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Game-theoretic models, social mechanisms and public goods in Africa: a methodological discussion

Tim Kelsall*

The Africa Power and Politics Programme aims to use empirical research to build a body of middle-range, policy-relevant theory about governance and development. This paper is about what that it likely to entail. It responds to previous contributions which have argued for an exploratory approach using the concept of 'practical norms' and for greater use of perspectives from the public choice tradition. With examples from the fields of traffic regulation, road maintenance, forest conservation, urban public services, maternal health and higher education, it argues that contextually modified game-theoretic concepts can help explain better and worse development outcomes in a way that the concept of practical norms, by itself, cannot. This suggests a strategy for the APPP which combines pre-fieldwork theoretical reflection with intense periods of empirical observation, analytical modelling, and cross-case comparative theory building.

> 'Good training in theory, and acquaintance with its latest results, is not identical with being burdened with "preconceived ideas". If a man sets out on an expedition, determined to prove certain hypotheses, if he is incapable of changing his views constantly and casting them off ungrudgingly under the pressure of evidence, needless to say his work will be worthless. But the more problems he brings with him into the field, the more he is in the habit of moulding his theories according to facts, and of seeing facts in their bearing upon theory, the better he is equipped for the work. Preconceived ideas are pernicious in any scientific work, but foreshadowed problems are the main endowment of a scientific thinker, and these problems are first revealed to the observer by his theoretical studies.'
>
> Bronislaw Malinowski, 1922

1 Introduction

What should be the relation between empirical observation and theory when conducting social science research appropriate to policy-relevant recommendations on development issues? What should be our approach to the gathering of data in the field? How should theory affect the way we write up our results? And on what basis should we select cases for further study? In this paper I make a case for pursuing a strategy that combines pre-fieldwork theoretical reflection with intense periods of empirical observation, analytical modelling, and cross-case comparative theory building. My launching point is discussions internal to the Africa, Power and Politics research programme (APPP), elements of which have also appeared in the public domain.[1] The APPP is now approaching mid-term, an initial set of promising hunches is being

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[1] Go to http://www.institutions-africa.org/publications/discussion_papers

explored in the field, and the first, preliminary results, are beginning to be returned. It seems an apposite moment, then, to reflect a little on the intellectual trajectory we have followed, and to give a few suggestions that might help illuminate the road ahead.

The diverse members of the APPP were drawn together by a common concern that the current donor orthodoxy on African development, operationalized through the Good Governance agenda, was not producing sufficiently positive results. Our initial proposals stressed the overlooked importance of informal institutions, hybrid states, and going with the grain of existing socio-cultural realities (APPP 2007). There followed several major think-pieces and working papers – as well as several shorter pieces – exploring different aspects of the problematic we had posed. Three of the former are of particular concern to me here.

Early on in the life of the consortium, I took it upon myself to explore, or push to its logical limits, the idea of 'going with the grain' (Kelsall 2008a, 2008b). I interpreted 'the grain' as 'patterns of thought, organization, and accountability in Africa that have been both widely distributed in space and durable across time' (Kelsall 2008b, 629) and suggested that the solution to Africa's development problems was to 'build on extant notions of moral obligation and interpersonal accountability to channel energies into activities that are developmental instead of predatory' (Kelsall 2008b, 637). I proposed that the extended family, ethnicity, religion, and ritual were potential foundations on which to build a new development strategy; I even went so far as to suggest that under certain conditions multi-purpose ethnic ministries might be appropriate providers of public goods, though I was careful to note that presently, such conditions did not exist anywhere.

Jean-Pierre Olivier de Sardan, in a follow-up piece entitled 'Researching practical norms of real governance in Africa' suggested that the idea of 'going with the grain' was inherently dangerous, proposing that we should focus on an exploratory concept of 'practical norms' instead (Olivier de Sardan 2008). Then, following several internal exchanges, Programme Director David Booth produced a paper trying to steer a path between our positions, suggesting we make use of a research tradition in public choice and new institutional economics (this built on a suggestion contained in an earlier think-piece) (Booth 2009).[2] In the current paper I want to concede some of Olivier de Sardan's points, before arguing that his proposed alternative, 'practical norms', takes us only part way down the path we want to go.

The paper proceeds by discussing five stylized development problems, including traffic regulation, road maintenance, forest conservation, urban public goods provision, and maternal mortality, all of which have been drawn from either APPP scoping work or internal discussions; I have also included, for heuristic purposes, a discussion of the Italian higher education system. My main strategy is to use the examples to explore the ways in which contextually modified game-theoretic concepts can help explain better and worse development outcomes in a way that the concept of practical norms, by itself, cannot. A second aim is to suggest some ways in which the multiplicity of causal mechanisms thereby unveiled might be reduced for mid-level theorization via systematic comparative analysis.

[2] I also included a discussion of NIE concepts in an internal think-piece for APPP (Kelsall 2008c).

2 Practical norms: a practical concept?

Olivier de Sardan's think piece for APPP (Olivier de Sardan 2008) contained some useful caveats, some wide-of-the-mark accusations, and a proposal for a new orientation to our research. The caveats included observations to the effect that so-called African 'traditions' are actually often recent inventions or improvisations, that contemporary African communities are often ethnically heterogeneous, and that there is no particular reason why successful development should necessarily trace a historical grain. Even if the accusation that I was a traditionalist-culturalist with a stereotypical and romanticized view of African communities was misplaced,[3] the reminder that there may be responses to Africa's development problems that are both local and of recent innovation was welcome. I will return to the question of what this might mean for our 'grain' metaphor towards the end of the paper. Before doing so, however, I need to say a few words about Olivier de Sardan's proposed plan to capture these recent innovations: operationalizing the exploratory concept of 'practical norms'.

Olivier de Sardan's practical norms concept seems to refer to an unofficial, informally regulated social practice that may be professional or social, pragmatic (self-seeking) or moral.[4] In other words, it is any unofficial non-random social practice. It attempts to capture the idea that although in Africa the official rules often are not followed, there are, in the background, unofficial ones that are. In this sense it appears to have much in common with Erving Goffman's observation that social settings are characterized by a 'front region' and a 'back region', in which the front region stages a performance meant to manage the impressions of an audience (Goffman 1959); or with James C. Scott's notion of 'on-stage' and 'off-stage' discourse (Scott 1990); or Emmanuel Terray's distinction in Africa between the 'air-conditioner' and the 'veranda', vividly illustrating the gap between the artificial environment of parchment laws and institutions, and the earthier world of real politics (see the discussion in O'Brien 1991).[5]

The emphasis on getting behind official appearances in this agenda is extremely useful. Unfortunately, as currently conceived, it comes bundled with distinct problems. First, because practical norms are tied to a notion of 'the unofficial', it becomes difficult clearly to identify such norms in cases where the line between the official and unofficial is contested or blurred.

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[3] See for example Kelsall (2003), Kelsall (2004) and Kelsall et al. (2005), which are greatly concerned with the idea that contemporary African societies and individuals are composed of an articulation or overlayering of both old and new, indigenous and imported elements.

[4] 'We would like to ask the following simple question: *How is it that the professional practices of public actors*, despite often not being in line with professional public norms, *are nonetheless regulated?* In other words, in what form are the *informal* practices of government officials structured? [...] If regulated practices are not following official norms, then they are following norms other than official norms. One might even go so far as to say that the regulation of extra-official practices has produced an excess, rather than a lack, of norms. [...] In admitting that the divergences between official norms and behaviours can follow practical norms, we are opening up a vast need for empirical research in order to determine what these practical norms are. [...] Professional and social norms alike belong to an official, formal or manifest level; however, they obscure, to some degree, unofficial, informal or latent norms. [...] depending on the public activities and hierarchical level considered and the technical or professional constraints in play, the plurality of practical norms can take very different forms, and vary considerably in nature.' (Olivier de Sardan 2008, 8, 9, 13, 15, 16)

[5] Practical norms might also capture some of the same phenomena as does 'organizational culture' in management theory.

Such will often be the case in contexts where the official rules are not written down, as in the case of Malawian town chiefs discussed below. Second, by focusing on 'the unofficial', it overlooks institutions in which the official norms actually are, to a great extent, adhered to. Churches, clan elders, chiefs, NGOs, and indeed many other institutions might follow official norms and they might also be developmental. It would be a shame if they were overlooked in our study. This is not to say that the idea of practical norms needs to be thrown out altogether; so long as the term is interpreted fairly loosely, as an admonition simply to find out how governance in Africa really works, these problems ought to disappear.

A more serious concern, I would argue, is that there is nothing inherent in the practical norms concept or in Olivier de Sardan's proposed strategy for operationalizing it to provide us any great leverage over our central research question: to wit, are there ways of doing development in Africa that are better suited to existing social realities than current policy allows? Of course, researching practical norms is helpful insofar as it helps us to know what that reality is. But, as Olivier de Sardan has stated, it is an 'exploratory' concept; it is not analytically powerful. If and when we find examples of developmental practical norms, we need a more sophisticated analytical approach if we are to understand what these norms have in common, and what makes them work for, instead of against, development. Olivier de Sardan addresses the first question by proposing that we create a typology of practical norms; he is silent on the second, more intriguing issue.

These limitations can be most clearly illustrated by scrutinizing Olivier de Sardan's sole example of a positive practical norm: informal driving rules in Cairo and Hanoi. Because the example provides an insight into a number of themes that will be addressed in the rest of the paper, I quote his account in detail here:

> 'The Highway codes in Hanoi and Cairo are practically identical to those in Paris or Berlin, and refer to driving rules that are virtually universal (with the exception of the British phenomenon of driving on the left). Nevertheless, drivers in these two cities wilfully disregard these rules when behind the wheel. They do not conform to official norms, or do so on very rare occasions. Furthermore, if, by chance, a visitor wanted to drive in Hanoi or Cairo and respect the Highway Code, it is likely they would be involved in a serious accident rather quickly. This does not mean, however, that residents of Hanoi and Cairo do as they please, in which case car accidents would be an almost permanent feature of the roads. Their driving habits conform to tacit, shared road rules.
>
> In Cairo, for example, the right of way is given to the driver who is overtaking, and it is incumbent upon the driver of the vehicle being overtaken to allow this vehicle to pass. Furthermore, although the use of the horn, always by the driver of the overtaking vehicle, is rare, it warns of immediate danger, and the vehicle being overtaken must immediately move over. In Hanoi, on the other hand, utter confusion would appear to reign; rights of way and one-way streets are non-existent, and horns are used at all times by everyone. Accidents are nonetheless still rare, because drivers constantly assess what others in their vicinity are doing and change their driving appropriately, gauging who is already well in the midst of a driving manoeuvre, in order to either slow down or accelerate accordingly. This is somewhat akin to Times Square when offices close – pedestrians move in all directions, in the midst of a dense and bustling crowd, without rights of way or traffic

> rules. However, few collisions occur, due to endless adjustments by drivers to the movements of others'.

According to Olivier de Sardan,

> 'The driving example is interesting because it proves that behaviour inconsistent with official norms of Western origin can follow local practical norms (following informal rules of the game that vary according to context) which bear no relation to either "tradition", or culture in general, common values, or a shared "network of meanings", but are nonetheless effective' (Olivier de Sardan 2008, 13).

There are several interesting points to note about this example. First of all, it appears to be the result of some acute observation. As a resident of south-east Asia, and having visited Hanoi, I can confirm that Olivier de Sardan's description is quite a good one. Longer periods of observation might have turned up even more nuanced descriptions of the rules. In Phnom Penh, where I live, for example, it seems to be acceptable on large roads for tuk-tuks and motorcycles to drive against the flow of traffic on the inside lane, but I have not seen cars doing this. It is one of the main strengths of the observational method to reveal such potentially important nuances, since they are often invisible to policy makers. No matter how nuanced and rich we make our account of the operative practical norms, however, an account like this will still be just a description, not an analysis. It would not tell us why official rules are ignored. It would not tell us how or why new rules have been arrived at, and why they are stuck to. It would not tell us why the informal rules in Cairo and Hanoi differ. And yet answers to all these questions would be important, I submit, for someone planning on designing a policy that had anything to do with road-use in Cairo or Hanoi. So how would we begin to address these questions?

Game theory has a model called 'the driving game', in which the pay-offs are arranged so that it is rational for individuals to cooperate rather than compete or conflict with each other (Binmore 2007, 1-22). If individual A drives on the left, it is rational for B to do so also. The cost of not doing so, a probable accident, far outweighs the benefits (which are negligible). Game theory tells us that in the case of driving, cooperation is rational; insofar as real-world situations mirror the driving game, game theory predicts outcomes that promote the collective good. And most real-life driving situations do indeed mimic the game. In England everyone drives on the left, in France, on the right, and in Phnom Penh, everyone drives on the right (except for tuk-tuk drivers and motorcycles who have use of a sort of unofficial contraflow lane); in Hanoi, people also drive on the right, at least on major roads.[6]

Driving is not the only game that traffic users in Hanoi and Phnom Penh are playing. They are also playing a version of a game called 'chicken'. If the driving game predicts that players will maximize their payoffs by choosing the same strategy (driving on the same side of the road, for example), the chicken game predicts that individuals maximize their payoffs by

[6] Note that game-theoretic models are not intended to be *descriptions* of real-life situations. They are abstract constructs that show, tautologically, the outcomes of interactions that have been loaded a particular way. Real-life situations, or aspects of them, may mirror these games to a greater or lesser degree. The driving model, for example, provides a good explanation for why people commonly drive on the same side of the road as each other, although there are other aspects of real-life driving that it does not explain, e.g. the reasons drivers do or do not cheat when observing car pool lanes.

choosing the opposing strategy. If A is driving fast in the direction of B, it is rational for B to slow down and give way, and vice versa. Phnom Penh drivers play a mild version of this game when individual road users jockey for position on their respective sides of the road, while they play a stronger version whenever traffic intersects at junctions and roundabouts. By mixing these two games – same strategy and opposing strategy – individuals minimize the chances of colliding with one another. These simple rationality models go a long way, then, to explaining why individuals behave in the way that Olivier de Sardan merely describes.

On the one hand, all this is rather obvious, but on the other, it is very interesting, since game theory tells us something quite profound about what type of problem traffic order problems are. In both the driving and chicken games, the individual pay-offs are loaded so that a kind of collective good normally results, with or without the intervention of an external authority. Prior acquaintance with game theory reveals that it is no accident that traffic rules are the only example of a positive practical norm – allegedly unrelated to culture, tradition, common values or shared meanings – that Olivier de Sardan has been able to offer: basic traffic regulation is not, in a strict sense, a collective action problem. It also tells us, as I will explain in due course, that most of the problems of development are not of this form; if they were, the majority would have already solved themselves! One the first lessons of game theory, then, is to teach us to ask: 'What kind of a (game) situation is this? Is it one in which it pays individuals to work for the collective benefit, or not? And why?'

Simple game theory models cannot explain everything, however, about traffic norms. They cannot explain why people in the UK drive on the left and in Phnom Penh (mostly) on the right, or why in the UK most people play the driving game the majority of the time, whereas in Phnom Penh and Hanoi it's mixed up with chicken. Game theorists supplement their models with the idea of social conventions in order to explain such phenomena (Binmore 2007, 57-71). If we want to explain why the British drive on the left and the Cambodians on the right, we need to delve into their social histories. Another way of putting this is to say that social histories establish conventions that then create equilibria or path dependencies, which have much in common with what some social scientists call 'traditions'. *Pace* Olivier de Sardan, present day solutions to problems of public order, even in simple cases like driving, do build on traditions. In the case of Phnom Penh and Hanoi, it is notable that until rather recently, the traffic was composed almost entirely of bicycles – hundreds of thousands of bicycles – and that today it is dominated by motorcycles, with not too many cars. My hunch – which would need to be explored – is that in an earlier era cyclists also merged the driving game with the chicken game, and that because accidents on bicycles are rarely serious, the authorities never put much effort into policing official highway codes. Even though people have gradually replaced their bicycles with motorcycles and cars, they still mix driving with chicken, and official enforcement has yet to catch up.

This is not to say that more public enforcement wouldn't be a better thing. To see why, consider that in the chicken game, the pay-offs shift when it is much more likely that one of the players rather than the other will be injured in an accident. This is clearly the case when an SUV confronts a moped, and partly explains the rather large number of accidents in countries that play a lot of chicken. Traffic in Hanoi is not a disaster, but neither is it optimal: I was told on a recent trip to Vietnam that 12,000 people a year die on its roads! This figure, however, would likely be significantly higher if SUV drivers were not constrained by some common values or basic morality: the sense that it is wrong to injure or kill innocent people,

even if they happen to drive mopeds. There is also a law enforcement aspect. In Cambodia, for example, the family of an injured party to an accident receives a fixed monetary compensation from the other driver, in what appears to be an improvisation on an earlier restorative justice tradition. Olivier de Sardan is a brilliant anthropologist who has made an outstanding contribution to our understanding of West African society, but when he says that in south-east Asia the practical norms of driving are tradition and value-free, he is wrong.

Of course, we know that there are cases when traffic does not always flow smoothly. Currently in Dar es Salaam, drivers at intersections are playing a variant of chicken, in which the most aggressive driver has right of way, and most people play this game most of the time. When one driver is being aggressive, it pays the other to be submissive, and vice versa. Nevertheless, it is increasingly common – perhaps because of the desperation felt by drivers in a city with too many cars and too few roads – for two drivers to go head to head with equal aggression. In this situation neither driver wins: both get caught in a standoff, while thousands of others suffer gridlock. Usually these gridlocks persist until a police officer arrives and forces multiple vehicles to inch back sufficiently for the quarrelling drivers finally to go their separate ways.

These incidents happen because some drivers are playing irrationally: they are ignoring the fact that the pay-offs of submitting far outweigh those of being aggressive (assuming, for the time being, that Tanzanian society does not attach large symbolic pay-offs to acting with excessive machismo).[7] What should a policy-maker do about this problem? Game theory predicts that in repeated games (e.g. driving to and from work every day) most irrational players will come to see the error of their ways and begin playing rationally. One might optimistically think, then, that this is a temporary problem caused by the fact that there are a lot of new drivers on the roads, which will smooth itself out in time. More pessimistically, one might hold that there will always be people who act irrationally some of the time, and that in the context of an overloaded road system, episodes of gridlock will be inevitable. Hence more costly solutions, like building a lot more roads, would be preferable.

Taking stock, thorough exploration of Olivier de Sardan's traffic example has shown us at least three interesting things: 1) practical norms is a descriptive concept, not an explanatory one, 2) informal solutions even to traffic problems are not value and tradition free, and 3) the example of rudimentary traffic control is not a very good one for helping us understand the problems of development. The next example I present, a stylized and simplified version of a real life case we encountered in scoping research in Tanzania earlier this year, is more typical (Kelsall 2009).

3 A tale of two roads: or, solutions to a collective action problem

Many of the problems of development are problems of supplying public or collective goods. A public good is one that 'yields non-subtractive benefits that can be enjoyed jointly by many people who are hard to exclude from obtaining these benefits' (Ostrom 2005, 23). Clean air is a classic example: by breathing in lungfuls of clean air, I do not normally subtract from the

[7] Put with greater sensitivity, it does seem that some societies place a premium on competition for 'individual reputation, chiefly by physical combat according to recognized procedures that imposed little moral restraint on violence and egotism' (Iliffe 2005, 1).

amount of clean air that others breathe; at the same time it would be most difficult to exclude me from breathing it.

Quite closely linked to public goods are common pool resources. As with public goods, it is difficult to exclude people from obtaining their benefits, but they differ inasmuch as they have a high subtractability. For example, it is difficult to exclude cows and cow-owners from common pasture land, but each mouthful of grass a cow eats subtracts from the amount another cow can eat.

Club goods (sometimes called toll goods), by contrast, are goods that can be enjoyed by many people with low subtractability of use but relative ease of exclusion. A good example would be a school. By enrolling my child in school I do not in any direct sense 'use up' education for the other children enrolled (at least not until a point of congestion occurs). At the same time, it is in principle easy enough for the school authorities to exclude my child, if, for example, I have not paid fees. Note that when I want to discuss a good that has either low ease of exclusion or low subtractability of use, I will use the generic term collective goods, by which I mean to distinguish them from private goods, which tend to have high ease of exclusion and high subtractability of use (even though private goods might in some circumstances be supplied by the state, like airline seats on state-owned airline companies, and vice versa).

If we believe that individuals are basically rational and self-interested, it is difficult to explain the supply of collective goods. At the root of this is the free-rider problem: 'Whenever one person cannot be excluded from the benefits that others provide, each person is motivated not to contribute to the joint effort, but to free-ride on the efforts of others. If all participants choose to free-ride, the collective benefit will not be produced' while if some provide while others free-ride, a less than optimal level of the collective benefit will result (Ostrom 1990, 6). In contrast to the driving game, collectively good outcomes in this type of game require individual self-interest to be reshaped: an external authority system, an internal monitoring and sanctions system, and strong group consciousness are some of the usual means.

In village A, in northern Tanzania, the road is poorly maintained. The men of the village are supposed to turn up once a week to work on the road. However, absenteeism is common, and even those that do turn up, work ineffectively. Consistent with bye-laws made democratically in a village meeting, a list is made of non-attenders; people who have a legitimate excuse (e.g. jobs in town) are expected to pay a fee, while those with no excuse are supposed to be fined. However, there is little sign that these bye-laws are consistently enforced. The problem of the road in village A, then, can be easily explained by way of the free rider problem. Most individuals, looking out for their own short-term self-interest and knowing that they will probably escape sanction, choose not to turn up for work on the road, and everyone suffers from a poorly maintained road as a result.

In nearby village B, the road is better maintained. A similar monitoring system exists, but in this case, it appears to be enforced. Village B's ability to overcome a free rider problem, then, can be easily explained by the presence of an effective monitoring system that offsets individuals' short-term interest in shirking. But neither of these explanations are final explanations. We need to get behind them and ask why B's monitoring system is effective while A's is not.

Here it is useful to introduce the idea of social mechanisms. The great sociologist Robert Merton thought the main task of social theory was to identify mechanisms and to determine the conditions in which they come into being, fail to operate, produce different effects, and so on (Hedström and Swedberg 1998a, 6). Arthur Stinchcombe proposes that mechanisms are 'bits of theory' about entities at one level of society that explain observations at another level of society (Hedström and Swedberg 1998a, 7). According to Diego Gambetta, '"mechanisms" are 'hypothetical causal models that make sense of individual behaviour. They have the form, "Given certain conditions K, an agent will do x because of M [the mechanism] with probability p"' (Gambetta 1998, 102). Mechanisms invoke causal agents (Hedström and Swedberg 1998a, 11), which follow the same logical principles in a range of social settings (Hedström and Swedberg 1998a, 2). Like many of the cutting-edge concepts in the natural sciences, mechanisms are often unobservable: they are 'analytical constructs that provide hypothetical links between observable events' (Hedström and Swedberg 1998a, 13), necessarily simplifying and accentuating some aspects of reality. As in biology: 'To produce a really good … theory one must try to see through the clutter produced by evolution to the basic mechanisms lying beneath' (Francis Crick, cited in Hedström and Swedberg 1998a, 15). The test of a construct's usefulness, meanwhile, is how well it explains and predicts reality.

The authors provide a number of examples of social mechanisms: 'self-fulfilling prophecies', 'cognitive dissonance reduction', 'norm compliance', 'relative deprivation', 'belief traps', 'threshold-based behaviour' – all of which might help us with our research. Particularly useful, however, are mechanisms derived from neo-classical economics and game theory, for example the 'free-rider problem', 'prisoner's dilemma', 'tragedy of the commons' and others. When the pay-offs in these models are modified by what Raymond Boudon calls 'cognitive' and 'axiological' elements of the local context, they can powerfully explain and predict real life situations (Boudon 1998).

We can now return to our case. An interesting fact about village B is that most of its residents, and all of the village leadership, are born-again-Christians. We can hypothesize that, being a born-again Christian imbues individuals with a special desire to act 'in good faith', that is, in ways that are consistent with one's stated intentions. We can treat this desire as a particularly virulent instantiation of the 'cognitive dissonance reduction mechanism', in which individuals find it painful to believe one way while acting another, which pressures them to take steps to bring action and belief into line. This will be reinforced by a 'peer pressure mechanism', in which individuals will want, if nothing else, to be seen to be acting in good faith. For these two reasons, both leaders and commoners in village B, having agreed to take responsibility for maintaining the road, have a strong incentive to follow through. What is more, the fact that all are members of the same church, increases the ease with which members can monitor each other's behaviour, just as Habyarimana et al. – in an important article – find for ethnic communities in urban Kampala (Habyarimana et al. 2007). Enhanced monitoring makes shirking more costly. Consequently, the particular context of village B has furnished a concatenation of 'cognitive dissonance reduction', 'peer pressure', and 'monitoring' mechanisms that jointly shift the pay-offs to individuals, making it better to cooperate than to defect. In essence, villagers in B are no longer playing the free-rider game.[8]

[8] I note that in some contexts, for example rural Sierra Leone, dissimulating one's real intentions is not generally frowned upon. See for example Ferme (2001) and Shaw (2000).

But why don't such mechanisms work in village A? On closer inspection, we find that in village A, there is a lingering split between members of the Lutheran church and a breakaway denomination. Owing to a recent history of violence, villagers are more concerned with keeping the peace than with driving development. Leaders are afraid to sanction non-cooperators for fear of stirring up old tensions, and villagers are afraid, for similar reasons, of holding the leaders to account. Although actors might not see it quite this way, they are trading better roads for social peace. But don't villagers still want to be seen to be acting in good faith? To some extent they do, but good faith is not as vigorously stressed by A's pastors, and the religious split weakens the monitoring machinery.[9]

What, then, might be the solution to the problem of the road in village A? One idea would be to align work parties with church groups. This might inject some of the intra-group morality and monitoring that we see in village B into village A. The problem is that denominations are geographically intermingled, so that assigning particular roads to particular denominations would be controversial. Another would be to see if richer villagers, the ones with cars, could be persuaded to pay for outside contractors. The problem is that richer villagers are denominationally divided too, meaning that cooperation between them might be difficult to achieve. Yet another would be for the different denominations to raise money from their congregations, and to use this to hire outside contractors; this might inject an element of competitive religious pride into fund-raising. The drawback is that it too might prove incendiary, and that the machinery for tendering would have to be highly transparent if it were not to be controversial. Ultimately, then, there might not be a solution to this problem. We might have to accept that village A will have a poor road up until the time when its religious rift has healed. We could be forced to admit that although they might not think of it this way, the population has made a rational choice in trading roads for peace.

What have we discovered about social mechanisms here? I think there are six findings:

1. Some problems of development can be explained via the free-rider problem.
2. We need to invoke other types of social mechanism, for example monitoring and sanctions, if we are to explain how the free rider problem is overcome.
3. Monitoring and sanctions mechanisms are more likely to be effective when concatenated with other types of social mechanism, for example, a desire to be seen to be acting with integrity.
4. The force with which these other mechanisms operate will be contingent on context, e.g. history, demography.
5. There are trade-offs among public goods, making it likely that successful solutions to collective action problems will emerge for some goods and not for others.
6. Preferences for public goods are context-sensitive.

Because collective action problems can only be overcome by means of external intervention, sanctions systems, and/or collective consciousness, it is worth asking where such solutions are likely to come from. Olivier de Sardan has made much of the fact that people can work out

[9] Note also that the cognitive dissonance reduction mechanism will operate less cleanly in contexts where individuals face conflicting normative demands and peer pressure. In these cases, the individual faces a conflict not just between individual self-interest and social norms, but between one or more sets of social norms as well. This greatly complicates the pay-offs faced, and makes action more difficult to decipher (Ostrom 1990, 36).

their own solutions to problems, without much reference to history. I would not want to deny that this can be so, and I shall be delighted if we find cases where new and innovative answers to collective action problems have been found: I have no particular affection for patriarchy, gerontocracy, ethnicity, or occult belief, after all. However, my hunch is that many solutions will go with the grain of beliefs, habits, institutions, and forms of authority that are several generations old. It is usually less costly, after all, to modernize something old, than to knock it down and start anew; but we shall have to see.

Before moving on, I should note that there is a rich literature exploring the strengths and weaknesses of applying choice-theoretic models to collective action problems. Critical anthropological voices have noted that collective action problems are embedded in informal social cultures and politico-symbolic fields that are perilous to ignore (Bardhan and Ray 2008; Harriss 2003). I am personally quite sympathetic to these critiques. As noted above, rational choice models normally require significant modification if they are to explain and predict behaviour in the real world. That being said, the models provide us with a powerful point of entry to a problem, focusing our observations, and suggesting the kinds of questions we should ask.[10]

4 Protecting the forests: tragedy of the commons or centralized rent-seeking?

Let us move now to another example – forestry. Forestry resources in Africa and elsewhere are often common pool resources, and are thus vulnerable to tragedy of the commons problems. To spell it out, individual pay-offs in a tragedy of the commons game are loaded so as to produce public bads. Consider a forest of 10 hectares, with a 100 families living in the surrounding area. Sustainable production is maximized if each family harvests 100 kg of firewood per year. However, it is not an equilibrium strategy for each household to harvest only this much, since if one household harvests 200kg, it will reap the entire benefit of those extra kilos, while the cost (a reduced harvest next year) will be spread among the other 99. Acting as individual rational maximizers, each household will over-harvest, and the forest will soon be reduced to nothing. Thus, if they are common pool, and on assumptions of individual rationality, forestry resources will be used in unsustainable ways. It is no surprise then, that communities that manage to use resources sustainably have usually developed some kind of system of sanctions for over-exploitation. Sometimes these sanctions can be administered by the community, and sometimes it is done by the state (in which case the state usually has an excuse to nationalize the resource). If we are faced with the latter situation, the problem becomes one of how to offer state officials the right incentives to ensure they do not over-exploit the forest for personal gain.

Giorgio Blundo has found in some of his fieldwork in Senegal and Niger, that some public officials in a *de facto* privatized forestry service are actually helping to conserve forest

[10] Fieldwork, in my humble opinion, should always contain a period of unfocused observation in which the researcher is as open as possible to unanticipated trends; indeed, an open-minded attitude should never be entirely abandoned. However, as the research progresses, a combination of pre-existing theory, hunches, and the hunches derived from unfocused observation, should structure the observation in an increasingly focused and systematic way.

resources.[11] The question is what makes Senegal and Niger different from places like Tanzania, where the evidence shows that officials conspire in looting the forest. I can think of a number of potential reasons. One is that for some reason or other, Giorgio's officials have internalized conservation ideology (though this still begs the question of why they have not internalized it elsewhere). Another is that the officials regard the forests as a national resource, and in a nationalist spirit are dedicated to protecting them (this seems unlikely). Another is that officials hail from the communities close to the forests, and that they thereby regard their role as protecting community resources (in order to counteract the temptation to act opportunistically, this would still likely require either a strong community consciousness or else some ability for the community to monitor the officials, and for the community to share an interest in sustainability). A final possibility is that in Giorgio's cases, the forest services have been unofficially privatized to such a degree that forest officials actually regard the forests as their own private property, and rational self-interest dictates that they husband those resources for long-term gain. The most likely way in which this might happen is if a top official takes the initiative, ensuring that his junior officials exploit but do not overexploit the forest. If I read Giorgio correctly, however, this is not the case. Instead, more junior (although still perhaps hierarchically organized) local officials appear to have taken the initiative. For this latter unlikely scenario to make sense, and if none of the other mechanisms are operative, the officials would have to have a reasonable expectation that they were not going to be transferred to another location any time soon. We might contrast this with the situation in, for example, Tanzania, where only partial *de facto* privatization plus frequent shuffling of staff has left property rights poorly defined, a classic tragedy of the commons situation which encourages employees to take a short-term view, consuming as much as possible before someone else does so.

We can compare this case to one from the Business and Politics stream of APPP, where we have found that in South-East Asia, corruption has generally speaking been more developmental than in Africa because of the phenomenon of centralized rent-seeking. In Indonesia, for example, President Suharto allowed other members of his regime and his family to enrich themselves, while disciplining subordinates whenever rent-seeking threatened to become too economically destabilizing. Suharto seems to have taken the view that he would maximize both his own personal fortune and that of the country by encouraging the economy to grow. Thanks to an effective centralization mechanism, the *de facto* privatization of the state was compatible in this case with a reasonably responsible husbanding of economic resources. This contrasts to the situation in, for example, Nigeria, where rent-seeking has generally been decentralized and competitive, with no central authority able to impose a long-term strategic view (Lewis 2007; McIntyre 2003).

What precisely are the mechanisms involved here? There seem to be three different bits to the explanation. One postulates that successful development implies placing some limits on rent-seeking, a second that centralization facilitates that limitation, and a third, though this is perhaps contingent, that centralized authority encourages that limitation. Perhaps the difference between centralized and decentralized rent seeking is like the difference between a private landlord and a common pool resources situation. Nothing determines that the private landlord will develop his estate over the long term, but he at least has an interest in not allowing it to deteriorate. By contrast, in a common pool situation, the condition of resources

[11] I note that this is just one finding of a rich and varied study.

is likely to be degraded in a tragedy of the commons type of way.[12] And here we can see a potential homology with the case described by Giorgio. The public/collective goods/common pool resources dilemma is resolved by (unofficially) privatizing the resource, and putting in place systems that permit the long-term exploitation of those private property rights by their 'owners'.

If this is right, enlightened self-interest, combined with adequate monitoring mechanisms, goes a long way to explaining better public goods outcomes. It is worth reminding ourselves, however, that monitoring becomes less costly in contexts where public goods provision is underpinned by morality, ideology, or group consciousness. This does not mean that everyone in a group or organization must have internalized an ideology, only that some, who can apply leverage to others, have done so.

5 Neo-traditional authority, democracy and sanctions regimes

A good example of sanctions-buttressing ideology comes from urban Malawi. In recent research Diana Cammack, Edge Kanyangolo and Tam O'Neil have found that in some places non- or neo-traditional 'town chiefs' are relatively successful in supplying a limited range of public goods in diverse urban communities. In the authors' analysis, there appear to be three main mechanisms that explain their success: a first is a felt need for their services, a second is a repertoire of concrete sanctions that chiefs can apply to non-cooperators, and a third is a resonant template of traditional authority transferred from the countryside to the town (Cammack, Kanyangolo and O' Neil 2009). It would be interesting to know whether or not these town chiefs could successfully impose sanctions in the absence of this template. However, it appears to exist, and it seems logical to suppose that it makes monitoring and sanctioning easier.

In other Malawian locations, the findings are less positive. They tell of rural-urban migration increasing witchcraft anxiety, and multi-party democracy eroding trust and destroying sanctions regimes. The data on urban-rural migration chime with widespread findings that show that mixed communities are generally worse at supplying public goods than homogeneous ones, and that trust is rarer among strangers than acquaintances (Habyarimana et al. 2007; Miguel and Gugerty 2005; Serra 2009, 16). The findings on witchcraft are interesting because they suggest that a phenomenon that historically had some positive socio-political functions has produced overwhelmingly negative effects when transposed to a new context. Malawi's witchcraft epidemic seems to be both cause and symptom of a collapse in authority. Whether the solution is to try and harness witchcraft belief, eradicate it, or lock up the witches, remains to be seen.

The negative effects of multi-partyism are more surprising. The data – which chime with scoping findings from Tanzania (Kelsall 2009) – appear to show that democratically elected politicians are fearful of sanctioning citizens for shirking or bad behaviour because of the negative effect this might have at the polls. This is puzzling, because if electors have an interest in a strong sanctions regime, one would expect them to punish politicians who don't enforce the rules. Choice-theory provides an angle on this puzzle.

[12] Another way of explaining this is to invoke Olson's distinction between roving and stationary bandits (Olson 1993).

For reasons too complex to explain here, most political systems in Africa are clientelistic, clientelistic politics being characterized by contingent exchanges between patrons (politicians) and clients (voters) (Kitschelt and Wilkinson 2007). In such systems, it is rational for politicians to focus on supplying goods that give maximum leverage in the politician-voter exchange: that is, goods that can be granted to some and withheld from others. Because by definition goods which are public cannot be withheld from individuals or even groups, the clientelistic politician will have little incentive to supply them. He will concentrate instead on supplying private and club goods, often through an intermediary or broker (Kitschelt and Wilkinson 2007).

We can use this insight to help explain why, in a place like Tanzania, village roads tend to get repaired only around election time. Heavy road maintenance in Tanzanian villages is usually the responsibility of the district council, which has a grader. The ward councillor is the link between the village and the council. Because the grader is in great demand, getting hold of it requires a lot of effort. Thus the efficient councillor will put just enough effort into securing the grader as is necessary to secure re-election next time (note that there is more than one village to a ward). Getting hold of the grader allows the councillor to offer his constituents something concrete in exchange for their political support. If at the election a particular village in the ward fails strongly to support him, and yet he has managed to win anyhow, he can make sure the village doesn't get the grader post-election time.

Light maintenance of village roads, however, functions according to a different logic. This is the immediate responsibility of the village chairman, who is also elected. From his point of view, road maintenance is not a club or a private good: it is public. This is because it is impossible, once maintained, to exclude village voters from the benefit of a maintained road. Because he cannot threaten to withdraw road maintenance from village voters who don't support him at the election, he is better off concentrating on providing goods that grant him more leverage: access to embezzled funds, exemption from fines, intercession with higher authorities, and so on. This is quite aside from the fact that maintaining the road exerts a high physical toll on voters, for which they might punish him. In public, an individual voter may say that he wants a tough leader who will enforce collective work on roads; but in the privacy of the polling booth, it makes sense for him to vote for a more lax politician under whose regime he knows he will be able to free ride. The problem is compounded by the fact that although the councillor has some interest in seeing the road maintained, he has no direct authority over the village chairman. Thankfully, so long as he can fix blame on village authorities, a poorly maintained road can be turned to the councillor's advantage: the village will be even more desperate to get its road graded come election time.

As we saw in the case of villages A and B, real life is actually more complex than this. In certain contexts the incentives derived from this modelling of the political system can be overridden, or may not operate at all. Nevertheless, laying bare the way the system operates if all the actors behave as individual maximizers, allows us to understand better what is happening when they don't.

6 Explaining institutional failure and possibilities for change

My example in the next section comes not from Africa but from Italy. I include it here because it is a good illustration of the diversity of social mechanisms that can be pressed into social explanations, and also because the analysis might help explain some of the behaviour we observe in African public institutions. It also provides an angle on what I have called 'going with the grain'.

In his contribution to the Hedström and Swedberg book, Diego Gambetta provides a description of the sub-optimal performance of the Italian academic system, together with an explanation of its resistance to change. He describes how professorial posts and the promotions system are dominated by academic 'barons' intent on rewarding loyal supporters rather than academic excellence (follow the professor's steps, study what he wants to study, avoid criticizing his work). Elementary and unprincipled rationality (the desire to get ahead), thus encourages intellectual subservience on the part of younger academics. This is reinforced by three other mechanisms. First, a self-selection mechanism in which those most likely to pursue a career in the profession are of a supine disposition. Second, a mechanism under which, because supine behaviour is the norm, the mildest independent behaviour or criticism is perceived as inordinately threatening. And third, a mechanism whereby the highest promoted people are those who have best perfected their sycophantic skills, an art in which they proceed to school others. Although some of the more talented members of the profession recognize its unfairness and inefficiency, painful feelings of cognitive dissonance are alleviated by way of self-serving justifications. The stability of a sub-optimal system is thus maintained (Gambetta 1989, 105-107).

I would argue that Gambetta's description of the system is consistent with the idea of 'practical norms' advanced by Olivier de Sardan. What he is describing, after all, are unofficial social regularities. However, where Gambetta's approach marks an advance, in my view, is in being clear about the macro-pressures impinging on micro-choices that feed back into macro-processes – the cogs and wheels, the causal mechanisms in other words, that make the institution tick.

One of the interesting features of Gambetta's account, is that it helps us to see how the same mechanisms can have different effects in different contexts. Fairly similar self-reinforcing mechanisms are at work, for example, in British universities, but with opposite results. In most British universities professors are academically excellent, they are well-represented on promotions and appointments boards, they by and large appoint people on the basis of excellence not loyalty, the brightest graduate students see opportunities for themselves in the profession, and slavish loyalty to a senior, if not condemned outright, is not going to earn one many friends. Because academic seminars tend to be open, even combative affairs, a junior colleague who heaped praise on the weak paper of a senior would in all probability be met with revulsion.[13] Doubtless there are pockets of mediocrity (some would say rather large

[13] An exception might be made if the junior was chairing the seminar, in which case a bit of flattery is expected.

ones) in the British system,[14] which also has its own, quite different perverse incentives, but generally speaking academic merit counts (Newcastle, for example, is full of talented Italians!). The difference between the substantive outcomes in the British and Italian systems, then, is not explained by the presence of self-reinforcing mechanisms. Rather, it requires an additional explanation: a dominant ideal of academic excellence, a norm or value that acts, in Boudon's terminology, as a social mechanism in this case. Context, clearly, needs to be grasped before we can appreciate different mechanisms' relative importance and likely effects.

How, then, could the Italian system be made more like the British one? I confess I do not know but I can suggest some ideas. Gambetta notes that throwing more money at research is not likely to bring good results, at least not in the short term, since the institution is staffed by mediocrities. Are there alternatives? One would be to parachute into top positions individuals committed to the ideals of academic excellence, perhaps having acquired them elsewhere – in foreign universities for example. However, such individuals are likely to encounter serious resistance, and are only likely to succeed in changing the culture if given a long time horizon and a critical mass. Another option is to subject the institution to much greater external oversight; but the costs of such monitoring would be considerable, and it is not clear that the monitors would have the expertise to do the job. Another is to try to change the culture at the grass-roots, exposing younger academics to external practices; but if promotion policy continues to be dominated by 'barons', institutional culture will take at least a generation to change. Perhaps external agencies could wrest control over the promotions process from the 'barons'? Sadly, this is likely to cause a great deal of resentment, and a difficult environment for newly promoted non-conformists. In short, reforming an institution such as this would appear to be a very difficult task, providing a temptation to create entirely new institutions from scratch, with all the costs and uncertainties this entails.

Readers will note that none of these solutions, and least of all the last, 'goes with the grain' of Italian academic social realities. They all try to solve the problem by emasculating the current power-holders. Going with the grain would imply a different approach. It would mean looking for an intermediate path between the desire for academic excellence and the barons' need for status. Could special honours or prizes be awarded to those barons who managed to rouse themselves from slumber and publish internationally recognized research? Could a way be found to reward barons who collaborated with internationally excellent junior colleagues, giving them an incentive to employ the brightest graduates and speed the promotion of the latter? Is it unrealistic to think that such intermediate solutions might in time bring about a quiet revolution in the norms governing academic life?

I should probably reflect at this point on the implications of this example for going with the grain and the question of history. The situation as Gambetta presents it, even the use of the term 'barons', suggests a definite similarity to feudalistic patron-client social relations. Is the Italian academy a surviving legacy of an older feudal tradition, even if, in some respects, it has modernized? Or is it something recently created that just happens to take a feudalistic form? I don't know. Does it make any difference? I'm not sure. My hunch, however, is that

[14] It should be noted that pockets of mediocrity have been getting smaller since the central government tied university funding to research performance, monitored through the Research Assessment Exercise.

even if a direct link with political feudalism cannot be drawn, these practices are old enough, rooted enough, to have acquired sufficient traction to shape not just the participants' current interests, but what Boudon calls their 'cognitive models' (Boudon 1998). Because of this, it may be even more difficult to sweep them away.[15]

7 Maternal mortality and the principal-agent problem

Maternal mortality is a serious problem in Africa. It was therefore natural to make it a particular focus along with a small number of other troublesome development issues in the APPP's Local Governance and Leadership research. But the kinds of services that reduce it are not for the most part public goods, strictly conceived. The fact that high quality maternal healthcare is supplied by the private sector in places like the USA, shows that in the right circumstances, private companies will supply appropriate services, recouping the costs from mothers.[16] The reason that the private sector does not, for the most part, supply such services in Africa is because of poverty and ignorance, which leads to a failure in effective demand.[17] Most states in Africa have created public organizations to fill the gap, but few are working well. To assess why public or private organizations succeed or fail, perhaps the most relevant piece of choice theory is the principal-agent model.

In the principal-agent model the individual taking the action is called the agent and the affected party is the principal. Principal-agent situations are non-cooperative games, since the agent, other things being equal, will want to exert the least amount of effort for the most reward, while the principal will want to extract the maximum effort for the least reward. Resource issues aside, problems arise when the principal lacks the ability to offer incentives to the agent (as when expectant mothers have no rewards or sanctions, financial or otherwise, they can apply to health workers); or when the principal lacks the ability effectively to monitor the agent (as when expectant mothers lack the knowledge to assess the quality of the care health workers provide).[18] In the field of health, the knowledge problem, also known as the moral hazard or hidden action problem, when combined with the adverse selection problem (the possibility that poorly informed principals make bad choices) is usually so serious that even in wealthy countries, responsibility for monitoring agents is usually transferred to a third-party or 'super-principal', for example a bureaucratic hierarchy, professional association, or regulatory body (Leonard 2000). Super-principals themselves, of course, being agents of 'society', an abstract entity, are subject to their own problems of monitoring and motivation (who monitors the monitors, in other words).

From a choice-theoretic perspective, the basic problem is one of how to provide the right incentives to agents, so that the pay-offs shift, bringing the interests of principal and agent into line. Incentive structures may comprise variables as diverse as accountability relations,

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[15] Gambetta, citing the example of Sicilian attitudes to the mafia, believes that socially damaging beliefs sustained by vested interests can actually change quite rapidly when underpinning power relations are robustly challenged (in this case from the outside). This is an interesting thesis worthy of inspection (Gambetta 1998).

[16] Although there may be bits of the solution, e.g. public information campaigns, maintained roads, that *are* public goods.

[17] Even in rich countries private health care is so expensive that in the absence of health insurance, the market for bulky products would fail.

[18] An expectant mother may give a health worker a 'gift' to solicit her attention, but she still might not know whether the health worker is putting maximum effort into diagnosis of her condition.

recruitment and disciplinary machinery, monitoring mechanisms, financial rewards, professional norms, peer-group pressure, dedication to a cause, social affinities, and so on. These may depend in turn on features of the environment as varied as the presence or absence (and the way of working) of markets, financial budgets, the degree of decentralization, career structure, the presence of professional associations, professional oaths, community oversight boards, informal social networks, beliefs about health, and so on.

For the sake of argument, we might find, in our APPP maternal health scoping, that mortality is lowest when health providers (and support staff like ambulance mechanics) are motivated not just by financial and disciplinary rewards and sanctions, but by strong normative commitment to clients.[19] We might find also that these incentives function most effectively in contexts where local hospitals have autonomy in resource allocation and staff hiring; where senior staff hail from the community concerned; where staff and patients are linked through formal or informal social networks; where there are measures dedicated to reproducing a professional *esprit de corps*; where there are no social taboos against hospital births; and where there are other features that none of us could have predicted, but which our scoping has revealed.[20]

Supposing for a moment our findings correspond to the conjectures above. What, then, should be our next steps?

8 Towards a comparative research design

From the beginning, the intention of APPP has been to produce middle-level theory about the determinants of better and worse public goods provision. Middle-level theory of this sort demands that after grasping the complexities of social life, we proceed to reduce them to a few key variables (a reduction, of course, that must be plausible) (Booth 2008; Kelsall 2008c). How could we begin to do this, for example, in the Local Governance and Leadership research stream?

Let us suppose, again for the sake of argument, that our maternal health researchers, having returned from the field with rich data, and having thought about this data in terms of social mechanisms, felt that principal-agent problems were most consistently overcome when, out of all the variables adduced above, the locality has autonomy in staff hiring and when senior staff hail from the community concerned. Suppose that we found similar factors to be an important part of the story in our sanitation and local security cases. If we did find this, it would then be open to us to design a diverse case analysis in which we looked at four or more cases exhausting every possible combination of these variables: (on:on; off:off; off:on; on:off),[21] allowing us to explore whether or not these variables in different combinations are either necessary or sufficient conditions for better 'public' goods provision, giving us the basis for *a theory* about the relationship between public goods-producing mechanisms and structural-institutional variables. This would provide policy-makers with a useful, theory-and-evidence-based, point of entry to the solution of local leadership problems.

[19] I am of course open to the possibility that we will find that one or more of these types of incentive is unimportant, and/or that other types of incentive are.

[20] The work on African health services by Leonard, for example, suggests a number of other factors that provide interesting leads (Leonard 2000).

[21] If it is three variables we need eight cases, if it is four variables, 16 cases, and so on.

Earlier this year Olivier de Sardan wrote another paper describing the eight different modes of local governance in West Africa (Olivier de Sardan 2009). This was a very useful inventory that made clear that different public goods, or aspects of public goods provision, are provided by different actors and mixes of actors in different places. It also provided a rich list of potential explanatory variables: the effectiveness of municipal councils, for example, is said to be possibly affected by 14 different variables, ranging across such diverse things as the 'personal characteristics of the incumbent', 'social networks', 'presence of social movements', and 'nature of the opposition' (Olivier de Sardan 2009, 7). Subsequently we agreed to devote another nine months of exploratory research to exploring causal variables, in sites characterized by different mixes of some of these governance modes. This was intended to capture a wide variation in public goods performance and the variables that cause this.

Nascent in Olivier de Sardan's typology is the kind of information we need to put together causal hypotheses and a diverse case analysis. After this year's fieldwork, I hope we shall have some systematic evidence about the ways the different variables practically interrelate. From that evidence, we need to start aggregating and reducing.[22] We need to try as far as possible to group idiographic variables under more general ones.

As far as I can see, there is not much in the background literature, or in the initial results of fieldwork, to suggest that *mix of governance modes itself* is a key driver of better and worse public goods provision. The drivers seem to me to be on the one hand more general: particular game-like mechanisms (free-rider, tragedy of the commons, principal-agent, etc., as well as, perhaps, what Olivier de Sardan refers to as 'logics'); and on the other hand more structural-institutional (histories of institutional change, degrees of autonomy, social affinities, and so forth).[23] In other words, unless at the conclusion of the current phase of Local Governance research (February 2010) we get strong *prima facie* support for the idea that modes-of-governance mixes are key parts of the causal mechanisms that explain better and worse public goods provision, it seems pointless to select cases for future study on this basis. A prior acquaintance with socially modified game-theoretic mechanisms will help us, I believe, both to see which the more appropriate variables are, and also to grasp how variables which on the surface are quite different, perform a similar function in shaping those mechanisms to produce better and worse development outcomes.

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[22] With 14 variables, a diverse case analysis would require 16,384 cases.

[23] Olivier de Sardan's typology (2009) does include variables of this sort, and others too.

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