime with the local place? For example. does the fertiliser provides by government suit the soil type? Does the community have a watershed which would benefit from a watershed management intervention?

Timing (dis)connects

How responsive is the programme design to relevant local structured time rhythms affecting different control parameters? A simple example is the frequent clash between nationally-designed school timetables and local daily and seasonal demands for household labour.

Cultural (dis)connects

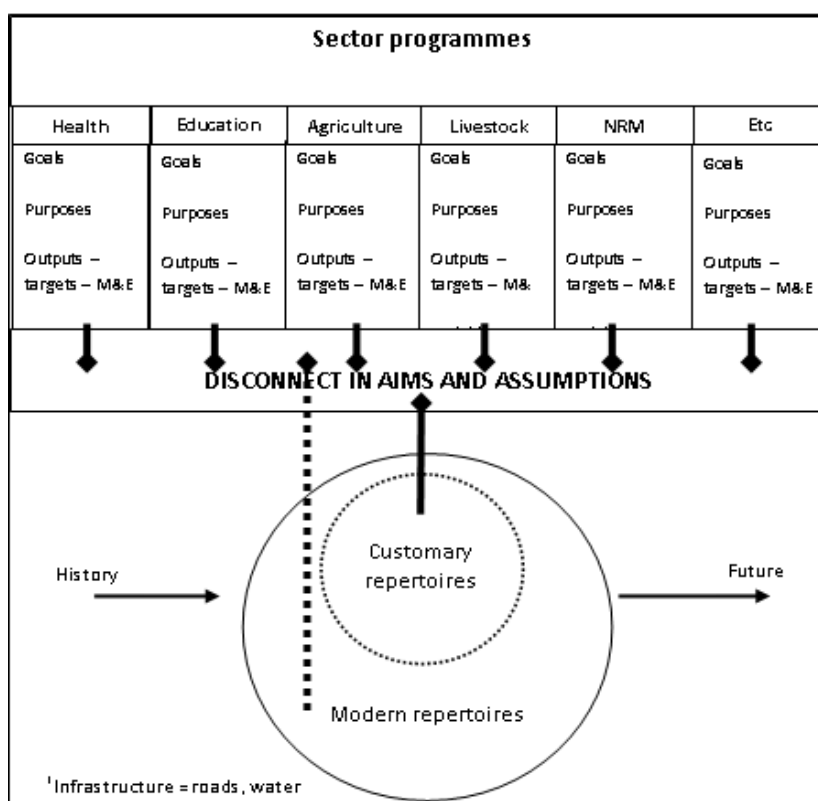*Figure 5 Cultural disconnects between top-down and local cultural repertoires*

Figure 5 depicts potential cultural (dis)connects between the aims and assumptions implicit in the mental models (ideas) and institutional designs (norms and rules) associated with top-down sector policies and programmes and local beliefs, values, norms and ways of doing things which we are calling cultural repertoires.

Theories of change implicit in development intervention design

Each development programme is designed to produce changes in people, institutions, and/or the material environment which will supposedly lead to the achievement of certain outcomes. Each programme contains more or less explicit theories of how the combination of the planned resources and activities will produce the desired changes and outcomes. Each programme strategy can be de-constructed in terms of a designed intervention configuration of social construction, mechanisms and outcomes (CMO framework[10]). The same framework can be used to explore what actually happened when the intervention was implemented (see below).

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[10] Pawson, R. and N. Tilley, 1997, *Realistic Evaluation*, London: Sage.

Social construction in the design

We considered the theoretical social construction in the design of the development intervention under three headings:
- *Social actors*: identify the social actors given roles and how they were meant to behave and relate
- *Institutional location*: describe the planned intervention system, rules, and routines
- *Resourcing*: what material and human resources for implementing the intervention are assumed to be available?

Mechanisms of change in the design

What change mechanisms are built into the intervention design? Potential mechanisms include legislation, administrative *fiat*, incentives, pressure from others, targets, threats, fines, imprisonment, awaring, training, targeting 'models', learning by doing, learning by copying.

Outcomes in the design

What were the planned outcomes for people, institutions, and the community place?
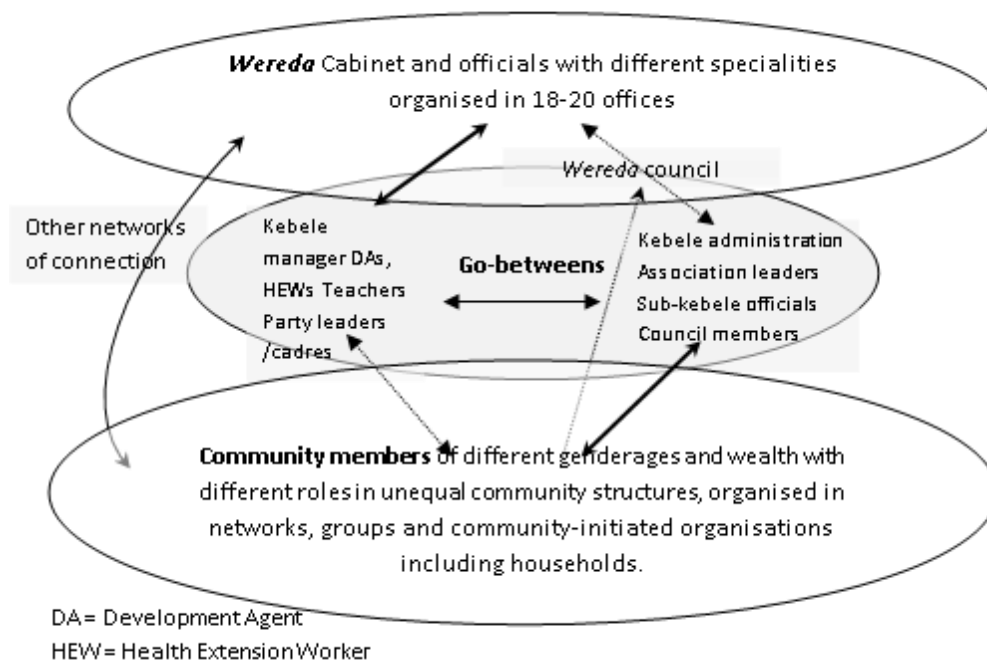
Intervention implementation never goes to plan

For a number of reasons development interventions are never implemented as planned. The reasons fall into two main categories. The first relates to the social construction of the interventions through actions and interactions in the development interface while the second relates to the passage of time including (1) internal system dynamics as time passes and (2) streams of interactions with other interventions and other relevant things going on with no intervention connections.

Social interactions at the development interface

The cultural contradictions between top-down and community development models are not easily resolved and they cause difficulties for those whose official positions require them to bridge the cultural divide. Figure 6 shows the key development players in the *wereda*, *kebele*, and communities and identifies a set of 'go-between' government employees who work in the development interface space interacting with *wereda* officials and community members.

Figure 6: Social interactions in the development interface

Wereda Cabinet and officials with different specialities organised in 18-20 offices

Wereda council

Other networks of connection

Kebele manager DAs, HEWs Teachers Party leaders /cadres

Go-betweens

Kebele administration Association leaders Sub-kebele officials Council members

Community members of different genderages and wealth with different roles in unequal community structures, organised in networks, groups and community-initiated organisations including households.

DA = Development Agent
HEW = Health Extension Worker

Kebele managers, Development Agents (Agriculture, Livestock and Natural Resources), Health Extension Workers and teachers mostly, though not always, come from outside the community. They are employed by the *wereda* and given performance objectives (targets) which, if not met, may have repercussions for their careers. A second set of 'go-betweens' – *kebele* and sub-*kebele* officials and *kebele* Council members - are (s)elected from within the community and embedded in community networks and structures whilst by their function they are also linked to higher government structures and increasingly to party structures. They are unpaid 'go-between' government volunteers. This framework was used in Stage 2 to design new questions and inform data interpretation.

There are four types of response that members of a community can make in the face of planned change from above: exit, voice, loyalty, foot-dragging. We started to explore these different responses.

The CMO framework described above in relation to intervention design can also be used to deconstruct the implementation of an intervention.

Social construction in practice

In practice interventions in rural communities are socially constructed by the actions of, and interactions among, the local implementers some of whom are (1) government employees while others are (2) unpaid (s)elected 'kebele volunteers'; (3) the direct 'beneficiaries' and (4) other members of their households and in some cases (5) community contributors of resources and work and/or (6) others directly affected by the intervention while not benefiting.

Potential beneficiaries have lives outside intervention programmes and may also be expected to participate in a considerable number of different interventions; given that implementation requires the use of household resources and time they will often have to prioritise. Furthermore, participation in different interventions usually requires different combinations of resources, time and attitude on the part of implementers and other people in the beneficiary's network. For example to send a child to school regularly parents must believe education is a good idea, have enough resources and time to cover the direct and opportunity costs throughout the school year or be willing to suffer a loss of household work or income, and the child must want to go to school. A school must have been constructed in the past, teachers must attend, there must be government resources for equipment and books, etc.

People not included in the intervention whose interests will be affected also have a role to play. For example, the success of the recent campaign for an increase in safe infant deliveries will depend not only on providing enough maternity beds, staff and equipment in health centres and ambulances and changing the minds and behaviour of pregnant women, but also on changed minds and behaviour on the part of husbands, mothers-in-law and traditional birth attendants, as well as neighbours expected to carry the women to waiting ambulances, HEWs and kebele officials expected to devote time and energy to the campaign, wereda officials expected to allocate scarce funds to fuel and drivers, health centre officials expected to treat rural women in labour with kindness and respect, and in some places households expected to contribute grain for customary ceremonies after delivery.

In addition there are a number of interventions, such as watershed management or the building of a Farmers' Training centre or a school classroom, which have collective (though not universal) benefits but depend on individual contributions in cash, kind, and/or work.

Another mechanism at work is that potential beneficiaries are influenced by opinion leaders and reference groups in the community. At one extreme an intervention may evoke *co-operative* individual or collective responses among the majority of intended beneficiaries and others and at the other it may be met with overt or covert *resistance*. In some cases responses may be more

complex with acceptance of some aspects of the intervention and not others, or due to a clash of interests acceptance by some and resistance by others.

The other aspects of the social construction are (1) the actual institutional location which includes systems, rules, divisions of labour and routines and (2) the infrastructure and resources for implementing the intervention.

Mechanisms in practice

Development interventions rely on one or a mix of the social mechanisms listed earlier, for changing minds, bodies and behaviour of beneficiaries, implementers and others. People react to the social mechanisms differently. Threats may frighten some people into new behaviour but antagonise others into overt or covert resistance or foot-dragging. Constant persuasion or 'awaring' may change some minds but not annoy others. Incentives may be taken up by some people but not be large enough for others compared with anticipated costs and opportunity costs. People may conform to legal restrictions and decisions made by government fiat or they may find ways to avoid being affected by their implementation. Differences in reasoning as to how to respond may derive from differences in circumstance, priorities, past experiences and/or personality. As a result of these differences no intervention is going to work according to the simple theories of change found in intervention designs.

The successful implementation of an intervention depends on new behaviour on the part of those charged with implementation. Social mechanisms for getting implementing officials to do what they are meant to include instructions, targets, reporting, *gimgema*, opportunities for training, promotion and demotion and the way these are used and responded to has consequences for the progress of the intervention.

Outcomes in practice

Interventions have consequences during and after implementation for people, place, institutions and community-government relations; some may coincide with planned outcomes but some are likely to be unintended.

Comparing intervention design and implementation

While there is always a gap between intervention design and implementation this is larger in some cases than others. Table 6 presents a framework for comparing design and implementation which was used during the Stage 3 research.

Table 6: Framework for comparing intervention design and implementation

Development intervention processes		Theory of change in design	Implementation realities
Social construction planning	Roles of implementers, beneficiaries etc		
	Material infrastructure & inputs		
	Systems, rules and routines		
	Time-frame for activities, inputs, outcomes		
Social mechanisms for influencing the behaviour of beneficiaries and other community members	Legislation and administrative *fiat*		
	Material & status incentives		
	Targets		
	Threats, fines & imprisonment		
	'Awaring' and training		
	Dialogue and participation		
	Targeting models, learning by doing & copying		

Development intervention processes		Theory of change in design	Implementation realities
	Organising and mobilising pressure from others		
Social mechanisms for influencing the behaviour of intervention implementers	Instructions		
	Targets & reporting		
	Gimgema		
	Opportunities for training		
	Promotion and demotion		
Outcomes	Place outcomes		
	People outcomes		
	Functional sub-system outcomes		
Collective responses to the interventions	Co-operation		
	Resistance		
	Complexity		

Modernisation variates

Table 7: Modernisation variate master list

N.B There is no read-across the columns which are presented thus to save space.

LIVELIHOODS	LIVES	SOCIETY & GOVERNMENT
Terrain	Population	Elders roles and activities
Ecology + environment	Household types and inequalities	Religious organisations and activities
Weather	Wealth differences	Other community-initiated organisations and activities
Land use	Social protection	Physical safety and security
Settlement pattern	Class relationships	Group disagreements and conflicts
Urbanisation + public buildings	Genderage differences: children	Justice
Electricity	Genderage differences: youth	Informal welfare regime
Communications	Genderage differences: adults	Governance structures: *kebele* and sub-*kebele*
Roads and transport	Genderage differences: elderly dependents	Community and *kebele* leadership
Credit and saving	Marriage, widowhood and divorce	Government-community relations
Shocks leading to food insecurity	Gender and inheritance	Community modern repertoire of ideas
Smallholder farming - crops	Gender relationships: nurturing, income-earning, power relations	Community conservative repertoire of ideas
Smallholder farming - livestock	Inter-generational relationships	Incoming religious ideas
Irrigation	Elite-mass differences	Incoming government ideas
Other farm technologies	Social exclusion	Incoming urban ideas
Inward investors involved in farming	Other status differences and relationships	Incoming global ideas
Co-operative farming	Social participation	Key clashes of ideas
Agriculture market linkages - upstream	Housing	
Agriculture market linkages - downstream	Household assets	
Prices and inflation	Other consumer goods	
Agricultural labour	Domestic technologies	
Labour-sharing/co-operation	Household work + workers	
Diversification and non-farm activities	Leisure activities	
Migration	Clothes	
	Food, diet, nutrition	
	Drinking water	
	Common illnesses and treatment-seeking	
	Producing children	
	Raising children: non-formal learning	
	Pre-school education	
	ABE	
	Primary education	
	Secondary education	

LIVELIHOODS	LIVES	SOCIETY & GOVERNMENT
	Technical and vocational training	
	University access	

References

Pankhurst, A. (ed.) forthcoming 2016 *Change and transformation in twenty rural communities in Ethiopia: selected aspects and implications for policy* Addis Ababa.