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***Methods for researching institutions:
Critical institutional perspectives***

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Foreword

This literature review was commissioned Dr. Sam Wong, Liverpool University, and Professor Frances Cleaver, King's College. The aim of the study was to get an overview of methods and approaches that are used in studies on institutions in natural resources management. The study is meant to contribute to a larger intellectual project to develop and articulate new, critical institutional perspectives in research on institutions in natural resources management.

The study was conducted in communication with the commissioners, but the content remains my writing, and I am solely responsible for any misinterpretations of the reviewed literature.

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Methods for researching institutions: Critical institutional perspectives

1. Introduction

This paper presents a literature study on “methods” for researching “institutions” in the field of natural resources management (NRM). The purpose of the paper is to highlight and identify (new) research methodologies for developing ‘post-institutional’ or ‘critical institutional perspectives’ in studies on NRM and institutions. These perspectives seek to counter mainstream institutional perspectives in research on NRM (Hall *et al.*, 2014). Doing a literature review on “methods” in research on institutions in NRM is not a straightforward task. A “method” or whatever is understood as a “method”, closely relates to theory and how ‘we’ observe the world, or rather, how ‘we’ *think* we can observe the world. Mollinga and Gondhalekar (2012, p.10), quoting Buroway (1998), make a useful distinction for analysis between ‘research model’ (positive or reflexive), ‘research method’ (survey, case study etc.), and ‘techniques of empirical investigation’ (interviews, participant observation, literature review etc.). In different wording, these distinctions are also made by other authors (see Bardhan and Ray, 2006; Freeman, 2007; Tavory and Timmermans, 2009; Komakech, 2013; Lund, 2014; Schnegg and Linke, 2015; Verzijl and Dominquez, 2015). This conceptualization of “methods” is (also) used in this literature review because it clarifies the discussion.

A study on “methods” in research on institutions in NRM is also difficult for one other important reason. In many social science fields, particularly in those with critical interpretative traditions (e.g. feminism, Marxism), and not least in anthropology, there appear to be many readings and very little agreement on what constitutes an “institution”. To illustrate the point, very often other concepts are used in these fields of social science, such as ‘community’, ‘tribe’, ‘class’, ‘gender’, ‘rights’, ‘norms’, ‘beliefs’, to describe phenomena that are understood or defined as (part of) “institutions” in mainstream fields of social science (e.g. positivist social science, economy, political science). In fact, many writings that use a critical interpretative and/or anthropology-based perspective for exploring institutions in NRM, do not define the concept “institution” explicitly and they do not use the term ‘critical institutionalism’. Illustratively, in the reference list of Hall *et al.* (2014), the article in which Cleaver and others elaborate on the term ‘critical institutionalism’, there is not a single article or publication that mentions this term. Two recent articles, Ingram *et al.* (2015) and Verzijl and Dominquez (2015) are actually the notable exception in this review, using the term explicitly.¹

As can be surmised, this complicates a literature review on “methods” in critical studies in NRM on institutions. Terms as ‘institutional analysis’, ‘historical institutional analysis’ or ‘comparative institutional analysis’ (see for instance: Greif, 1998; Morgan *et al.*, 2011) invariably direct an inquiry at search engines to mainstream social science research, mostly to the field of economics, management studies and business systems. This is also true for the field of NRM when specific key words are used at search engines (e.g. ‘resources’, ‘forest’, ‘water’). For this review, this exercise is not very useful, apart from being reminded that economists and political scientists in scholarship on NRM, or ‘common-pool resources management’ as it is generally known (Agrawal, 2001, p.1660), use an almost universal definition of institutions in NRM. This definition is basically about ‘rules-in-use’ that constrain and sanction people’s behaviour (cf. Verzijl and Dominguez, 2015). Hereby people are conceptualized as rationally behaving, individual subjects who aim for risk aversion and profit maximization (Bardhan and Ray, 2006). To circumvent this ‘search problem’ and steer research towards critical (social science) perspectives, I have used an ‘additional’ set of search words, apart from “institutions”,

¹ The work of Liebrand *et al.* (2012) and Wong (2009), two researchers involved in this study, is no exception. These studies engage critically with institutions in NRM, but only use implicit or generic definitions of institutions.

such as ‘human agency’, ‘social capital’, ‘livelihoods’, ‘collective action’, and ‘land and water rights’. These terms are commonly used in critical scholarship on institutions in NRM.

The main technique that I have used in this literature review has been critical reading. I went back to articles that I had read before, this time focussing fully on the ‘question of method’. What theory or interpretative framework has been used? How are institutions defined? What methodology is described? And, what techniques have been used for empirical investigation? In addition, knowing that peer-reviewed journals give little space for an elaboration of methods, I was invited by the commissioners to review PhD thesis’ of Wageningen University and elsewhere – not just articles. The idea was that PhD thesis’ often contain a separate chapter on ‘methodology’, and may shed more light (than journal articles) on the process-of-thinking and testing-of-methods in research on institutions in NRM. In selecting articles for review, I looked to scholarly work of the commissioners, especially paying attention to Cleaver’s concept of ‘institutional bricolage’ (2000; 2001) and how that scholarship underpins the development of critical institutional perspectives (Hall *et al.*, 2014). In this exercise, it also became necessary to review (some) articles on mainstream institutional approaches, to assess how theory, methods and techniques are used in this body of work. All this required considerable back-and-forth reading, assessing main texts, as well as foot – and endnotes, and appendixes in which information on “methods” was mentioned. In total, about 50 texts have been assessed.

This working paper is divided in six main sections and sub-sections. These sections are:

1. Introduction
2. Definitions of “institutions” in literature in – and outside the field of NRM.
 - 2.1 *Outside the field of NRM, no definition of “institution”.*
 - 2.2 *Outside the field of NRM, definition of “institution”.*
 - 2.3 *Inside the field of NRM, no definition of “institution”, higher levels.*
 - 2.4 *Inside the field of NRM, definition of “institution”, higher levels.*
 - 2.5 *Inside the field of NRM, no definition of “institution”, local levels.*
 - 2.6 *Inside the field of NRM, definition of “institution”, local levels.*
3. Debates on the ‘question of method’ in research on “institutions” in NRM.
4. Examples of critical research on “institutions” in NRM – three PhD thesis.
 - 4.1 *Institutional bricolage in smallholder forestry in the Amazon (de Koning, 2011)*
 - 4.2 *Water institutions in the Pangani river basin in Tanzania (Komakech, 2013)*
 - 4.3 *Scale and social capital in water struggles in Ecuador (Hoogesteger, 2013)*
5. An overview of “methods” for researching “institutions” in NRM.
6. Conclusions and discussion.

2. Definitions of “institutions” in literature in – and outside the field of NRM

In the viewpoint of this study, (critical) literature in social science on institutions, both *in – and outside* the field of NRM, deserves attention. Literature that does not directly deal with NRM and/or with a definition of “institutions” may also yield potential to advance studies in NRM on institutions. It is useful to acknowledge that concepts of “institutions” have developed in specific academic contexts, in ‘mainstream’ economic and political science disciplines, as well as in ‘critical’ anthropology and development studies disciplines, be it through cross-fertilization of disciplinary insights or through ‘independent’ research. ‘Opening-up’ or scrutinizing these tendencies in thinking on institutions in NRM requires looking to knowledge and methodologies that are not directly related to “institutions” and/or to the field of NRM.

In addition, it is useful to take into account studies that focus on “institutions” in NRM *at higher levels of governance*. Here, I understand governance as an arena in which various institutions and actors interact and integrate in terms of policy and decision making (Nuijten *et al.*, 2004; Lund, 2006; Arts and Leroy, 2006; Arts *et al.*, 2013), *also* in the domain of research practice itself (Liebrand, 2014; Verzijl and Dominguez, 2015). Generally, it can be stated, that studies in NRM on “institutions” have an historical focus on ‘locality’ (Agrawal, 2001, p.1657), and have a strong tendency to ‘study down’. In the 1980s and 1990s, research work focussed on “institutions” at grassroots levels with the objective to figure out how users’ were (or could) manage resources sustainably without strong interference of the state or market (see Acheson, 2006 for background). Since then, the focus has also shifted to higher levels of governance in NRM, to studies of bureaucracies, professionalism, project management and policy making. This shift was (and is) inspired by the critique that ‘local institutions’ are deeply informed by ‘external linkages’, and also by the insight, that government agencies, policies and professionals themselves are “institutions”. There is now also an emerging research line to ‘study up’ institutions in NRM, and potentially, there can be gained a lot from this approach.

These considerations have structured the literature review. In short, the review (and text below) is divided along three axis of distinction: (1) literature on institutions *in – and outside the field of NRM*; (2) literature *with and without (explicit) definitions of “institutions”*; and (3) literature in NRM that focusses *at higher – and local levels of governance*. Examples of these categories of literature are discussed below, starting with the most ‘distant’ literature and then, dealing with literature that is (more) strongly associated with critical institutional research.

2.1 Outside the field of NRM, no definition of “institutions”

Giroux (2000) presents an interpretative critique on the film ‘Fight Club’, seeking to address how the film is silent about many oppressive ‘institutions’ in consumer society, such as class, ethnicity, domestic violence and aggression against gay people. For clarification, the word “institution” is not used in this article. This paper illustrates that institutions in cultural studies are seen as structures or discourses that discipline subject positions and govern ‘what we see and do’. Typically, critical interpretative theory is used for analysis in such writing, in this case a social pedagogy perspective – the idea that films simultaneously entertain and educate, showing the audience what subject positions and forms of agency are available. No detailed description is given of the methods used in the article (e.g. there is no specific section heading under the label ‘methodology’), but it is clear that the film has been used as source material, and also how the film has been analysed (through a social pedagogy perspective).

Another example in this category is Freeman (2007), who studies how public health officials (e.g. government officers, doctors, controllers) in the US and the UK ‘piece together’ elements of knowledge in policy making, often creating something new from whatever is at hand. Interestingly, he calls this a process of ‘epistemological bricolage’. He focusses on ‘learning in practice’, using ‘simple questions’ and ‘ethnographic observations’ in 35 interviews, allowing for comparison and reflection. He elaborates on a theory of learning (or epistemologies), identifying (1) rationalist learning (e.g. universal reason, science over other ways of knowing), (2) institutional learning, respectively organisational and administrative learning (e.g. incremental, evolutionary, collecting, coding, positions); and (3) constructionist learning (e.g. learning as a collective and interpretative exercise). Freeman shows through excerpts of interviews that public health officials’ learning consists of working in various epistemological domains and piecing together knowledge. To capture this process, he introduces Levi-Strauss’s (1966, p.16-22) metaphor of bricolage. The workings of the ‘savage mind’ is bricolage, acquiring and assembling tools and materials as he or she goes, keeping them until they might

be used (Freeman, 2007: 486). Each is shaped in part by its previous application but remains inevitably underdetermined, imperfectly understood, open to manipulation for whatever purpose is at hand. Not only are tools selected according to the bricoleur’s purpose, but the purpose itself is shaped in part by tools and material available.

Freeman (2007) brings home the argument that bricoleurs negotiate between research and practice, *and also between ways of knowing*. In this regard, public health officials are best seen as ‘situated agents’ who operate in ‘traditions’ (rational, institutional and constructionist learning), and deal with (or embody) different ways of knowing. In this sense, he argues that a bricoleur is not simply a (rational) ‘knowledge broker’, given the variety of sources (of knowing) that are used, and the opportunism and large degrees of innovation that are in play. Freeman also talks about the limits or failure of learning, which is described as being unable to ‘piece things together’. In short, bricolage is heterogeneous, but not unlimited, and learning begins with uncertainty and also ends with uncertainty. Based on this article, a table can be compiled (Table 1), differentiating between ‘traditional’ scientists or engineers and bricoleurs. As can be seen, the ‘concepts’ that bricoleurs work with differ from the scientist. This can be seen to relate to different “methods” to study bricolage. For instance, studying ‘material and tools’ (or ‘authoritative resources’ as de Koning, 2011 calls it), rather than ‘projects’.

Table 1: The scientist (or knowledge broker) and the bricoleur

Scientist, engineer (or knowledge broker)	Bricoleur
Project	Material and tools
Concept	Signs
Creating events by means of structures	Creating means of structures by events
Questioning the universe	Questioning the tools
Universal	Heterogeneous

Source: Based on Freeman (2007).

The study of Freeman (2007) does not completely fall outside the field of NRM, as public health officials also deal with water quality. The article can be seen as an example of ‘studying up’ institutions at higher governance levels. It aptly illustrates that ‘our’ research on institutions in NRM itself is subject to bricolage practices (see also Verzijl and Dominguez, 2015 in relation to WUAs in Peru). The implications of this realization are discussed in the conclusions.

These articles serve as an example of this category of literature, and no other articles have been reviewed here.

2.2 Outside the field of NRM, definition of “institution”

Similar to Giroux (2000), Martin (2001) and Czarniawska (2006) examine the ‘institution’ of gender discrimination in (professional) organisations and workplace cultures (e.g. US multinational corporations, police service). These articles illustrate that critical interpretative analyses (in cultural studies) are (or can also be) supported by clear definitions of institutions. Martin (2001) explicitly defines gender as an institution: ‘Gender, conceptualized as an institution, is a complex and contradictory system of social relations and culture that includes expectations and ideology, social, economic, and political structures, and micro-level statuses, identities and practices, among other elements’ (p.590). Czarniawska (2006) defines institutions as ‘sets of repeated social practices that are legitimized by normative justifications’ (p.235). These authors are inspired by critical feminist theory and they use respectively in-depth

interviews (Martin, 2001) and detective fiction (Czarniawska, 2006) to reveal patterns of gender discrimination in organisations. These articles have in common, especially Giroux (2000) and Czarniawska (2006), that an interpretative and critical analysis of ‘everyday’ cultural products (e.g. film, fiction) is used as a “method” to unpack institutions. A typical technique is to focus on particular scenes, quotes or vignettes to illustrate the argument. The use of critical interpretative theory (e.g. social pedagogy, feminism) constitutes the main element of the methodology here – and an explanation of these theories receive ample space in the articles.

Sharp *et al.* (2013) and Sharp (2013) study economy and informal business operations. Their work is part of a new research project, called the ‘human economy project’. This project aims to document how people actually live their day-to-day lives. They mention explicitly that their approach is interdisciplinary in scope and relies extensively on anthropological research methods. They argue that anthropological research methods are ‘an appropriate counter’ to the methods of mainstream economics, which has been criticised for its isolation from ‘the ordinary business of life’ (Sharp *et al.*, 2013, p.99). Interestingly, in these articles, “institutions” are understood in two ways, but only one of them is defined explicitly. Institutions are defined as the ‘big institutions’ that impinge on people’s lives, namely ‘the market, the state, [and] business corporations’. The other understanding of institutions is implicit and described as the ‘ground level’, the ‘plural economy’ (Sharp, 2013), and as ‘local understandings’ of people on how they perceive the big institutions. The objective of the researchers is to expose the neo-liberal, free market economy as a ‘representation’, and to describe actual economic conditions, starting from the premise that ‘a human economy is already all around us, but is currently hidden from view’ (Sharp, 2013, p.133). Sharp (2013) discusses ideas of Mauss (1990 [1925]) and Polanyi (2001 [1944]) in relation to ‘self-interest’ and ‘mutuality’, and important concepts in their work are ‘livelihood strategies’ and ‘participation’ in big institutions. They see case studies, and long-time inquiry in specific places at specific times, as an appropriate research model. Empirical techniques are vignettes, participatory observations and archival research.

Taken together, these articles illustrate that “institutions” are defined variedly and differently in literature outside the field of NRM, from ‘big institutions’ (market, state, business corporations) and structures or discourses in society (class, gender, ethnicity, violence) to more specific definitions as ‘sets of repeated practices’, ‘normative justifications’, ‘identities’ and ‘micro-level statuses’ – to name a few. The examples from this body of literature also reveal that these big and small ‘elements’ of “institutions” are seen as deeply related. However, few studies seem to focus explicitly on the interrelations and connections (how big institutions shape specific institutions *and vice versa*). The tendency is to focus on how ‘big institutions’ impact the ‘ground level’. Put differently, there is given a nod to some idea that they are related, but it appears not to be seen or treated as an object of study itself. It is unclear from the papers whether it simply was overlooked, or was not considered a subject worthy to investigate, or whether it was a matter of “method” – not knowing how to investigate interrelatedness.

Another observation has to do with representation and objectivity. As noted, Sharp (2013, p.133) states that the human economy is ‘hidden from view’. This immediately triggers the question ‘whose view’? Who is watching, and for what reasons? What is the position and conceptual lens of the researcher? In what contexts or networks are institutions hidden from view? These are important questions to address in a review on methods to study institutions

2.3 Inside the field of NRM, no definition of “institution”, higher levels

As argued, there appears (now) to be a large body of literature on “institutions” in NRM that focusses at *higher levels of governance*, for instance, at the level of professional development

practice (Chambers, 1988), higher engineering education (Gupta, 2007), irrigation project management (Veldwisch *et al.*, 2009), government agencies (Udas and Zwarteveen, 2010), and irrigation policy formulation (Singh *et al.*, 2014).² The theoretical (and methodological) approaches in this body of literature are varied. Chambers (1988) engages in critical (self) reflections on the practice of development professionals, being one himself. The work of Gupta (2007) and Udas and Zwarteveen (2010) is inspired by feminist theory, and gender analysis is central in their writing. Veldwisch *et al.* (2009) adopt a ‘social construction of technology’ perspective and they use actor-network-theory (ANT) to reveal that (state) irrigation developments require the active construction of networks, consisting of human and non-human factors. Singh *et al.* (2014), following Mosse (2004), adopt a ‘cultivation of policy’ perspective among ‘policy elites’ in the irrigation sector whereby the production of ‘coherent policy ideas’ is seen to represent ‘the need to maintain relationships’ (p.156). These examples of literature, and the theories mentioned, can be considered the top of the iceberg.

In these papers, concepts of “institutions” are not clearly defined, but the use of interpretative, reflexive and anthropological-oriented “methods” can be considered a common denominator. In using personal reflections, Chambers (1988) talks about ‘normal professionalism’ in relation to canal irrigation management in state projects, aiming to address linkages between authority, power and disciplining forces among development professionals and engineers. Gupta (2007) focusses on the ‘informal milieu’ of institutes of higher education in engineering and science, taking Indian Institutes of Technology (IIT) as a case study. Quoting Merton (1996), she conceptualizes science as a social process – as ‘a system of communication, interaction and exchange’ (p.508). She also talks about ‘socialization’ and ‘enculturation’ in the informal milieu of science. This conceptualization directs her inquiry to the study of ‘cultural norms’ and ‘practices’ to understand the reproduction of inequalities, quoting Bourdieu (1986) here. As research techniques, Gupta (2007) used structured questionnaires (159 respondents) and in-depth interviews (20 respondents) with students and staff of IITs. She qualifies the methodological approach of her work as a ‘comparative quantitative study’ (p.514).

Veldwisch *et al.* (2009) document the travails of an irrigation system in Malawi, focussing on the aspirations, perceptions and views of donor agents, foreign consultants, government officials and development experts, to reveal how ‘they’ see and think ‘irrigation’. The authors seek to expose the ‘irrigation factory mindset’ (p.198), a term they use to describe the idea that certain areas can be transformed into high-productive, fully irrigated areas that boost national productivity. One of the more salient observations (and arguments) in their work is that the boundaries of an irrigation system are not fixed (see for a similar argument, Gururani, 2002; and Verzijl and Dominguez, 2015). They argue that a persistent conceptualization and presentation of an ‘irrigation system’ as a ‘system’ needs then to rely on other aspects of the ‘network’ to acquire its hardness and rigidity – a point that the authors bring across through a historical construction and analysis of events. The main technique is to compare ideas and designs of project implementers with perceptions and practices of users in the field, using the contrast to open the ‘black box’ of state irrigation development as the authors call it (p.199).

Udas and Zwarteveen (2010) present a case study of the Department of Irrigation (DOI) in Nepal, focussing their attention on ‘professional cultures and identities’ in the DOI, and also on the bureaucratic (or formal) ‘incentive structure’ of the agency. The argument of their paper is that ‘addressing gender issues continues to yield little praise, both formally and informally’ (p.88). The conceptual lens of this paper is ‘cultures’, ‘identities’ and ‘incentives’, and as

² The thesis of Liebrand (2014) ‘Masculinities among irrigation engineers and water professional in Nepal’ can also be considered an example here.

techniques for empirical inquiry, the authors relied on ‘participatory observation, interviews and workshops with implementers’ (p.88). Singh *et al.* (2014) aim to show how ‘success’ and ‘failure’ is cultivated in policy, focussing on the case of Participatory Irrigation Management (PIM) in Nepal. The authors scrutinize two influential (research) policy reports of the FAO and IWMI, comparing descriptions of two irrigation systems in Nepal in the reports with field observations. The analysis reveals that the descriptions of the systems, and the associated claim that ‘PIM has failed’, has little to do with contextual ground realities. It (also) is shown that the construction of ‘failure’ has been the result of exclusive networking among (high) policy elites in the irrigation sector (this work resembles the ‘piecing together’ of knowledge, as elaborated by Freeman, 2007). Research techniques used have been critical reading of policy reports, and interviews and participatory observations in the field.

These articles on “institutions” in NRM at higher levels of governance can be seen to contain a few typical characteristics, yielding four interesting observations for this study:

First, most of these articles spend little words on “methods” in the strict sense of the word. Chambers (1988) and Veldwisch *et al.* (2009) are completely silent on this topic, no information is given. Udas and Zwarteveen (2010) mention methods in less than a paragraph in the introduction of the paper. More specifically, they only mention techniques (e.g. participatory observation, interviews). Gupta (2007) and Singh *et al.* (2014) are slightly different. Gupta (2007) has included a special section ‘conceptual tools and research method’ (p.513-516), and Singh *et al.* (2014) ‘methodology and selection of research sites’ (p.159-161). Upon closer inspection, however, it is mainly theory and considerations (or process) of selection that is discussed under these sections (what sites, which people) – not necessarily “methods”. In other words, the trend is that it is not deemed necessary to explain exactly how information has been obtained or what questions have been asked, as long as a proper elaboration of theoretical interpretation is given – it is the *explanation* that matters. The fact that Gupta (2007) and Singh *et al.* (2014) do have a special section under the label methodology can be explained by the use and engagement with (more) predefined and ‘structured’ research techniques. Gupta (2007) used structured questionnaires, and Singh *et al.* (2014) discuss in detail a report of IWMI in which a coding exercise was developed to evaluate the performance of systems. These papers reveal that an (extra) elaboration on “methods” is (only) considered necessary when more ‘closed’ methods of inquiry are used – not for ‘open’ methods for inquiry. This can be considered to constitute a strange silence in this body of work. ‘We’ also bring ‘our’ biases in open (anthropological) inquiry, and they need elaboration and description.

Second, these articles share a generic understanding of “institutions” in their analysis. This is visible in two ways. First, the word ‘institute’ in Gupta’s (2007) article on ITTs resonates with the word “institution”, a conflation of meaning that is not just left unattended but also appears to support the analysis. The same tendency is visible in Udas and Zwarteveen (2010) who talk about the DOI. To clarify, it is crystal clear that these authors do not just see institutions as synonymous with organisations, rather they see the (formal) design of organisations, as they exist on paper and how they are socially (and informally) embedded, as part of the same configuration of social practice – as part of one ‘working whole’ to quote Veldwisch *et al.* (2009). It is also visible in the seemingly arbitrary use of various meanings of “institutions” – from ‘actor’ to ‘network’, from ‘practices’ to ‘cultural norms’. Again, this seems to support rather than undercut the analysis. This is a puzzling observation. How is it possible that vagueness contributes to clarity in analysis? Is it the power of suggestion that all things are invariably connected? What if we start working with more clear definitions of institutions?

A third observation is closely related to this point. In critical studies, “institutions” are seen to relate to many aspects of the (social) world. To sum up the concepts of institutions so far: structures, class, ethnicity, gender, discourses, nature(s), cultures, identities, norms, normative justifications, informal milieu, actors, networks, systems, incentives, repeated practices, communication, interaction and exchange. Indeed, the list seems boundless, and also, seems to touch upon various levels, from structures and discourses to (individual) practices and identities. It appears that the word “institution” partially function as a container concept. It simultaneously means everything and nothing, potentially losing its analytical function in research. The obvious remedy is to produce a clear definition of “institutions” or use alternative terms in order to give it analytical power. It can be said that economists, political scientists and other mainstream institutional thinkers precisely do this (see for instance Agrawal, 2001; Shivakoti and Ostrom, 2002), working with a clear definition of “institutions”. However, this is precisely what many critical scholars are reluctant to do – they prefer ‘open definitions’. This may work for critical inquiry, but also can make findings *illegible* for a larger audience.

Fourth, these studies illustrate that “institutions” in NRM can also be studied at higher levels of governance. I am making this point (again) because much work on “institutions” in NRM appears to focus at local, community or grassroots levels. As Agrawal (2001) argues, this is true both for economists and anthropologists. He mainly criticizes work of economists on the commons for an excessive focus on ‘locality’, but also points out that a similar argument is often made for anthropologists who tend to study communities as miniature worlds (p.1657). Nowadays, most anthropology-oriented studies on “institutions” in NRM explicitly take into account external linkages and the larger context, but it also can be seen that the focus is still on the local level (see for instance Cleaver, 2001; de Koning, 2011; 2014). In short, there is a tendency to ‘study down’ institutions, while gains could be made in ‘studying up’ institutions – a task ideally suited for critical studies. Interesting research questions could be: how does institutional bricolage work at policy and professional levels? And how are those processes linked to institutional bricolage at local levels?

2.4 Inside the field of NRM, definition of “institution”, higher levels

I came across some articles in the field of NRM that focus on higher levels of governance, using the concept of “institutions” (more) explicitly. For instance, Behagel and van der Arend (2013) discuss the implementation of the Water Framework Directive in the Netherlands, a new piece of European legislation. They focus on the events that occurred in the design of new ‘participatory institutions’, defined as basin-level, regional and national platforms for discussion. Interestingly, these authors quote both mainstream institutional (Ostrom, 1992) – and critical institutional thinkers (Cleaver and Franks, 2005). They mention Ostrom as follows: ‘institutions shape the patterns of human interactions and the results that individuals achieve (Ostrom, 1992). Ostrom [...] defines institutions as the set of rules that is followed by a set of individuals. These rules impact on incentives, which means that institutions operate in an indirect manner to achieve or frustrate outcomes. In other words, institutions are simultaneously enabling and constraining and are never directly concerned with the output or a policy process, but rather with the practices in which these outputs come about’ (p.71). And Cleaver and Franks are mentioned as follows: ‘institutional approaches to participation can be criticized for a failure to understand the social, cultural and political contexts in which participation takes place (Cleaver and Franks, 2005)’ (p.70). Behagel and van der Arend conclude ‘that fields of practice are not level surfaces, but are very uneven terrains with a diversity of positions and outlooks that cannot be smoothed out by participatory institutions to create a level playing field for all participants’ (p.84). Research techniques have mainly been 23 qualitative interviews with civil servants and spokespeople of societal groups.

Wong (2014) examines three high (policy) level ‘climate financing organs’: (1) Climate Investment Fund; (2) Adaptation Fund; and (3) Global Environmental Facility, in relation to three projects in Africa: (a) tree planting; (b) smart agriculture; and (c) disaster information dissemination. Though focussing on the policy level, “institutions” are mainly defined in relation to the projects at the ground level, namely as the ‘web of institutions, such as family ties, customary practices and community relations, interactions with market networks, labour, technology and laws’ (p.2). The focus of analysis is how individuals, as men and women, are ‘capable’ of participating in these institutions (resonating with the work of Sharp *et al.*, 2013). The concept of gender is used in the analysis, and the author proposes a ‘finance gender equity framework’ based on notions of ‘contextual’, ‘procedural’ and ‘distributive’ equity. No methods of data collection and research techniques are mentioned in the article.

Agrawal *et al.* (2014) assess the ‘effectiveness’ of various ‘governance interventions’ in agriculture-forest landscapes. Their work is based on the assumption (and conservation argument) that current uses of agriculture-forestry landscapes are unsustainable, and unable to mitigate climate change. Based on a (literature) review of 123 project-based and policy interventions, using a search in ISI Web of Science, they categorize policy interventions in 12 types, covering three categories: ‘rights (and institutions)’, ‘incentives’ and ‘technologies’ (see Table 2 for a summary). They note that interventions can be taken by users, governments, civil society organizations and market actors. The typology of interventions (and institutions) is insightful, but the authors are only interested in ‘outcomes’ – not in processes or in how and why questions. They use a straightforward coding exercise to determine the effectiveness of the interventions, i.e. improved forest cover/ not changed/ declined, and country level/ province level/ smaller unit level. They report that they did not find a statistically significant relation between intervention and (positive) outcome, and they argue that a general characteristic is that interventions fall short of expectations for a variety of reasons.

Table 2: Types of project-based and policy interventions in forestry

A	Rights (and institutions): ‘resource rights interventions’
1	Forest and agriculture policy reform
2	Titling/land tenure
3	Protected and conserved forests
4	Zoning and spatial planning
5	Decentralization and CBNRM
6	Logging bans and moratoria
B	Incentives: ‘incentives and rewards-based incentives’
7	Payment for environmental services (PES)
8	Voluntary standards and certification
9	Sustainable commodity supply chain interventions
C	Technology: ‘technological interventions’
10	Agricultural intensification
11	Fire management
12	Tree planting

Source: Agrawal *et al.* (2014)

Agrawal *et al.* (2014) can be considered part of mainstream institutional thinking, using indicators to test hypothesis, and assuming a rational subject model. For critical institutional thinkers, this work may not be exciting, but it is useful to remind that it is written to ‘counter’ dominant economic thinking in policy making in NRM. Hence, the paper shows in a straightforward way that interventions almost never are tightly coupled with specific outcomes.

They note that meta-comparison between cases is actually very difficult, because of the limited availability of consistent information across the reviewed cases, and they quote Ostrom (2007), to argue against the common presumption that one can ‘make simple, predictive models of socio-ecological systems and deduce universal solutions, panaceas, to problems of overuse or destruction of resources’ (p.278). To get a better understanding of policy interventions, they argue to move beyond simple causal analyses, and use methods suited to the analyses of complex systems and exploration of non-linear causal relationships. Saliently, the latter is something that critical institutional thinkers could happily agree with.

Another article that can be considered to fit this category is Ingram *et al.* (2015). Saliently, they state to contribute to ‘critical institutional theory’ (p.4), but their work is in fact mainstream institutional thinking and it resembles the work of Agrawal *et al.* (2014). Based on the assumption (and conservation argument) that current uses of 8 Non-Timber Forest Products (NTFP) in Cameroon are unsustainable, they explore (plural) ‘governance arrangements’ (p.4). They define 12 indicators, based on the institutional design principles of Ostrom (among others), and they apply these indicators on six, a-priori defined ‘governance arrangements’: (1) statutory regulations; (2) customary regulations, (3) voluntary market-based systems; (4) international conventions; (5) project-based systems; and (6) corruption. They define governance as ‘messy with overlapping, multiple layers of institutions and actors’, as an interactive process of rule-making embedded in a broader societal process, which is linked to interests, authority, sanctions, and rights and obligations, quoting Ostrom (1990) here. They look to ‘value chains’ of the NTFPs (e.g. cola nut, bush meat), using quantitative and qualitative methods: 2.112 semi-structured interviews with ‘direct stakeholders’ and 82 with ‘indirect stakeholders’; literature review, SPSS analysis (no explanation on why and how), and participatory action research (also here, no explanation on why and how).

The article of Ingram *et al.* (2015) is structured as a science article: (1) introduction, (2) methods, (3) results, and (4) conclusion and discussion. The authors show in a relatively straightforward way that there exist plural governance arrangements in the value chains, and this adds a comparative dimension to the analysis. In other words, the analysis simply does not support the conclusion. They argue for instance that ‘weak governance arrangements are counter-productive to sustainable livelihoods’ (p.16). As noted, they work with the (a-priori) assumption that ‘overharvesting’ is unsustainable. This may be true from a conservation point of view, but it also is stated in the article that the production of NTFP has increased in last 40 years, suggesting that some livelihoods of people have apparently been reasonable sustainable and durable. They have not really investigated ‘livelihoods’ and their findings are, therefore, difficult to link to people’s ‘livelihoods’. Furthermore, clear definitions (or arguments) should be given of what is considered ‘weak’ and ‘strong’ governance arrangements.

As noted, Ingram *et al.* (2015) seek to make a contribution to critical institutional theory, showing that governance arrangements in practice are a ‘fine mess’ as they call it – a positive qualification. They talk about ‘voids’ and ‘gaps’ in institutional arrangements, which they see as spaces of the bricoleur, who uses ‘capitals’ creatively. At the same time, Ostrom’s term ‘crafting’ is used interchangeably and confusingly with Cleaver’s ‘bricolage’, and the analysis is clearly based on a rational subject model, in which the importance of (individual) interests is assumed, and in which actors/stakeholders create ‘competitive advantage’ and add ‘value to assets’ (p.18). A question arises here on what do mainstream institutional thinkers ‘see’ in Cleaver’s concept of institutional bricolage? As noted, this particular article is written from a conservation point-of-view and the authors are (mainly) concerned with identifying suitable governance arrangements to prevent or stop ‘overharvesting’ and the extinction of species. It is

here that the concept of ‘bricolage’ comes in. It seems that they see in the concept of ‘bricolage’ a glimpse of hope, creating an ‘opportunity’ to reconcile both development and conservation agendas (p.20). As can be surmised, bricolage is thus used here in a very particular way, and the analysis of the authors is not really informed or concerned by an understanding of ‘culture’ or ‘social practices’ – these are simply treated as given and stable by the authors.

The observations identified earlier are also applicable for these articles: (1) in the strict sense of the word, there is little mentioned on “methods” and an elaboration of methods is only done when more ‘closed’ methods of inquiry (e.g. scoring) are used; (2) the authors use a generic understanding of “institutions”, it seems both in mainstream and critical institutional thinking; (3) the concept of “institutions” in critical writings is not clearly defined, causing the word “institutions” to function as a container concept, possibly making findings illegible for policy makers, and (4) “institutions” can also be studied at higher levels of governance in NRM.

2.5 Inside the field of NRM, no definition of “institution”, local levels

This and the next section discusses work that is most commonly associated with studies on “institutions” in NRM, namely studies that deal with resources management at local, community and grassroots levels. First, I discuss critical literature on NRM that does not use the term “institutions” explicitly, examples are: Carney (1988), Zwarteveen and Neupane (1996), Wong (2009), Hoogesteger (2013), Veldwisch and Mollinga (2013), Verzijl and Quispe (2013), and Bossenbroek and Zwarteveen (2014). These examples can be considered the proverbial tip of the iceberg, there are many more.

Carney (1988) studies ‘land rights’ and ‘gender dynamics’ in the development of a new state irrigation project in the Gambia. She adopts a classical, interpretative Marxist approach, studying capital, labour and resources. Her article is an illustration of early work of anthropologists and geographers in development projects, focussing explicitly on social and institutional aspects, and breaking new ground in development studies, also making women visible in development. As research techniques (mentioned in the footnotes of the article), she spent various months in the field, interviewing men and women farmers and doing participatory observations. Similarly, Zwarteveen and Neupane (1996) broke new ground in the field of irrigation management in a study of women’s ‘non-participation’ in a newly created ‘Water User Associations’ (WUA) in Chattis Mauja Irrigation System, Nepal. Focussing on dynamics of in – and exclusion, and participation, and documenting household livelihood strategies, and distribution and resources mobilization patterns, they question the idea that farmers act as ‘individuals’, noting that most studies in NRM do not specify the term ‘users’. They show that ‘participation’ in (formal) irrigation management, in WUAs, is not a straightforward activity for every single farmer or user, it depends among others on gender and access to land. To make an impact (among engineers), these (early) studies adopted a neutral-empirical style of writing, aiming to ‘show how it works in practice’. Carney (1988) and Zwarteveen and Neupane (1996) do not discuss theory, and a description of research methods is treated as material for footnotes – not as an issue for serious debate.

Jumping to more recent work, Wong (2009) documents the set-up of a new, trans-boundary, regional water committee to deal with water uses in the White Volta River in West Africa. No definition of “institutions” is used in this paper. It is part of an edited volume on ‘community-based adaptation to climate change’, suggesting that ‘communities’ and ‘water committees’ are seen as institutions. His focus is mainly on participatory processes and the working or effectiveness of the new committee. For instance, he elaborates that the committee is seen as a new platform for tribal power in the area, and at the same time, is useful for creating increased

awareness of interdependence between users and for creating acceptance of diversity among representatives from different ethnic and religious groups. Methods or techniques of research are not described (presumably interviews with village leaders and field visits). Also here, “methods” appear not to be seen as an issue for debate (by the author and volume editor).

The PhD thesis of Hoogesteger (2013) focusses on irrigation management in the Andes of Ecuador, particularly at WUAs and how peasant communities, through a few grassroots leaders, ‘jump scale’ and manage to ‘up-scale’ their ‘political agency’ in regional federations of WUAs and national platforms for water dialogue. Saliiently, the word “institutions” is not used in this thesis, while the study clearly focusses on ‘communities’, ‘collective action’ and ‘participation’ in NRM, to name a few central points of attention. The objective of the thesis is to understand how poor water users (can) develop ‘political agency’ by getting organised into federations and alliances, to gain influence, power and a say in NRM (e.g. new legislation, new projects). The social construction of ‘scale’ and the development of ‘social capital’ (quoting Bourdieu and Putnam) are conceptual entry points for analysis. The author relied on the following research techniques: long periods of field research, participatory observation, interviews, and office-based cooperation with farmer leaders in the main building of one of the federations. The methodology of this thesis is further discussed in detail below.

Veldwisch and Mollinga (2013) take a ‘policy in practice’ perspective to analyse the introduction of a model of formal WUAs in Uzbekistan, in areas that were previously under (Soviet) state control. The article does not contain an explicit definition of “institutions”, although the authors refer to the work of Cleaver (2002) in the conclusions, in particular to the concept of ‘institutional bricolage’. They argue that the introduction of WUAs in combination with existing forms of district control in agricultural production, create the fabric for a ‘qualitatively new type of institution’ (p.770). In many ways, this article is exemplary for ‘case study research’ in NRM: (a) it hardly mentions “methods” in the strict sense of the word; (b) there is a good discussion on theoretical perspective (2 pages), in this case a ‘policy in practice’ approach, seeing the social construction of policy as contested and dynamic; (c) it follows that in-depth research is necessary, basically in whatever ways are possible and through whatever means are available; and (d) a brief description of research techniques is given (two lines in the main text and additional information in the footnotes), in this case interviews, participatory observation and reading grey (policy) literature. Saliiently, the authors mention that some research work was ‘not deemed methodologically feasible’ (p.769). This sentence does not directly relate to methods or research techniques, but is sensitive wording for saying that researchers were denied access at bureaucratic levels of policy making, and were monitored by secret service agents of the state.

Verzija and Quispe (2013) document land use and water management practices in high-altitude wetlands in the Andes in Peru. In policy and science, and also in the popular view, these wetlands are considered ‘natural grounds’, seen as unused and available for more effective exploitation (for downstream uses). Through in-depth field research, they show that these wetlands are, in fact, human-made and human-managed (and irrigated) lands, supporting large herds of cattle and other forms of livelihood (‘the system nobody sees’). Through the construction of visual maps, ‘cataloguing’ canals, wetlands, grazing lands and migratory movements, they make clear that this area is intensively used and monitored. The authors do not use the word “institutions” explicitly, but they are centrally concerned with ‘local resource governance arrangements and organisation of communal opposition to external threats to water security’ (p.281). They use the term ‘social organisation’ of natural resources, being based on kinship ties, trade, and other ‘cultural institutions’ such as reciprocity, collective user

investment (labour), and communal authority. It also discusses ‘regulations’ such as a ban on sheep and pigs, and herd-size regulation. Interestingly, the authors also use a dynamic concept of ‘community’, referring to a group of people linked to a land unit whose territorial boundaries are recognized *and* contested. In short, the ‘boundaries’ of the community (who is in, who is out), and the land that belongs to the community change through time and are dynamic. As Veldwisch *et al.* (2009) have argued for ‘systems’, and Gururani (2002) for ‘forests’ (see below), this makes the distinction between natural and cultural elements of “institutions” in human-made ecologies fuzzy and (analytically) artificial.³

Bossenbroek and Zwarteveen (2014) seek to understand the participation of male and female farmers in irrigation management in two small hill systems in Tajikistan. It is an interesting case, because land rights in both villages were largely registered in women’s names after the collapse of the Soviet Union, respectively 60% and 75% in both villages. However, as they document, ‘water rights’ became vested in men, formally and informally. This provides for a new context in which negotiations take place between household members and between households in the community. No explicit definition of “institutions” is used. As the main concept, it takes ‘agency’ (quoting work of Cleaver, 2007; 2012), defining it as the ‘capability or power to be the originator of acts’ (p.267). It also mentions concepts as ‘livelihood strategies’ and ‘intra-household bargaining’, and it seeks to analyse irrigation through the lens of legal anthropology (e.g. ‘water rights’). In short, they show that agency of men and women is gendered (‘gendered agency’), and they show that men and women negotiate in different ways to get access to water. This article contains a section under the label methods, describing research techniques, the selection of villages, in-depth interviews, life histories, wealth-ranking, canal walks, group discussions, and the focus on ‘female-headed households’.

In regard to these case study articles in the field of NRM, similar observations can be made in comparison with previous articles. In short, (1) “methods” in the strict sense of the word are hardly described; (2) the authors use generic understandings of “institutions” in their analysis – the term is often not explicitly defined; and (3) “institutions” are seen to relate to many elements of the (social) world, meaning that the term “institutions” partially functions as a container concept. Upon closer inspection, the article of Veldwisch and Mollinga (2013) illustrates that the ‘question of method’ in a typical cases study can be spelled out in more detail: (a) it is true that “methods” are hardly mentioned in the strict sense of the word, but (b) there is always a good discussion on theoretical perspective, elaborating on how observations are interpreted and what the case is supposed to reveal. Furthermore, (c) it is clear through the elaboration of theory that an in-depth field research approach is necessary, basically in whatever ‘methodological’ ways possible and through whatever ‘methodological’ means available – no further explanation required. This provides for a context (d) in which it is sufficient to spend a few lines on listing research techniques (e.g. interviews, participatory observation).

2.6 Inside the field of NRM, definition of “institution”, local levels

The following articles focus on local, community and grassroots levels of governance in NRM and they contain explicit definitions of “institutions” or they make a clear reference to literature on “institutions” in NRM: Martin and Yoder (1988); Cleaver (2000; 2001; 2005); Shivakoti and Ostrom (2002); Gururani (2002); Shrestha and Shivakoti (2003); Talati and Liebrand (2005); Acheson (2006); Nagendra *et al.* (2008); Mukherji *et al.* (2009); de Koning (2010; 2011; 2014); Liebrand *et al.* (2012); de Koning and Benneker (2013); Komakeck (2013); Wong

³ The thesis of Liebrand (2014) also describes a human-made ecology for Chitwan District in Nepal. This area is seen as a forest first and then as agricultural land, while, in fact, in the past, it was a human-made, irrigated and grazing-land jungle area, monitored and managed by Tharu cultivators.

(2013), Schnegg and Linke (2015); and Verzijl and Dominguez (2015). Also in this category, these examples are just the tip of the iceberg.

Martin and Yoder (1988), as Carney (1988) and Zwarteveen and Neupane (1996), is also a ground breaking study in irrigation and rural development. It was one of the first studies that documented irrigation systems as “institutions”, managed by farmers. It broke with previous research in irrigation in the sense that it turned the focus on social aspects of irrigation system management. It explicitly defines system management as an ‘institution’, quoting Uphoff (1984): ‘as complexes of norms and behaviours that persist over time by serving collectively valued purposes’ (p.148). In this definition, it is perceived that institutions regulate individuals’ actions and consist of significant practices and relationships with society. They recognize that institutions may be ‘formal’ (e.g. cooperatives, local governments, a bank) as well as ‘informal’, and also that institutions do not necessarily have to be ‘organisations’ (e.g. land tenure systems, customary labour exchange relationships). They focus on the institution of ‘collective water management’, whereby the legitimacy is vested in the local community, based on local ‘property rights’. They use the ‘irrigation system activities matrix’ of Uphoff (1986) for studying the inter-relatedness of water use and organisational activities (e.g. resources mobilization, conflict management). The study is based on a comparative description of two farmer-managed irrigation systems in Nepal, both intensively studied for 20-months as part of PhD research. Research techniques were structured questionnaires (e.g. documenting cropping patterns, crop yields), interviews and participatory observations.

The work of Cleaver (2000; 2001; 2005) can be considered foundational work for critical institutional thinking on ‘common property resources management’ and ‘collective action’ in NRM. Many read her work as a critique on, or reaction against, mainstream institutional thinking, i.e. ‘common property resources management theory’ (CPRMT), and the ‘institutional analysis and development’ (IAD) framework and ‘design principles’ of Ostrom (see Cleaver, 2000; 2001). In her work, Cleaver emphasizes the ‘socially embedded nature of institutions’ in NRM, and she introduces the concept of ‘institutional bricolage’, adapting work of Douglas (1987), to capture the idea that people draw on various social and cultural arrangements (e.g. modern, traditional, formal, informal) for shaping institutions. In this regard, the work of Cleaver is more than a critique on Ostrom’s work and wider in scope than her inquiries, it (also) deals with a different (or new) research objective, namely to show *how* local groups and institutions in CPR management actually work – not simply *that* they work. To clarify, Ostrom (1992) *does* say that institutions ‘must be’ socially embedded in the social and cultural milieu, and Ostrom (1990) *does* mention the influence of external factors on local institutions, and she does not deny (or has no explicit opinion about) the existence of various sources or origins of local rules-in-use. ‘[O]ne reason scholars of commons have focussed so little on external factors (...) lies simply in the nature of their intellectual enterprise’ (Agrawal, 2001: 1656). They focus on showing the role of local groups and institutions in CPR management – end of story.

Similarly, Cleaver (2005) presents a critique on mainstream, under-socialized policy approaches to achieve public participation of the poor and alleviate poverty. The focus is on the community level in NRM and the critique focusses on the mainstream use and understanding of social capital (Putnam) in policy. To counter the view that social capital is equally available for all (poor) individuals, she emphasizes the socially situated nature of agency (quoting Bourdieu). Also here she is dealing with a different (or new) research objective, namely to understand *how* poor people (can) participate in institutions in NRM – not just *that* some of them participate. Cleaver (2000) engages critically with definitions of “institutions” in her writing, rejecting the functionalist and normative approach to institutional development and its

emphasis on ‘design principles’ (p.364). She comes up with an alternative approach, based on a discussion of the work of Douglas (1987), Peters (1994), Giddens (1984) and Long (1992), to study “institutions” in the view of a ‘complex-embedded and recursive approach to human action and institutional formation’ (following Granovetter, 1992: 53). In this view, Cleaver (2000) ‘suggest[s] that institutions are partial, intermittent and indeed often invisible, being located in the daily interactions of ordinary lives’ (p.366). In Cleaver (2005), institutions are conceptualized as ‘social relationships’ and ‘collective action’. Cleaver’s work draws on ethnographic research in Zimbabwe and Tanzania, focussing on ‘livelihood strategies’, ‘household economies’, and concepts such as ‘access’, ‘multiple uses’ and ‘ownership’. Various research techniques have been used: life history interviews, participatory observations, labour and activity charts, wealth ranking, and selection of 4 villages (in Cleaver, 2005).

In the context of this review, it is interesting to note that Cleaver (2000) proposed basically two new concepts to study “institutions”: (1) a ‘moral ecological framework’ in which individual and collective action is shaped (p.377), based on notions of the ‘desirability of solidarity’ (p.374), and (2) ‘institutional bricolage’, the conceptual idea that institutions are assembled from available formal and informal practices, meaning that practices of ‘bricolage’ are less purposeful, more partial, ad hoc and historically embedded than is suggested by the concept of ‘crafting’ (as propagated by Ostrom). With hindsight, it can be said, that only one of the concepts has been picked-up in critical institutional studies: institutional bricolage.

Shivakoti and Ostrom (2002) present a clear case of mainstream institutional thinking, elaborating on the IAD framework of Ostrom. The focus of study is on so called ‘farmer managed irrigation systems’ (FMIS) in Nepal. Nepal has been one of the key research sites of Ostrom, and she and her colleagues built the ‘Nepal Irrigation Institutions Systems’ (NIIS) database, containing information of about 300 FMIS systems and documenting cases of collective action in Nepal in relation to irrigation system management. The database has been built up over years, through primary data collection with surveys (standardized questions) and through the ‘mining’ of existing case studies on FMIS (see Mukhurji *et al.*, 2009 for a similar approach). The analysis is guided by pre-defined indicators (yes/no answers), and put in a database (basically a huge excel sheet). As described in Agrawal (2001; see below) and also by Cleaver (2000), this information is translated in ‘design principles’ to ‘craft’ institutions. In the IAD framework, “institutions” are treated or perceived as ‘local institutions’, as ‘rules-in-use’ that have developed in a particular social and cultural environment and in relation to specific external linkages, which themselves are treated as static and given. In critical institutional thinking, this type of scholarship is typically the object of critique, but it can also be considered an example of ground breaking, interdisciplinary work. Especially Ostrom’s attempt to use qualitative case studies (of anthropologists) to come up with theory on institutional development deserves praise, also from a methodological point of view.

The article of Gururani (2002) is a worthwhile contribution to critical institutional thinking, engaging with feminist theory and being ethnography-based. This article documents forest uses and livelihoods in the Himalayas, and the word “institution” is used ‘between the lines’. The authors makes a reference to the work of David Mosse on tank irrigation in India, and she suggests that forests, as tanks, can be understood as ‘public institutions expressive of social relations, status, prestige and honour’ (p.233), and that forests, like irrigation tanks [or other institutions] are ‘idioms of political relations and social standing’ (p.233). Interestingly, forests are usually understood as ‘nature’ in which the uses of humans are seen as ‘culture’. This dichotomy of thought can be seen to inform much contemporary work on institutions in NRM, including it seems, in some critical social science writings (see for instance, de Koning, 2011;

2014). However, Gururani (2002) suggests that this dichotomy is artificial at best, a product of 'our' views, and she questions the idea of institutions as exclusively being 'cultural' or 'social'. In exploring the relation between women and 'their' forest environment, she argues that nature itself is an institution – a place of configuration of social practices. She makes her argument in the background of the debate on 'Gender and Environment', and her thinking is informed by a critique on eco-feminism (as propagated by Vandana Shiva), and also on a critique on ethnographically grounded, utilitarian perspectives (as propagated by Bina Agarwal). The method of this study is a critical geographer's interpretation of an ethnography, consisting of 20 months of field work in rural villages, accompanying women into the forests, sharing chores, doing observations and occasionally, recording interviews.⁴

The lesson really worth taking from this article is to think about a 'fixed view of culture' in relation to an associated 'schematic view of nature'. More specifically, it may be useful for critical institutional scholars to embrace more fully the idea that space and place 'is always unfixed, contested and multiple' (Gururani, 2002: 234). This is basically also true for a category as 'scale' – a point well elaborated by Jaime Hoogesteger (2013).

Shrestha and Shivakoti (2003), as Shivakoti and Ostrom (2002) is part of mainstream institutional thinking. The authors develop and propose a 'livelihood asset pentagon' model to evaluate irrigation system performance and 'crucial livelihood factors' – two phenomenon that are assumed to be related. It uses case studies of two FMIS irrigation systems, a census survey, observations and PRA (discussions with farmers). The pentagon framework is based on five core assets to study 'sustainable livelihoods' (as developed by DFID): human, natural, physical, financial and social capitals. These capital assets are translated in proxies for the model. For instance, a proxy for natural capital is 'cropping intensity'. These various proxies are then calculated in an index figure per capital asset. For this exercise, the authors develop various mathematical formulas. An understanding of 'institutions' comes in under 'social capital', defined as networks of relationships, equity principles, efforts of a society and social institutions among people (p.67). This article reveals a strong faith in the capacity of researchers to capture 'reality' in one single rational model of performance evaluation. It explains in detail all formulas that have been developed to 'compute' a range of complexities, translating them into a score for each proxy or indicator. This makes the article difficult to read, but it is also surprising to see the large number of complexities that the authors are capable to translate into numbers (e.g. including incidences of water conflicts and whether water conflicts have been litigated). As with Nagendra *et al.* (2008) (see below), it gives the analysis a rigorous (statistical) appearance, lending credit to the view that livelihood variables have a significant impact on irrigation system performance, and supporting the argument that irrigation system performance is much more than a technical issue. Obviously, the focus to capture everything in numbers is also very cumbersome; and the method raises many question on how proxies are selected and indexes calculated. For instance, cropping intensity is (also) used in the calculations as a proxy for equity (as part of social capital, not just as part of natural capital).

Talati and Liebrand (2005) is an example of 'process documentation research' of 'institutional development processes'. In 2003, water was to be released for the first time in the Sardar Sarover Project (SSP), a huge irrigation canal system in India. At that time, the authors went into the field to document how farmers would respond and what institutions would arise. The government of India had adopted an official policy of WUA formation and water distribution was to take place through formal WUAs. The concept of "institutions" was understood in two

⁴ Interestingly, Gururani (2002) shows that 'feminization in agriculture' as is recently claimed to take place, has a very old history in (parts of) South Asia, going back to the late eighteenth century at least.

ways, as ‘village level institutions’ (e.g. WUAs, cooperatives and farmers’ organisations), and as new ‘rules-in-use’. The focus of research was to understand how policy was implemented. The following research techniques were used: surveys in 12 villages (information collection of demography and village level institutions), participatory observations, interviews, group discussions and review of grey literature and policy guidelines.

Acheson (2006) identifies three major institutional frameworks or ‘governance structures’ for resources management: ‘private property, government management, and local community management’ (p.118). The argument is that all three institutions can have ‘success’, but more often result in ‘failure’. The article presents a history of the debate (among economists) on institutions and ‘common property resources’, going back to Hardin’s (1968) work. He rightly notes that Ostrom developed her ‘institutional logic’ to counter the argument that community management would lead to ‘resource failure’. The concept of ‘resource failure’ is central in this article, which is defined as ‘institutional failure in terms of resource sustainability’ (this is what has been identified earlier as the ‘conservation argument’). Interestingly, he notes that ‘collective-action dilemmas have not received much attention in anthropology’ (p.120). The author regrets this, identifying Hawkes (1992) as one of the view anthropologists who worked on collective-action dilemmas, using concepts of rational-choice theory. He proposes a simple definition of ‘institutions’ as ‘rules’ within a given ‘governance structure’ (p.120). This argument deserves reflection, although anthropologist and critical institutional scholars have produced overwhelming evidence that governance structures in NRM are typically a mix of private, government and community management – not clearly delineated spheres.

Acheson (2006) has not much to say about proposed methodologies to study institutions. He makes three points: (1) there are no universal solutions to resource problems; (2) there is a need to discuss ‘interdependence’ of factors and how they lead to resource failure; and (3) government is inevitably nowadays and new rules will need to be embedded in a structure of government management. His views contribute to mainstream institutional thinking.

Nagendra *et al.* (2008) resembles work of Shivakoti and Ostrom (2002), and Shrestha and Shivakoti (2003). This article is a study of forest change in the background of a commonly observed ‘institutional mosaic’ in forest management: (1) a national park (government); (2) a buffer zone with participatory management programmes (government and communities); (3) designated patches of community forests (communities); and (4) large areas of private holdings (private). The article aims to show that participatory and community management by users’ groups works ‘best’ to protect and re-grow forests, countering the argument that only governments (or private partners) can manage forests well. In this sense, the article is typical ‘Ostrom work’ (Nagendra is a student of Ostrom). The argument is based on a study of ‘land cover change’, using satellite images in combination with interviews to lay bare institutional rules and structure at the ground (following the AID framework). The article has a very technical appeal, allocating almost 3 pages to an explanation of method (similarly as in Mukherji *et al.*, 2009, see below). In the article, institutions are conceptualized as (a) larger-level socio-economic and political settings, such as ‘tenure regimes and rule systems’, and (b) as ‘different forest institutions’ (p.43) (government, community or private). The article uses the ‘one-tailed Mann Whitney analysis of differences’ for interpretation (p.51-52).

Mukherji *et al.* (2009) is a report of IWMI staff, a study to find ‘patterns of success’ in Irrigation Management Transfer (IMT). IMT policies were introduced in the early 1990s, aiming to hand over system management responsibilities to users. The report focusses particularly on the working of Water User Associations (WUAs). It assesses success factors for ‘cooperative

action' in large-scale irrigation systems. Conceptually, the report leans on Ostrom's theory, seeing 'irrigation systems' as 'common pool resources'. The research starts from the premise that there is not much evidence that IMT 'works', and also it states, that there are very few 'comprehensive and methodologically rigorous evaluations of IMT and PIM' (p.3). Saliiently, they state that many case studies on IMT are 'questionable in terms of method and rigour'. In their view, a database is more 'methodologically rigorous' (than case studies) and therefore, they built a database of 108 case studies, using (or mining) available literature on irrigation systems and IMT. Their aim is to make the database amenable to 'statistical analysis', and they explicitly aim to build a large-N database (p.5).

The database is based on a coding exercise of the 108 case studies, based on literature review. It is stated in the report that the IAD framework of Ostrom is used for coding, following the method as developed by Tang (1992). However, it is not very clear how this is done and how the IAD coding is used exactly. It remains vague. Rather, it appears that the IAD framework was mainly used for inspiration – not to follow it closely. They come up with their own indicators to calculate a 'composite success score' (p.10-11) for a-priori defined indicators (e.g. irrigation service fee collection rate; financial viability of WUA; functional condition of infrastructure; equitable water distribution). They introduce a straightforward method of scoring: '1' if it has gone up; '0' if it has changed or deteriorated. Generally, the report reads as an attempt to make information from a large number of case studies 'legible' for policy makers. As Singh *et al.* (2014) write, who present an analysis on the report, the study was instrumental in showing that IMT has been a failure, clearing the ground for new (privatization) policies or public-private-partnerships. In terms of methods, the report can be seen as an interesting attempt to build large-N research based on case studies or single-N research.

The work of Jessica de Koning (2010; 2011; 2014; de Koning and Benneker, 2013) has been extensively reviewed for this study. The focus of her work is forest and nature governance, and the role of institutions and local practices in forestry. Throughout her work, she uses the concept of 'institutional bricolage' (de Koning, 2010; 2011). Her work includes a review of institutional literature, mentioning the work of Cleaver (2002) and Scott (2001), and calling attention for concepts such as 'formal' and 'informal', 'bureaucratic' and 'socially embedded' institutions, 'normative' and 'cultural-cognitive' institutions, and 'rules', 'norms' and 'beliefs'. Her work also discusses the concept of 'bricoleurs', elaborating on Giddens's (1984) idea on the 'institutional limits of agency', and discusses Long (2001) in relation to a definition of 'actors' – as 'having the capacity to process their and others' experiences and to act upon them' (de Koning, 2011: 30). In the view of de Koning (2011), the 'added value' of institutional bricolage is that it 'embraces both the conscious crafting and the less intentional construction of institutional settings' (p.240). In other words, a bricoleur is seen as an actor, as a conscious and unconscious social agent. In her analysis, she pays attention to 'authoritative resources' of bricoleurs, which can be a position, a formal function, kinship, wealth and personal characteristics of an actor, such as knowledge, eloquence and strength. She uses presentations of life histories of locally recognized leaders to identify 'authoritative resources'.

Other work (de Koning and Benneker, 2013; de Koning, 2014) focusses on newly introduced projects and laws in forestry and how they have 'changed' practices on the ground, based on field work (e.g. interviews, observations, group meetings). Both new projects/laws and local practices are conceptualized as institutions, but the focus is (mainly) on bricolage practices at the ground – not at higher levels of governance. Much of her work reads as a reaction to mainstream institutional thinking, defined as Common Property Theory and New Institutional Economics. To quote: 'Institutional bricolage is *a reaction* against the idea that designed

institutions can be universally effective in achieving a predefined purpose' (emphasis added) (de Koning and Benneker, 2013: 53). As a reaction, her work can be considered to raise provocative questions. For instance, de Koning and Benneker (2013) argue that mainstream institutional approaches are 'overtly functionalist' (p.52), and yield 'generalizable data on institutions and actors' at best (p.56). If this is true, then it can also be said that 'critical institutionalism' merely or only produce non-functionalist and non-generalizable data (my wording). It then will have no purpose other than producing new case studies, showing the uniqueness of every single situation. Clearly, this is not (or should not be) the purpose of critical institutional thinking, and it is more useful to formulate an argument on critical institutionalism as a school of thought in its own right – not as a reaction against mainstream thinking.

The argument in de Koning's work, resembling Cleaver's work, resolves around 'agency'. A key argument is that mainstream institutionalism is using normative or pre-defined concepts and indicators to study institutions, such as the subject being a rational individual, and the idea that people's actions are regulated by incentives and sanctions. In contrast, critical institutionalism proposes to use a more comprehensive understanding of agency (de Koning and Benneker, 2013, p.54-55). Here, Bourdieu (1977) is quoted, and it is argued that agency has both 'conscious' and 'unconscious' dimensions: 'Within a situation, certain local principles are consciously and unconsciously implicitly mobilized (Bourdieu, 1977)' (idem, p.54). With this in mind, it is argued that a study on institutions (and institutional bricolage) should focus on what actors do and say in practice, and a study on bricoleurs should focus on local actors' capacity to act, shape, mediate and negotiate. In theory, this makes sense and it provides for interesting reading, but there also can arise a problem in practical analysis.

The problem is related to how 'we', as critical institutional researchers, precisely recognize the agency (or capacities) of actors, particularly when we acknowledge that behavior of people is partly 'unconscious' and 'irrational' (as de Koning does). The risk is that a very rational (and a-priori conceived) analysis of agency seeps through in the analysis, and this can be seen in some of the work of de Koning (and in many other authors' work as well). Though recognizing in theory that agency is partly an effect of unconscious ideas, habits and taken-for-granted norms, in practical analysis, bricoleurs are presented as highly rational individuals. This can be seen in the use of wording. For instance, the 'project was met by strategic bricolage practices of actors' (de Koning and Benneker, 2013: 58), local actors 'faking interests' (idem, p.58), 'local actors [who] conned the NGOs' (idem, p.58), 'villagers drew on their identity (...) as green people' (idem, p.59), 'the association of the loggers decided' (idem, p.60), 'they portrayed themselves' (idem, p.61). Words matter and it appears that some sort of a normative, Western, secular-liberal understanding of agency (my wording) seeps through in analysis. This point is discussed below in more detail, because it is visible in many studies in NRM.

Liebrand *et al.* (2012) document negotiations on land and water reforms in South Africa, focussing on farmers' institutions such as irrigation boards and farmers' associations, and on institutions as land and water rights (using a legal anthropological approach): how people perceive their 'rights', and what is considered 'legitimate'. The article mentions the word institutions, discussed in relation to 'embeddedness', i.e. 'the idea that institutions like property are basically social institutions, reflecting a complex alchemy of politics, culture, economics and ideology' (p.774). The study is based on intense field work, much like an ethnography. The first author was hosted by a farmers' family, creating an opportunity to develop trust, having conversations and doing observations. The method of research is a case study, using interviews, review of literature and field observations, to triangulate and deconstruct 'what is happening'.

The PhD thesis of Komakech (2013) is discussed in more detail below. Here, it suffices to say that the study focusses on ‘water institutions’ in the Pangani river basin, Tanzania, at two levels: (1) ‘new’ institutions imposed from ‘above’, such as new water policies and legislation, the introduction of River Basin Authorities, River Committees, and formal WUAs; and (2) ‘local self-governing’ water institutions ‘from below’. The overall research objective is to explore ‘conditions’ for reconciling state-led institutional arrangements and local water management practices (p.9). The central idea behind the thesis is to investigate how ‘local level approaches’ to water management can be ‘up-scaled’, and how ‘state-led approaches’ can be ‘down-scaled’ (p.7). In this sense, the thesis leans on two thoughts, (a) an interest in ‘designing’ and ‘modelling’ of institutions to see if the ‘disconnect’ between local and state-led institutional development can be overcome; and (b) an interest how local institutional development actually work. The methodological approach of the author is discussed below in detail.

Wong (2013) examines the dynamics of elite capture in programmes in Africa that aim for ‘community-based resource management’ (CBRM). The author calls it a ‘comparative study’ but it reads more like a critical evaluation and literature review on two approaches in CBRM: (1) approaches that try to ‘exclude’ the elite, and (2) approaches that try to ‘cooperate’ with the elite. The ‘elite’ are understood as local leaders or ‘big men’ at lower levels of governance. The article engages specifically with contemporary (mainstream) ideas of institution building which frame institutions as ‘formal committees’ that can be newly crafted to replace old, informal institutions. This concept is based on the idea that individuals act rational, according to incentives and formal, ‘controlled’ participation. In contrast, Wong (2013) proposes concepts as ‘human agency’ and ‘symbolic power’ to understand institutions, and the author makes a point that institutions, such as communities and tribal leadership, are not bounded and ‘fixed’, but complex, changing and contested. The main message is that the elite has a critical position in the shaping (and maintaining) of institutions in CBRM; and it calls for more situation-specific and contextually-rooted ‘institutional interventions’.

Schnegg and Linke (2015) write about ‘living institutions’ among pastoralists in Namibia. They engage with literature on institutions in NRM, particularly Ostrom’s CPR theory. One of the key arguments of CPR theory is that collective action ‘works’ because there are good rules for ‘sanctioning’. Through detailed case studies and ethnography, the authors show that sanctions are in place in Namibia as ‘institutions’, but that they are rarely applied or enforced. In short, the authors show that the ‘inefficacy of institutional sanctioning does not lead to failure of natural resources management as predicted by institutional theory’ (p.211). The set-up of the article is very rigorous, describing in detail all the steps that have been taken. The article is an excellent illustration of the three aspects of ‘research methods’ as mentioned in the introduction of this paper: (1) research model; (2) research method; and (3) research techniques. First, the researchers take a reflexive approach to studying institutions, using theory of Gluckmann (1955) on multiplexity and theory on agency of individual actors. Second, the research method is ethnography to develop an in-depth understanding of human relationships, studying multiplexity; and third, they describe empirical techniques for investigation: observations, structured interviews, and also, saliently, coding of data in a database. Ethnographic reports and network analysis were coded following 100 detailed indicators. Regrettably, the article is not giving much information on the indicators itself, or how they have been chosen or used in analysis. This suggests that these indicators and coding were not really useful – in the end the analysis reads as solid anthropological work.

Verzija and Dominguez (2015) use theory of institutional bricolage and actor network theory (ANT) to make sense of the ‘powers of water user associations’ in Peru. They have a *very*

interesting definition of institutions. They define ‘natural resource institutions’ as ‘continuously performed and patched together, through heterogeneous elements and practices, by those that live, experience and enact these institutions every day *and by those who make sense of them* (emphasis added). Hence, they recognize that ‘institutions’ (at lower governance levels) exist both for actors (those who live, experience and enact them), *and* for observers and researchers (those who make sense of them). As definitions of bricolage, they quote de Certeau (1984), and also Levi-Strauss (1966), as the poetic way of doing things, as tinkering, as reaching brilliant unforeseen results. Leaning on performance theory – something they do not mention explicitly in the text – they argue that WUAs are many things at the same time. They may not fulfil predicted outcomes, but they are durable actors in water governance, and they are enacted or performed in various, multiple ways. In short, there are many stories to tell about WUAs.

The paper has a specific section on ‘method: on following bricoleurs’. They used ethnographic research techniques, and the collaboration with 6 researchers, local actors who had an active role in the WUA. These co-researchers are seen as co-learners, and the research itself is treated as an enactment of an image of WUAs (or what we think they are). It is clear that here lies a promising way forward for future research on institutions – how do we or other institutional thinkers enact institutions in ‘our literature’? As Verzijl and Dominguez argue: ‘a particular performative representation of an institution (...) is often itself part of a project (intellectual, political, cultural) of the sense-makers. (p.5). It is one of the rare papers in which this is mentioned explicitly – and something worth to consider in the light of this study. ANT theory seems to have the capacity to evade or circumvent foundational divisions such as modern-traditional authority, social-natural worlds, structure-agency, public-private action and human-nonhuman actors, which frequently are assumed a-priori in institutional analysis. The authors conclude that the question whether an institution is effective or a lame duck is totally dependent on who makes sense of what performances, and what ‘ought to be’.

The following observations can be made for this category of literature:

First, studies that fall in mainstream institutional thinking (see table 3 for overview) are mainly concerned with *outcomes*, or with showing *that* something happens. In contrast, critical institutional thinking is concerned with *processes*, and with showing *how* things are interrelated. These differences are also described by Bardhan and Ray (2006). In the review, these differences are visible in the ‘closed’ and ‘open’ definitions of institutions that are used in mainstream and critical institutional thinking respectively – institutions as a set of rules or norms against institutions as embedded actor-network relationships.

Second, the literature that can be considered part of the category of critical institutional thinking can be (further) divided in two (sub) categories (see Table 3). There are studies that are written as a reaction or in response to mainstream institutional thinking (labelled in Table 3 under the category ‘reaction and realist’). This literature is characterized by using rigorous empirical investigation ‘in the field’ and also by using critical theory to ‘bring out reality’. Early examples of this work are Martin and Yoder (1986) and Zwartveen and Neupane (1996), and more recent examples are Cleaver (2000; 2005) and de Koning (2011; 2014). Then, there are studies that take a more independent stance, often not mentioning mainstream institutional thinking at all, and also, very often, departing from a position of transcendence – the idea that the world can be studied from an objective outsider position (labelled in Table 3 under the category ‘independent and interpretative’). Here, examples can be considered Gururani (2002) and Verzijl and Dominguez (2015). The first sub-category typically argues that (informal) institutions are hidden from view or ‘invisible’ (Cleaver, 2000: 366), while literature in the

second category argues that ‘institutions’ are partially performed and enacted in ‘our’ literature (Verzijl and Dominguez, 2015).

Third, critical institutional thinking appears decidedly to have taken the route of ‘institutional bricolage’, while a second concept, as identified by Cleaver (2000), a moral ecological framework, has been being ignored or overlooked. It is unclear (to me) why this has happened. The idea of the ‘desirability of solidarity’ in institutions in NRM, as a key concept underpinning moral ecological frameworks, is worth thinking about. It opens up space for questions as what actors want or desire (rather than focussing on agency); what they see as solidarity and what is considered just and fair. In studies on ‘institutional bricolage’, these questions are rarely in sight; they tend to focus on how institutions are made, and who is doing the active work.

Table 3: Overview of literature in categories

With or without a definition of “institutions”	Mainstream institutional thinking	Critical institutional thinking	
		‘Reaction & realist’	‘Independent & interpretative’
Outside the field of NRM	- Greif (1998)	- Sharp (2013) - Sharp <i>et al.</i> (2013)	- Giroux (2000) - Martin (2001) - Czarniawska (2006) - Freeman (2007)
Higher levels of governance in NRM		- Singh <i>et al.</i> (2014)* - Wong (2014)	- Chambers (1988) - Gupta (2007) - Veldwisch <i>et al.</i> (2009) - Udas and Zwarteven (2010)* - Behagel and van der Arend (2013)*
Lower levels of governance in NRM	- Shivakoti and Ostrom (2002) - Shrestha and Shivakoti (2003) - Acheson (2006) - Nagendra <i>et al.</i> (2008) - Mukherji <i>et al.</i> (2009) - Agrawal <i>et al.</i> (2015) - Ingram <i>et al.</i> (2015)	- Carney (1988)* - Martin and Yoder (1988) - Zwarteven and Neupane (1996) - Cleaver (2000; 2001; 2005) - Talati and Liebrand (2005) - Wong (2009; 2013) - de Koning (2010; 2011; 2014) - de Koning and Benneker (2013) - Hoogesteger (2013) - Komakech (2013) - Veldwisch and Mollinga (2013) - Bossenbroek and Zwarteven (2014) - Verzijl and Quispe (2014)* - Schnegg and Linke (2015)	- Gururani (2002) - Liebrand <i>et al.</i> (2012)* - Verzijl and Dominguez (2015)

Source: My compilation. Please note that this table only shows the literature discussed so far (there follows more). The literature noted with a * are basically boundary cases, and can also be moved into the other sub-category.

3. Debates on the ‘question of method’ in research on “institutions” in NRM

This review on methods for researching institutions in NRM is certainly not the first. In this section, I summarize the discussions on methods and research on institutions as I found them in the following papers: Lund and Marcussen (1994), Agrawal (2001), Bardhan and Ray (2006); Tavory and Timmermans (2009), Mollinga and Gondhalekar (2012), Hall *et al.* (2014), and Lund (2014). As noted already in the introduction, “methods” are essentially ‘derivatives of ontologies’ (Mollinga and Gondhalekar, 2012: 45) or ‘theory-method packages’ (Tavory and Timmermans, 2009: 258), meaning that a discussion on the ‘question of method’ is invariably linked to theoretical perspectives. In short, there is not one best way or ‘blueprint method to study institutions in NRM. To paraphrase Verzijl and Dominguez (2015), the question whether a method is effective and appropriate or ineffective and inappropriate is totally dependent on who makes sense of what ‘performances’ and what ‘ought to be the research objective’. Therefore, it is useful to realize that methods in these 7 papers are discussed in relation to different objectives and theoretical perspectives. Table 4 presents a schematic overview of the ‘position’ of the papers, on a scale of positivist (empirical) social science research (e.g. economy, political science) to critical interpretative traditions in ethnography.

Table 4: Schematic overview of discussion on methods and institutions

Positivist (empirical) social science research	<<< Scale >>>	Critical interpretative traditions in ethnography
<ul style="list-style-type: none"> - Economy - Political sciences - New Institutional Economics - IAD framework - Common Property Theory - Mainstream Institutional Theory 	<ul style="list-style-type: none"> - Anthropology - Critical Institutional Theory 	<ul style="list-style-type: none"> - Interpretative theory - Post-modern philosophies
<ul style="list-style-type: none"> - Agrawal (2001) 	<ul style="list-style-type: none"> - Lund and Marcussen (1994) - Bardhan and Ray (2006) - Mollinga and Gondhalekar (2012) - Hall <i>et al.</i> (2014) 	<ul style="list-style-type: none"> - Tavory and Timmermans (2009)* - Lund (2014)*

Source: My own compilation. Paper mentioned with an * are boundary cases within the field of critical studies.

The work of Agrawal (2001; see also Agrawal *et al.*, 2015 in this review) is part of mainstream institutional thinking on CPR. This particular article contains a specific section on the ‘problem of methods’ in research on institutions and common-pool resources management. It illustrates how the question of method is perceived in mainstream institutional thinking. In short, the problem of methods is conceptualized in very specific terms, namely how to do research on 36 ‘factors’ (e.g. variables, conditions) that have been identified as important for institutions to function. Based on a discussion of three influential studies in CPR and sustainable governance of resources, namely Wade (1988), Ostrom (1990), and Baland and Platteau (1996), Agrawal identifies a total of 36 factors that are believed to influence the effective functioning of institutions. In relation to these factors, he identifies the following methodological problems: (1) the neglect of ‘external relations’; and (2) no good theory on the interrelatedness of 36 factors in CPR management and thus no good methods to do research on that.

To remind, this type of scholarship – and mainstream institutional thinking in general – is mainly interested in the sustainable use and governance of CPR – not in “institutions” (or social life) itself. In other words, it focusses on the ‘question of the commons’, going back to the work of Hardin (1968). In this thinking there is made a distinction that would puzzle critical institutional thinkers, between ‘local institutions’ on the one hand, and ‘common property arrangements’ on the other hand, as Agrawal (2001: 1650) calls it. Here, common property arrangements is basically used as synonymous with ‘nature’, ‘resources’ and/or clearly delineated (autonomous) units of common property use – an irrigation system, a forest, a village area or pastoral lands. Local institutions refer then to what is seen as human and cultural aspects, to a set of rule based social arrangements. With these foundational divisions in mind, between nature/culture, given/craft, resources/rules, common property/local institutions, Agrawal (2001) argues that ‘the focus on institutions [in research on the commons] comes at a cost’ (emphasis added) (p.1650). To iterate, ‘local institutions’ are really seen here as universal, autonomous, self-sustaining and bounded units, and Agrawal is mainly concerned in studies on (universal) ‘local institutions’ about the negligence of (1) ‘aspects of resource system’ (or ‘resource specificity’), (2) ‘aspects of user group membership’, and (3) ‘aspects of social, physical, and institutional environment’. Again, for critical institutional thinkers, these things are part and parcel of the fabric of local institutions, but in mainstream institutional thinking, these aspects are perceived to fall outside the sphere of ‘local institutions’.

To remedy the situation and take ‘external factors’ into account in studies on CPR and local institutions, Agrawal pleads for large-N studies and structured comparative research, preferably with statistical analysis and rigorous hypothesis testing. Saliiently, he calls this a ‘careful research design’, based on a well-informed ‘trade off’ between factors. The assumption here is that there is essentially ‘one best way’ (my wording) for institutions to function in any given context. The way forward is thus complex ‘factor analyses’ and ‘modelling’ to study the most effective ‘outcome’ (my wording). In a way, it is difficult to see how this might work; ‘other’ factors can never be fully controlled, and the attempt to explain the working of ‘one or two interrelated factors’ appears almost naive (to me.) More so, because institutions change through time, and can be many things at the same time (see Verzijl and Dominguez, 2015).

Lund and Marcussen (1994) can be considered early work in critical institutional thinking. It concerns a proceeding of a conference (5 papers) on ‘access, control and management of natural resources in Sub-Saharan Africa’ and it focusses on ‘methodological considerations’. In the preface, it is acknowledged that classical or neo-classical schools of thought, as well as more structuralist or Marxist inspired interpretations, fall short in explaining how the ‘African rural scene’ works. It lists a whole set of factors – social identities, ties, relationships, social networks, institutions – which are believed to be connected, but fall outside the scope of theories to explain them. To quote: ‘In other words, the mentioned aspects create a number of *theoretical problems* (emphasis added) to everyone of us, but in particular they pose a long range of methodological problems’ (emphasis original) (p.7). As can be surmised, the research objective is very broad here, much broader than in mainstream institutional thinking, namely *how* to understand social life in rural areas in Africa.

In these proceedings, Christian Lund (first paper) argues to focus on a ‘combination of factors’ (not just finding the factor), and to adopt a ‘process perspective’. He argues to focus on ‘people’s strategies’ (p.14), think about the unit of analysis and include a time perspective, proposing terms as ‘actors’ social power’, ‘knowledge’, ‘authority’ and ‘access’. He argues that ‘institutional sub-systems of different purpose overlap, intersect [and] become one another’ (p.17-18). Interestingly, Lund notes a danger in an actor perspective, namely to be lured into

‘conceptualizing positions in terms of interest’ (p.19). With hindsight, it appears that this is exactly what has happened (or tends to happen) in (some) critical institutional work (see discussion above in relation to the work of de Koning and Benneker, 2013). To circumvent this problem, he calls for a ‘conceptualizing of events’ (p.20) (perhaps as Verzijl and Dominguez, 2015 have done). Lund concludes that ‘complex questions’ are best researched with ‘a broad societal perspective and *through composite methodologies*’ (emphasis added) (p.22).

Also Sara Berry (second paper) calls for a process perspective. She poses the question how to study rural societies where ‘no condition is permanent’ (p.24). In her view, the issue cannot simply be solved by making ‘projections’ and ‘collecting longitudinal evidence’. She argues that a new theoretical perspective is necessary. She argues, quoting others, that ‘institutions, such as law or marriage, are better understood as processes than events (...), and African cultures are fluid and dynamic constellations of social interactions and cultural practice, rather than “closed, corporate, consensual” communities’ (p.26). She criticises ‘methodological individualism’ for treating social processes as multiples or weighed sums of autonomous individuals, although it is important to document what people are doing in their daily lives (p.28-29). She also talks here about ‘agency’, and how people construct meaning and make sense of their life (and that of researchers). She makes a difference between ‘surveying individuals’ and ‘studying people’. She talks a lot about the ‘fluidity and complexity of institutionalized rules and practices’ (p.33) (defined as property rights in this case). She concludes this section as follows: ‘To study these processes one must observe them’ (p.35).

Berry defines three possible methods for research: (1) *Studying people and resources in motion*: (a) document people’s lifetime histories of movement; (b) literally follow informants as they travel from place to place; (c) tracing people’s movements through interviews and observations; and (d) studying labour and labour requirements; (2) *Restudies*: (a) revisiting a research site; (b) re-interview farmers and observe changes, and (c) visit sites documented by others; and (3) *Study processes within processes*: (a) spell out multiple processes, in relation to labour, migration, agricultural development; and (b) focus on ‘divergent trajectories’.

A. Allan Schmid (third paper) is an institutional and behavioural economist, and he tends to equate methods with models (my reading of his work). His interest is in developing ‘coevolutionary’ perspectives (rather than uni-directional determinism), and he remains faithful to rational theory. He proposes a ‘coevolution model’ rather than a ‘deterministic model’ (p.52). He favours Ostrom’s work. Her ‘institutional change analysis’ differs from normal ‘impact analysis’. Impact analysis asks, what the outcomes would be if certain rules were adopted, while Ostrom asks what why the rules that common pool users adopted seem to work. Ostrom’s language is of rational choice and individual decision making, and she considers one case a ‘data point’. In this regard, he poses the question: can people learn to cooperate on land use matters after experiencing trust in a game simulation? He notes that economists have a strong preference for making up their own stories on the connection between variables rather than asking people for their own story (p.59). He argues the assumption that a given factor can be introduced (or changed) in a stable environment is wrong. Environments are not stable. Interestingly, the term ‘coevolution’ allows him to conceptualize fluid boundaries between nature and culture, between biology and social aspects. As an alternative method, he proposes extended questionnaires, with questions about the ecosystem, and about changes in use patterns.

Richard Moorehead (fourth paper) presents a discussion on research on policy in community-based NRM, and how methodologies and concepts have influenced development practice. He argues that ‘there is an iterative process where the policy environment informs concepts that

lead to research initiatives which in turn may affect future policy' (p.74). He makes his argument in relation to the tenure regime debate (e.g. commons, private, public ownership), and he briefly discusses three schools of thought: (1) the idea of 'tragedy of the commons' which has become a dogma in Africa, leading to impose nationalisation of land; (2) the 'assurance problem', the idea that people coordinate actions once 'assurance' among users is assured; and (3) various 'property rights schools' which he criticises for being a-historical (p.82). He calls for 'applied research' to identify and promote 'new institutions' which can effectively manage resources. This requires research on (1) local management systems/ institutions, (b) relationship between customary systems and formal law, and the process of conflict resolution; and (c) the role of the state in supporting local institutions.

Agnes Weis Bentzon (fifth paper) deals with the study of indigenous law. She discussed the concept of 'negotiated law' (a mix of state and indigenous law), and various schools of law: legal centralism and legal positivism on one hand, and legal pluralism and law as process on the other hand (p.92). Interestingly she notes that 'customary law' in Africa is partially a construct of colonial administrators. She elaborates that anthropologists' customary law is based on observations of customs and attitudes, more or less giving a reliable picture of customary law. She is writing 'more or less', because customs and attitudes are not static, hence the view 'law as process'. She pleads to focus on (1) processes of regularization (the kinds of processes which produce rules, symbols, rituals to make the durable); and (2) processes of situational adjustment (using whatever 'areas' are available to achieve a situational end). She argues for an 'extended case study' approach, studying 'the lived realities of people's lives'. By using teaching in legal law as a metaphor, she argues, teaching in law starts with (1) 'case studies' (studying a particular case study), and then with (2) the 'extended case method', adding observations of court hearings. As a next step, one has to (3) conduct interviews with the participants in the process of a law case to find out whether the law has been followed up. These question lead to (4) a focus on the agents of informal conflict handling. She also recommends to focus on 'trouble-less-cases' – not only on 'trouble cases' (p.104).

In summary, Lund and Marcussen (1994) reflect modes of thinking in institutional thinking, containing both mainstream views (Schmid and also Moorehead), and critical views (Lund, Berry and Bentzon), even though the word 'institutions' is not used explicitly in these writings. Noteworthy is the focus in critical thinking in NRM on 'processes', 'people's lives', and concepts as 'legal pluralism' and 'processes of situational adjustment', which reads to me as forerunners or other wording for 'institutional bricolage', as used by Cleaver.

The writings of Bardhan and Ray (2006), Mollinga and Gondhalekar (2012), and Hall *et al.* (2014) are more recent examples of the debate on understanding institutions in the rural scene and common property management, often explicitly mentioning the term 'institutions'. Bardhan and Ray (2006) focus explicitly on the 'methodological approaches to the question of the commons', discussing in-depth anthropologists' and economists' views in social analysis on institutions and common resources. This article is an excellent summary of the various views (and methods) that exist for research on institutions in NRM. It specifically focusses on the methodological, epistemological, and normative divides that exist between the disciplines of anthropology and economy – two leading schools of thought in research on common pool resources, institutions and collective action. The authors identify three key dichotomies in the schools of thought: (1) autonomy (the 'rational individual') versus embeddedness (the complexity of 'human agency'); (2) outcomes (arrive at 'predictions') versus processes (try to create 'understandings'); and (3) parsimony (find most relevant 'indicator' or 'factor') versus

complexity (show the ‘interrelatedness’ and changing nature of things and human interaction). These differences are summarized in Table 5.

Bardhan and Ray (2006) essentially show that both schools of thought use different criteria for a ‘good explanation’; and these criteria result in strong preferences for different research methods (or techniques). In short, economist trust in large-N surveys and building a database, and anthropologists trust in case studies and in-depth research. The authors hope that a discussion on these criteria can re-open the debate on interdisciplinary social analysis. That having been said, their (hidden) agenda appears to be an effort to create more space in science, policy and public debates for the viewpoints of anthropologists. Unfortunately, they do not make concrete proposals for new or more promising research methods.

Table 5: Key dichotomies between anthropologists’ and economists’ views

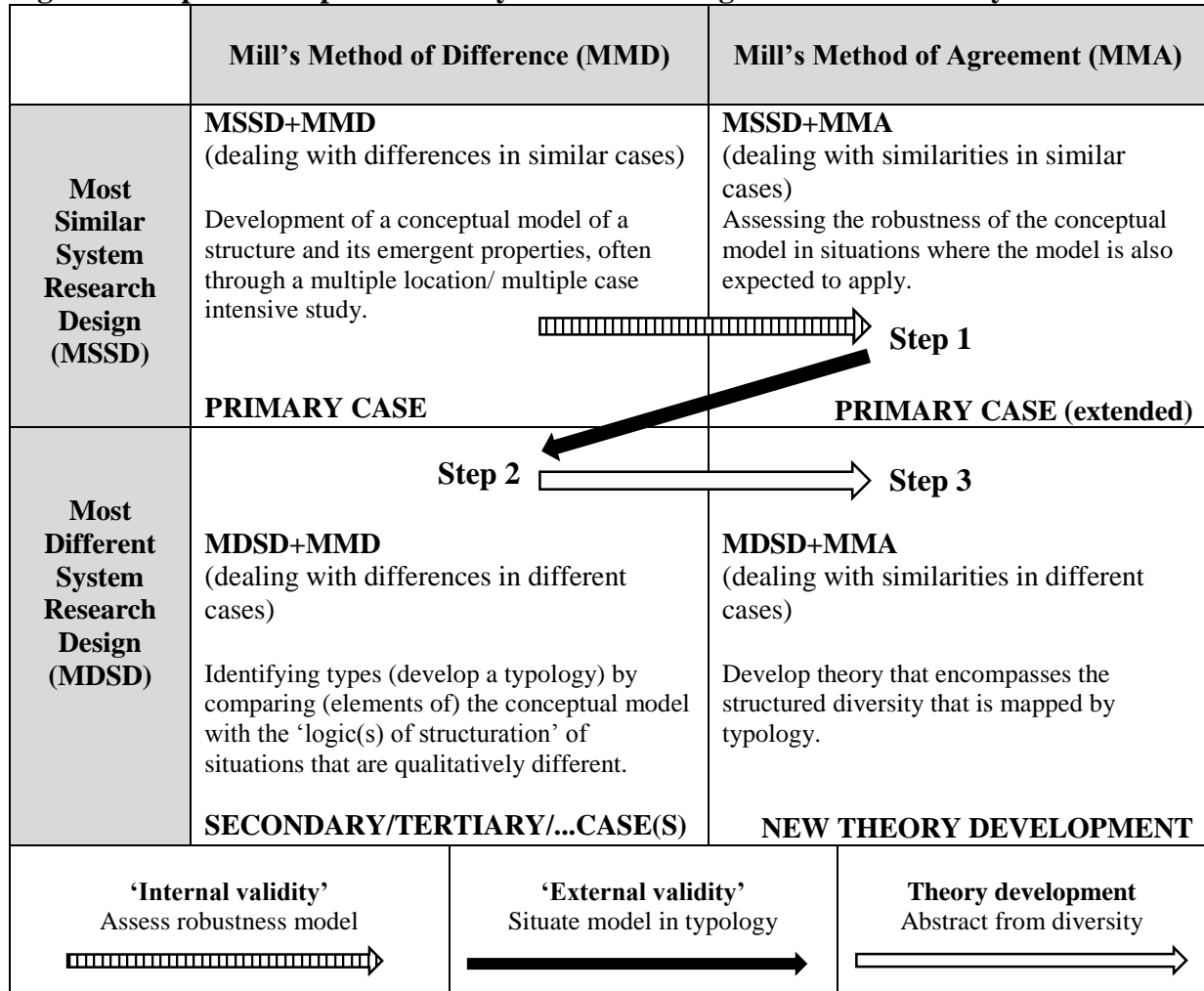
Economists’ view	Anthropologists’ view
Autonomy	Embeddedness
The rational individual	The complexity of human agency
Outcomes	Processes
Predictions	Understandings
Hypothesis	Open questions
Parsimony	Complexity
Indicators or factors	Interrelatedness or changing nature
Preferred method ∨ ∨ <i>Large-N surveys, rigorous testing</i>	Preferred method ∨ ∨ <i>Case study research, in-depth inquiry</i>

Source: Adopted from Bardhan and Ray (2006).

Mollinga and Gondhalekar (2012) do not specifically write on the commons or on institutions in NRM, but their work is about ‘water resources management’ and they have concrete proposals for a new research method. Their paper is a literature review for ‘theorising structured diversity’, addressing anthropologists and critical scholars in NRM, and calling for more comparative research through what they define as a ‘stepwise small-N approach’. The authors are committed to critical perspectives in NRM and seek to look beyond the conventional case study approach. They argue that comparative research is essential for building new theory, and they search for a ‘rigorous comparative method’ to facilitate research in critical perspectives. Their paper gives a full overview of current research methods in NRM, broadly: (1) qualitative; (2) quantitative; (3) small-N approaches; (4) large-N approaches, and (5) combined methods. They iterate that qualitative research is not always small-N research and quantitative research not always large-N research. They acknowledge that ‘comparison’ has a long tradition in water studies, but also, that comparison is done without much rigorous and explicit articulation of comparative method (p.12). It is helpful that they discuss the concept of ‘rigorous’ itself, stating that rigorous is conceptualized differently in science and social sciences. They observe that the ‘lack of rigour’ is regularly used as a pejorative disqualifier of the ‘other’ (p.13). To resolve this discussion, they come up with their own definition of ‘rigorous research’: (1) there should be a stated objective of comparison; (2) there should be an explicit comparative research question, and (3) the method of comparison should be clearly described and applied.

With this definition, they argue that much water research using comparison falls short on the third condition, being nothing more than ‘loose comparison’ or ‘implicit comparison’ (quoting Wescoat, 2009). They also argue that water research in general, whether it is qualitative, quantitative, small-N, large-N or combined, falls short in rigour on one of these conditions. They conclude that the idea of comparative research in water, and in NRM, seems *not* to be a ‘self-standing discussion’ (p.30). For instance, a common means of ‘comparison’ is to collect a number of case studies, put it together in an edited volume, and write a short preface or introduction on commonalities in the case studies. The reader is then expected to draw lessons for him or herself. In short, there is little systematic deliberation on this.

Figure 1: Stepwise comparative analysis for theorising structured diversity



Source: Adopted from Mollinga and Gondhalekar (2012, see p.48)

The authors argue that there is an urgent need to deal with the ‘disregard for methodological issues’ in (comparative) water research (p.34-35), and they articulate one particular approach to introduce more comparative research, called the ‘stepwise small-N approach’, as developed by Levi-Faur (2005). They consider this method particularly suitable because it enables researchers to remain faithful to realist and critical perspectives in research (p.28). The idea is the following: develop ‘primary case studies’, based on in-depth investigations and anthropological research methods, and then, using a stepwise approach, increase the number of cases. In this way, there is a balance between ‘depth and breadth’. Two important elements are (1) the emphasis on the process of case definition and re-definition (when more cases are added); and (2) the stepwise and systematic development of cases in multiple ways. Here, they

define four ‘inferential strategies’ (quoting Levi-Faur, 2005): (1) dealing with differences in similar cases; (2) dealing with similarities in similar cases; (3) dealing with differences in different cases; and (4) dealing with similarities in different cases (see Figure 1). The arrows in Figure 1 present a summary of the stepwise small-N approach. This method resembles the extended case method (ECM) approach as it is known in ethnography (see below for a discussion of Tavory and Timmermans, 2009) and also, the ‘analytical movements’ thinking in qualitative social science research (see Lund, 2014 below). The authors define the stepwise small-N approach as a ‘third position’ in research – not just as a combination of both qualitative and quantitative research. They believe that this approach is capable to fit a particular epistemological and ontological project in science.

Hall *et al.* (2014), in a similar fashion as Bardhan and Ray (2006), present an overview of current themes and debates in studies on institutions in community-based NRM. The article is written by authors (including Cleaver) who have become ‘frustrated’ with the rigidities of mainstream institutionalism, and want to identify new ways ahead for research in NRM from a critical perspective (and here the term ‘critical institutionalism’ is mentioned). Very broadly, it outlines the divisions in views between economists (and political scientist) on the one hand, and anthropologists on the other hand – as they are often identified in scholarly work (see Table 6 for a summary). For clarification, they state that anthropologists (or critical institutional scholars) are not necessarily wholly antagonistic to mainstream thinking on institutions and very often the views and objectives overlap (p.73). For instance, mainstream and critical institutional scholars can agree that ‘institutions’ consist of ‘rules’ (or norms), and this can be considered a shared starting point for research. Generally, however, economists see institutions as something ‘bounded’ in which subjects act as rational individuals, aiming to maximize benefits. In contrast, anthropologists see institutions as fluid, in which ‘rules, boundaries and processes are “fuzzy”’; and in which people’s complex social identities and unequal power relationships shape resource management arrangements and outcomes’ (p.73).

Table 6: Categorisations used in the commons literature

Authors	Categorisations
Mosse (1997)	Economic-institutional explanations/ sociological-historical explanations
Mehta <i>et al.</i> (2001)	Mainstream approach/ Emerging or post-institutionalist approach
Johnson (2004)	Collective action scholars/ Entitlement scholars
Agrawal (2005)	Common property scholars/ Political ecology scholars
Sandström (2008)	Common pool approach/ Adaptive resilience approach/ socio-historical approach
Roth (2009)	Mainstream institutional economics approach/ Alternative social anthropological approach
Bruns (2009)	Building/Crafting/Bricolage/Discourse/Adaptation approaches
Cleaver (2012)	Mainstream institutional approach/Critical institutional approach

Source: Hall *et al.* (2014: 72), who quote Cleaver (2012).

To identify ways ahead for further research, the article formulates three main points of critique in relation to mainstream institutional work: (1) the idea of the ‘homogeneous community’; (2) the persistent ‘avoidance of politics’, referring to ‘ideational politics’ in research and policy concepts and the ‘politics of local empowerment’ at local levels of resources management; and (3) prevailing ‘socially inadequate analyses’, referring to a neglect of the embeddedness of institutions in NRM. The authors conclude that the challenge is really to make ‘complexity legible’ for policy makers, NGOs, donors and others involved in the design and implementation

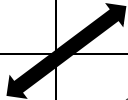
of programmes in NRM (p.82). This is considered challenging because there is every reason to ‘be pessimistic about the possibility of a universal theory of the commons’ (p.83). They conclude that it remains imperative for critics to develop and use ‘flexible concepts’, which can explore and explain the dynamic processes surrounding collective action. Other than this recommendation, no specific research methods or techniques are proposed.

The work of Tavory and Timmermans (2009) and Lund (2014) is not directly related to studies on institutions and NRM, but these articles are interesting because they deal with (new) directions in ethnographic methods and case study research. Hence, this work may contain clues for the development of critical institutional methods.

Tavory and Timmermans (2009) discuss two cases of ethnography, the differences between ‘grounded theory’ (GT) and the ‘extended case method’ (ECM). They explain that both GT and ECM offer an alternative to positivist functionalism, and that both claim to offer a better theoretical picture of social life, seeing ethnography as a preferred method. The central question in this debate is ‘what is the study a case of’ (p.244). To elaborate on this, it is important to understand how ‘casing’ occurs – the process of determining what kind of case one has. Broadly, GT practitioners construct a case from within the ‘ethno-narrative’ of actors in the field, while the selection of a case in ECM reflects an a-priori theoretical framing. GT and ECM thus form two distinct positions on a continuum of the relationship between data and theory. They can also be seen as ethnographic traditions. GT is derived from the University of Chicago’s sociology department, aiming at capturing social process as they unfold and building theory ‘from the ground up’ through systematic conceptualization and constant comparison with similar and distinct areas. GT uses methodological principles as ‘theoretical sampling’, ‘conceptual saturation’, ‘open coding’ and ‘memo writing’, and modern versions of GT are infused with post-modern and interpretative traditions of science. ECM has been developed in the British school of anthropology, mainly the Manchester school of anthropology. It focusses on particular incidents and then links the incidents as constitutive of processes studied. The focus is on ruptures, disputes, conflicts and rituals – and to understand what this says about the context. As a method it focusses on ‘situational analysis’, aiming to gain insights for theory. In short, ECM demands macro-theories of the social, while GT requires a more general set of sensitizing guidelines of people acting together (p.245).

Table 7: Directions of what is seen as ‘a case’

	Specific	General
Empirical units	‘specific-empirical’	‘general-empirical’
Conceptual constructs	‘specific-theoretical’	‘general-theoretical’



Source: Inspired by Ragin (1992), quoted in Tavory and Timmermans (2009).

In this debate, it all depends on what is seen as ‘a case’. They quote work of Ragin (1992) on which basis a fourfold table can be conceived, see Table 7 (resembling the argument of Lund, 2014; see below). In case studies, it is the ‘narrative’ that artificially binds time and space, while social life is a continuum. ECM proponents as Michael Buroway argue therefore, that GT is an epistemological fairy-tale, because what is presented as a case is never fully ‘grounded’ in

reality: the narrative is always already theoretical. In contrast, GT proponents argue that ECM approaches rework observations to ‘fit’ theory, adding another ‘protective belt’ to empirical inquiry. In Ragin’s (1992) classification (see Table 7), GT moves from ‘general empirical’ to ‘specific theory’, while ECM moves from ‘specific theory’ to ‘general empirical’ – exactly the other way around (p.252). ECM starts with theory, while GT sees the world as narratively self-ordering. These narratives are not naturally deterministic, but the world is constantly ‘bounded’ in narratives. In short, GT proponents argue that it is possible to find patterns in the field that do not derive from theory. Therefore, GT practitioners, *more than ECM proponents*, are keen to discuss “methods” (e.g. constant comparison, coding, field-note writing) because this is what ‘makes’ theory grounded.

To be clear, both GT and ECM practitioners work within the confines of sociological theory. Although ECM begins with theoretical concerns, it does not mean that practitioners are not sensitive to empirical surprises they encounter in the field (p.254). ECM ethnographers explore the fit between theoretical casing and empirical findings, while the GT ethnographer begins with the ethno-narratives of casing, and only then moves into the realm of theory. The meaning of ‘theory’ differs thus in both approaches. It can mean two things: (1) theory produces a general picture of the social world, defining the boundaries of the case and the narrative; and (2) theory provides ways in which social reality is constructed in action, providing *the grammar* – not the boundaries – of narratives (my emphasis). ECM proponents use theory in the first way, and GT practitioners in the second way. The authors argue that both GT and ECM have advantages and disadvantages, although they appear to be proponents of GT (my reading of the article). ECM risks that some of the issues observed are considered irrelevant, because it falls outside the domain of what needs to be explained. In contrast, GT risks that some of the more intrinsic ways in which ethno-narratives are shaped (e.g. class relations, globalization) escape attention, because it uses theory (only) as a toolkit to organize the grammar of narrativity. The use of actor-network theory is a good example here.

Lessons that can be taken from this paper are that other movements – between ‘specific empirical’ and ‘general theoretical’ – are apparently rare in ethnography (see Table 7), and that the risks for ECM are perhaps also the risks for the stepwise small-N approach as propagated by Mollinga and Gondhalekar (2012) (Although one can also argue that this approach falls in the GT tradition).

Similarly as Tavory and Timmermans (2009), but from a more broad qualitative social science perspective, Lund (2014) scrutinizes the idea that the description of ‘a case’ is always self-evident. Using a concrete example of a land conflict in Northern Ghana, between the government and tribal leaders, and between tribal leaders and community members, Lund asks ‘of what is this a case?’. He shows that ‘this case’ can be interpreted and used in different ways. His argument is basically as Tavory and Timmermans (2009) that cases are ‘intellectually construed’, both small and big cases; and he attempts to think through a ‘conceptual strategy’ to explain of ‘what’ one’s work is actually a case. For this purpose, he identifies four ‘analytical movements’ within the framework of an analytical matrix (p.225) (see Table 8). The four analytical movements are: (1) generalization; (2) specification; (3) abstraction; and (4) concretization. Based on these movements, he argues that cases can make sense at three levels: (a) general sense; (b) conceptual sense; and (c) theoretical sense. In short, based on descriptions of cases, various ‘cases’ or arguments can be made. Examples of arguments, based on the ‘same’ case description, are presented in Table 8.

Lund (2014) is not discussing methods in particular, but the idea of analytical movements is useful in thinking through the ‘question of method’ in NRM. It illustrates that methods are invariably linked to research model (theory), research method (qualitative and/or quantitative approach), and research techniques for empirical observation (cf. Tavory and Timmermans, 2009; Mollinga and Gondhalekar, 2012). For instance, if one aims to make a ‘concrete’ and ‘specific’ case of land reform, extensive field work is necessary, an ethnography perhaps, relying on participatory observation, casual talk and interviews. In contrast, if one aims to make an ‘abstract’ and ‘general’ case of state formation through the mutual constitution of rights and authority (see Table 8), an extensive literature review is necessary, and perhaps a macro comparison with many concrete, specific cases of land reform.

Table 8: Analytical matrix – four analytical movements or arguments to be made

	Concrete	Abstract
Specific	Land reform Land conflicts Reversal of colonial policies Legal infrastructure	Property-authority Recognition Institutional completion over jurisdiction
General	Post-colonial societies Normative/institutional pluralism Re-invention of custom	State formation through the mutual constitution of rights and authority.

Source: Lund (2014, p.230).

Saliently, the analytical matrixes presented so far in this review (of Ragin, 1992; Mollinga and Gondhalekar, 2012; and Lund, 2014) (see Figure 1, and Table 7 and 8) do not seem to overlap. They present different ways to think about (comparative) case study research. Nor are the various analytical matrixes – and the methodological strategies that they represent – linked in any straightforward way to different views in research on institutions in NRM, as presented in Table 5 and 6. The only differentiation that clearly stands out is presented in Table 5 – one we all know too well – a preference among economists and political scientists for large-N surveys and ‘rigorous’ testing, and a preference among anthropologists and critical scholars for case study research and ‘in-depth’ inquiry.

4. Examples of critical research on “institutions” in NRM – three PhD thesis

In an attempt to fully assess the process-of-thinking and the testing-of-methods in research on institutions on NRM, this review discusses three PhD thesis in more detail: de Koning (2011); Komakech (2013) and Hoogesteger (2013). For clarification, Frances Cleaver has acted as an opponent of the first two thesis (de Koning, 2011 and Komakech, 2013).

4.1 Institutional bricolage in smallholder forestry in the Amazon (de Koning, 2011)

The thesis of Jessica de Koning (2011) documents ‘bricolage processes in smallholder forestry in the Amazon’ as an approach to understand ‘reshaping institutions’ in relation to various interventions in the forestry sector. It is interesting to read the thesis because it reveals in a nutshell, the characteristics of social-anthropological research on institutions in NRM. The thesis is exemplary for how ‘we’ as critical institutional scholars think and do institutions in our research (to paraphrase Behagel and van der Arend, 2013). The thesis is insightful because it gives an overview of categorisations of institutions as found in literature. For instance, Cleaver (2002) is quoted in the context of ‘formal’ and ‘informal’ institutions, and ‘bureaucratic’ and ‘socially embedded’ institutions. Scott (2001) is mentioned for ‘regulative’,

‘normative’ and ‘cultural-cognitive’ institutions, or, in less words, ‘rules’, ‘norms’ and ‘beliefs’. These categorisations appear to be construed (or seen) as foundational or grounded divisions in research on institutions. Saliently, however, it is not very clear from this literature (or the thesis of de Koning) how these differences are methodologically identified in practical analysis. For instance, to what extent do ‘local people’ actually perceive these divisions, if at all? And, how precisely to define between formal and informal institutions in analysis? For instance, ‘bureaucratic’ institutions can also be ‘socially embedded’ and integrated in ‘local norms’. This suggests, perhaps, that (some) critical institutional work is (also) based on a-priori perceived (grounded) divisions – something which often tends to be a critique on mainstream institutional analyses with its preference for pre-defined factors and indicators.

Another observation is related to the concept of agency. De Koning (2011) aimed to study ‘bricoleurs’ as ‘actors’, as ‘having the capacity to process their and others’ experiences and act upon them’ (p.30). As noted earlier, de Koning considers ‘institutional bricolage’ as an appropriate concept, because ‘it embraces both the conscious crafting and the less intentional construction of institutional settings’ (p.240). In other words, institutional bricolage acknowledges that institutions may also be the product of unintended and unconscious action – not just of intended, rational or conscious action. If this is true (and I am inclined to agree), it brings to the fore urgent questions on methods – questions that are not addressed in the thesis itself, nor in the work on institutions that has been reviewed for this study.

The problem is simple: How do we fully identify the agency of others? More specifically, how do we identify ‘unintended’, ‘unconscious’ and ‘irrational’ practices, or gradual, habitual and routine behaviour? What special capacities (and methods) do ‘we’ have to see these things? The absence of a discussion on this matter suggests that a transcendental position is assumed in research. In other words, an objective outsider position is believed to exist. Saliently, de Koning starts (and ends) her thesis with an anecdote of flying in an airplane, gazing down and seeing the forests as a green and quiet place. In the gaze of the ‘objective outsider’, traditions and informal practices are conceptualized as ‘deeply embedded’ and as ‘hidden from view’ (cf. Cleaver, 2002), up to a point that even ‘local communities are hardly aware of them’ (de Koning, 2011: 241). The latter quote reveals the complexity of the ‘methodological problem’. First, respondents may not see their own behaviour and practices as ‘actions’ and ‘capacities’ – they may not see themselves as ‘actors’; and second, researchers may not have the techniques to identify ‘unconscious’ actions and capacities – ‘we’ do not have a method to distinguish between conscious and less intentional actions. As said, this twofold problem is not explicitly recognized in critical institutional studies as exemplified by the thesis of de Koning (2011).

In practical analysis, it can be seen that unconscious and less intentional actions are ignored, or rather, all behaviour of actors ends up being conceptualised as conscious action and rational capacity. For instance, de Koning concludes in Chapter 8 that some processes of institutional bricolage are considered as ‘more intentional’ and ‘strategic’ than others. In other words, *all* actions and capacities have been considered as logical and rational; it has only been examined as a question of ‘less’ or ‘more’ intentional. It is also visible in the consequent use of the wording ‘intentional’ and ‘gradual’ processes of institutional bricolage – two processes of bricolage that de Koning identifies as qualitatively different. At first sight, gradual appears to be used as a synonym for ‘unconsciousness’, but intentional can also be gradual, and the matter has thus essentially been perceived as part of the same ‘strategic’ processes of institutional bricolage. Furthermore, it is visible in the use of the concept of ‘authoritative resources’, the word ‘resources’ (similarly as the word ‘capitals’) hinting at economic and utilitarian views on social life that seep through in the analysis. Linked to a study on ‘authoritative resources’, an

analysis emerges in the thesis in which actors hold ‘positions’, having certain ‘interests’ to defend in forestry. This is exactly the danger in actor perspectives that Lund identified earlier, in the 1990s – to be lured into ‘conceptualizing positions in terms of interests’ (Marcussen and Lund, 1994: 19). In this regard, the analysis of de Koning (2011) has the flavour of a political-economy analysis, a school of thought that may not fit critical institutional thinking, because it assumes a fixed (or grounded) view of culture against an associated understanding of a schematic view of nature (see Gururani, 2002, discussed earlier in this review).

Interestingly, de Koning elaborates extensively on research methodology. She qualifies it as a ‘qualitative case study research with ethnographic methods’ (p.41). She aimed to integrate a ‘holistic approach’ in her study, and adopted flexible techniques for research. She focussed on the ‘why’ and ‘how’ question, seeing research as a process. She selected 6 case studies (6 locations) in two countries (Bolivia and Ecuador), introducing a comparative element in the analysis. She stayed for extended periods of time in the field, in the communities, during a period of 2 years. She used the following techniques for empirical inquiry: 72 interviews, close observation of 24 key respondents, snowball method, questionnaires, group discussions, research on documents and participatory observation. She basically qualifies her research as the ‘study of practice’, aiming to unravel what others call a ‘logic of practice’ (see Behagel and van der Arend, 2013 for an elaborate discussion). However, in spite of a detailed description of research methods, it remains unclear how she identified (or dealt with) so-called habitual, unconscious and irrational elements of institutions. This strange silence is not exceptional, it reveals a trend in research on institutions from a social and anthropological view.

Two things can be considered to require reflection. First, critical institutional scholars need to reflect on subject positions, especially on an assumed position of transcendence of the researcher. This point and the implications for research on institutions in NRM is (partially) exemplified in Verzijl and Dominguez (2015): ‘we’ produce research in the context of specific academic and policy networks. Second, critical institutional scholars need to reflect on how normative ideas on agency, actors and capacities seep through in analysis. It appears (to me) that Western, secular-liberal understandings of (rational) behaviour frame ‘our’ understanding of agency. In short, the problem is created by the assumption of the universality of desire, the rational-liberal and progressive idea that all people want to be free from relations of subordination (see Liebrand, 2014, p.10-14 for a background discussion). It can be said that this produces a secular-liberal ‘doctrine of agency’, a doctrine that has become essential to our recognition of ‘other’ people’s humanity. For critical studies on institutions, however, such a view is not very helpful, because it tends to reinforce prevailing theories of domination and resistance, and the associated ‘methodological blinds spots’ in our research gaze.

The thesis of de Koning (2011) deserves one last observation. Her work nicely shows (p.236; 240-241) that institutional bricolage does not only takes place at grassroots and community levels, but also at the level of NGOs, hence at higher levels of governance. It is worth to re-iterate this point. Policies and interventions are reworked ‘from within’ by bureaucrats, project managers and consultants to ‘fit’ their institutional life worlds (cf. Veldwisch *et al.*, 2009). This insight puts very concrete question marks with perceived divisions such as nature/culture, formal/informal and bureaucratic/socially embedded: who is seeing and using them?

4.2 Water institutions in the Pangani river basin in Tanzania (Komakech, 2013)

The thesis of Charles Komakech (2013) documents water institutions in the Pangani river basin in Tanzania. As described, he aimed to study ‘new’ institutions imposed from ‘above’ such as new policies and legislation, and ‘local self-governing’ institutions ‘from below’. The objective

of the thesis was to explore ‘conditions’ for reconciling state-led institutional arrangements and local water management practices (p.9). In this sense, the thesis leans on two thoughts: (1) an interest in ‘design’ and ‘modelling’ of institutions to see if the ‘disconnect’ between local and state-led institutional development can be overcome; and (2) an interest how local institutional development actually works. In other words, it leans on mainstream institutional thinking and critical institutional thinking. It remains unclear how these schools of thought were envisioned to be integrated. For instance, it is not clear (to me) how the author conceptualized actors and institutions. In Chapter 1, the author discusses theory (and design principles) of Ostrom as well as other perspectives of NIE (Balland and Platteau) and the ‘assurance problem’, particularly in relation to the prospect of ‘up scaling’ local institutional practices. At the same time, the author discusses Cleaver’s concept of institutional bricolage. In the process of reconciling these theories, the author seems to have opted in the end for a (critical) reflexive research position (but it also includes a chapter on game simulation to understand collective action, tested among students at UNESCO-IHE, see Chapter 9, p.191-202).

The leaning on two thoughts is visible in the way how the methodology of research was (first) envisioned (see p.10-13). Initially, he wanted to use actor network theory (ANT) in combination with agent based modelling (ABM). These theories are difficult to reconcile. ANT highlights the complexity of human action and perception (Bruno Latour is quoted as a reference), while ABM is based on game theory, seeking to simulate actions and interactions of ‘autonomous’ agents. Initially, he wanted to present ‘dynamics’ in an agent based model in one furrow irrigation system, based on an ‘understanding of field reality’. Then, after some discussion with agents in the field, he wanted to extend the model to simulate interactions between furrows in one village. And then extend the model to simulate water use arrangements among neighbouring villages, and finally, he aimed to put the whole ‘catchment’ in a model, based on consultations with various ‘stakeholders’ and ‘sectors’ (p.11). Based on an ‘institutional mapping’, he also envisioned to incorporate ‘policy’ into the model, as well as ‘civil societies’ and ‘transnational organisations’ involved in water management. The ‘outcome’ of the model was envisioned to be ‘confronted’ with the objectives of the policy, allowing for reflections and discussion. All this seems (to me) near impossible for one model, and it can only be done by making huge simplifications. Apparently, this was realized in the process of doing the PhD research. In the end, he did not execute this methodology, writing that ‘[this] approach (...) seems valid to me, but reality was so complex that it eluded my research design’ (p.12).

As an alternative, the author focussed on ‘getting a thorough understanding of the water management institutions and practices through in-depth descriptions and analyses of selected cases within the Pangani river basin’, using a ‘follow the water’ approach (p.12). He did case study work to get an understanding of institutional dynamics in water management. He used participatory observation, follow day-to-day practices, focus group discussions and in-depth interviews as research techniques. He interviewed farmers, members of irrigation committees, representatives of NGOs, and government officials. Interestingly, he also used cartography to link physical infrastructure to social relations that surround water (cf. Verzijl and Quispe, 2013). The latter research method leads to comments on the specific nature of water, something that Agrawal (2001) calls ‘resource specificity’. Water is fluid and easily crosses ‘boundaries’, unlike trees in a forest or grazing land. Komakech notes that the hydraulic position of the actor is an important explanation for institutional innovation, the initiative almost always coming from downstream users. He also notes that ‘collective action’ is primarily confined to small communities – a maximum of 3 administrative wards in his study. He poses the question over what spatial distance does solidarity still function?

The lesson that can be taken from this thesis is that mainstream – and critical institutional perspectives cannot easily be integrated in one study. To illustrate, in the conclusions, the author highlights the fluidity of boundaries of systems and communities, a statement that is difficult to reconcile with a question over what spatial distance solidarity still functions. Albeit for a different resource, Schnegg and Linke (2015) illustrate for pastoral areas that solidarity can stretch over huge geographical areas, through linkages between family members who live in urban and rural areas for instance. In other words, answers to a question over what spatial distance solidarity still functions, all depends on context and location – there is not be expected one ‘golden rule’ (or one specific spatial distance) that is valid in all situations. More generally, the study can also be seen to illustrate that it is difficult to study the interrelatedness of institutions at the level of one whole basin.

4.3 Scale and social capital in water struggles in Ecuador (Hoogesteger, 2013)

The thesis of Jaime Hoogesteger (2013) focusses on scale and social capital in peasants’ struggles for water in the Ecuadorian Highlands; it does not specifically mention institutions as a concept. As an object of study, it takes users’ organisations at system level (two cases), and it studies how these systems are linked to organisations at higher levels of governance, at the provincial level (one case, a provincial federation of WUAs) and the national level (one case, a ‘Water Resources Forum’). The study is conceived as a project to understand how peasant or users’ organisations can ‘up-scale’ or ‘jump scale’ to gain influence, power and a say in NRM (e.g. legislation, new projects). Ecuador is well-known for its indigenous movements, as well as for bitter struggles of peasants and indigenous groups to have their rights recognized. The thesis focusses on how these groups develop ‘political agency’ by getting organised into federations and alliances. The focus is on ‘collective action’ in ‘communities’, and the author mainly uses concepts such as ‘scale’, ‘agency’ and ‘social capital’.

The thesis contains a nice elaboration on ‘scale’, which is understood as relational and process-based (resonating with the work of Gururani, 2002 and Verzijl and Quispe, 2013 for instance). It also contains a discussion on social capital, quoting Bourdieu and Putnam. The work of Cleaver (1999; Franks and Cleaver, 2002) is also quoted here, in relation to ‘networks’, ‘participation’ and ‘power dynamics’. Using these concepts, the thesis calls attention for the key role of ‘grassroots leaders’ in community organisation and networks. This resonates with contemporary critique on mainstream models of participation, which hold that every single user should be represented in formal WUAs to secure a say and protect (individual) interests (cf. Liebrand and Yakami, 2011). The work of Hoogesteger reveals that leaders are indispensable for up-scaling and scale-jumping. Remarkably though, there is no reference to gender (or the required masculine performance) of the leaders, while it shows as a component in the ethnographic accounts, as they are presented in text boxes in the thesis. This suggests that ‘scale’ and ‘social capital’ have been used as (gender) neutral concepts in the analysis – a trend that also is visible in other critical institutional work on institutions. A reason for concern.

The thesis contains a specific section on ‘research methodology’ (p.17-21). The author did extensive field research. Two irrigation systems were studied in about eight weeks. He did 44 interviews; 4 focus group discussions; observations in the field; and reviewing (grey) literature on the systems. He also used thesis research of MSc students who were supervised by him. Most time (in total 10 months) was spent on understanding the federation, and also the national multi-stakeholder platform (the Water Resources Forum). He did semi-structured interviews, using a snowball sampling method (as part of network analysis). He spent considerable time on ‘following the actor’, observing day-to-day activities through observations and informal talk. He also acted as an ‘action-researcher and participant observer’ in the federation, helping to

organize events, making radio reports and trying to find funds for the legal office of the federation (he was given a key of the legal office of the provincial federation). He reconstructed life histories of individuals (grassroots leaders) and of organisations. In short, the study relied heavily on anthropological research methods, although it is not a classical ethnography.

Some observations can be made when looking to the analysis and how empirical material is presented and related to the concepts of scale and social capital. The first observation is related to scale. As can be imagined, it can be difficult to actually identify ‘relational’ and ‘process-based’ elements of scale, and the tendency in practical analysis, appears to be to treat scale as grounded (as relatively ‘fixed’). This can be seen in the language of the thesis; ‘scale’ appears to be used as synonymous with ‘levels’ – as the local level, provincial level and national level. In this view, higher or ‘broader scales’ (wording used in the thesis) are presented as levels that are more powerful and influential. For clarification, the author explicitly states that ‘scale’ is not the same as a hierarchy of levels, but this appears difficult to apply in practical analysis. The tendency is to understand the higher and bigger scale/level as more powerful, and the lower and smaller scale/level as less powerful – in spite of thorough theoretical deliberations.

Something similar appears to happen in the use of social capital in practical analysis. For a start, the author quotes two important names: Bourdieu and Putnam – two particular conceptual views on social capital. As van der Ploeg noted (professor rural sociology, Wageningen University, an opponent at the public defence of the thesis), Bourdieu was interested in putting a ‘value’ on social interactions and in the possibility of generating ‘additional value’. Later, Putnam reworked it as a concept to capture trust, frequency of meetings, reciprocity and norms, aiming to understand how ‘democracy might work’. In this view, as van der Ploeg argued, social capital becomes something like a ‘good’ which can be added to a project and then good things will happen – a view that is influential in academic and policy circles (including in agencies such as the World Bank). This view is also visible in the thesis. Social capital has mainly been used as synonymous with trust, reciprocity and collaboration, as something (normatively) positive, seen as a ‘functional’ resource that peasants can use to produce ‘advantages’ and ‘benefits’. Such an understanding of social capital reveals that democratic and emancipatory ideals seep through in an analysis – the focus is on the good things that can happen. Interestingly, a well-known critique is that social capital can also be exclusionary (see Cleaver, 2005). As van der Ploeg noted, bonds of trust between large land owners can lead to the exclusion of small land owners. Yet, this critique appears not to land in an analysis of social capital (or is easily overlooked). It seems that the concept of ‘capital’ – the word itself – is so value-laden that seeing ‘capital’ as exclusionary or as a loss (for someone) is a *contradictio in terminis*. If this is true, it would perhaps make more sense, in a critical institutional view, to talk about ‘agency’ for instance.

In the thesis itself, there is no elaboration presented on how ‘agency’ is understood, nor on how ‘political agency’ is defined. It appears that political agency in the analyses has been used interchangeably with political capital (and also, that agency has been used interchangeably with social capital). This is visible in the thesis in the sense that it presents a somewhat optimistic analysis of the case studies (comment of Zoomers, professor social geography, Utrecht University, another opponent at the public defence). The thesis mainly shows how federations and networks allow peasants to gain influence at higher policy levels. There is less discussion on conflicts within communities and on motivations of grassroots leaders who seem to aspire political careers (possibly for individual gains). In my view, the ‘brightness’ or optimistic view of the analysis is invariably rooted in the use of the concept of social capital – something that critical institutional scholars should be concerned about.

Perhaps this can also explain a lack of ‘social differentiation’ and ‘gender’ in the analysis (mentioned by two opponents at the public defence). Issues of intra-household organisation, and differences along the axes of gender, class and ethnicity seem to have escaped observation. In posing the question ‘who has access to social capital’, it is a reason for some concern that realities such as gender, ethnicity and class in Ecuador’s indigenous movements could escape a researcher’s eye. In theory, social capital may thus be conceptualized as contested, negotiated and strictly regulated (Cleaver, 2005), but in practical analysis, having such intrinsically positive connotations, it invariably ‘becomes’ something (gender) neutral, useful and functional – a ‘capital’ or ‘stock’ that everybody can access and make use of.

Overall, the thesis shows that social capital cannot be understood without scale, and also that a (new) definition of social capital should include the dimension of space. The thesis also reveals that the role of bureaucrats and policy makers is essential in processes of scale. Leaders of grassroots movements appear to end up in the government, or seek to gain access to political parties. This suggests that social movements are (also) used by individuals for their careers and this opens up a new perspective of understanding processes of institutional bricolage at higher levels of governance. In such an analysis, broader events such as the introduction of neo-liberal policies and the ‘rolling back’ of the state need to be taken into account. Though often publicly opposed by indigenous movements, neo-liberal decentralisation policies in Ecuador appear to have created a partially favourable environment for the growth of peasant movements, creating new spaces for participation.

5. An overview of “methods” for researching “institutions” in NRM

In this section, an attempt is made to present an overview of “methods” for researching “institutions” in NRM – in the form of a table (see Table 9). This is not easy. First, as noted, methods are a combination of theory, research approach and techniques. Second, as shown, there are various ways to think about (and illustrate) case study research and movements in analysis (see Figure 1, and Table 7 and 8). As can be imagined, all this information and insights are simply impossible to integrate in one table. Therefore, Table 9 is just one representation of thinking about research in NRM on institutions. All the papers, books and articles that have been reviewed for this study, have been used as a source of information.

The table is structured in a fairly straightforward way. First a distinction is made between two **schools of thought**: Mainstream Institutionalism and Critical Institutionalism. To remind, other distinctions can be made as well (see Hall *et al.*, 2014). The category of Critical Institutionalism has been sub-divided in ‘realist’ and ‘interpretative’ approaches, based on differences in approach as found in this review (see also Table 4). Second, five more columns have been added to the table, for the following categories of information:

- **Theoretical assumptions, objectives and positions (TAOP):** Containing information on the foundations that underpin research in NRM on institutions.
- **Specific concepts, models or theories (SCMT):** Containing information on specific disciplines, and key models and theories used for research in NRM on institutions.
- **Concept or definition of “institutions” (CDI):** Describing how “institutions” are seen and conceptualized in research in NRM on institutions.
- **Research model, surveys or case study (RMSC):** Summarizing the main research models (survey or case study research), with some specifications within these categories in research in NRM on institutions.
- **Techniques for empirical investigation (TEI):** Listing all the research techniques that have been found in literature for research in NRM on institutions.

The following abbreviations are used in Table 9:

ABM	= Agency Based Modelling
ANT	= Actor Network Theory
CIA	= Comparative Institutional Analysis;
CPRMT	= Common Property Resources Management Theory
ECM	= Extended Case Method
GT	= Grounded Theory
HCIA	= Historical and Comparative Institutional Analysis
IAD	= Institutional Analysis and Development framework
NIE	= New Institutional Economics
PDR	= Process Documentation Research
PRA	= Participatory Rural Appraisal

Table 9: An overview of “methods” for researching “institutions” in NRM

School of thought	Theoretical assumptions, objectives and positions (TAOP)	Specific concepts, models or theories (SCMT)	Concept or definition of “institutions” (CDI)	Research model, surveys or case study (RMSC)	Techniques for empirical investigation (TEI)
Mainstream Institutionalism	<ul style="list-style-type: none"> - Positive position - Objective outsider position - Subject is autonomous and rational - To understand outcomes - Focus on predictions - Test hypothesis - Principle of parsimony - Distil indicators or factors 	<ul style="list-style-type: none"> - Mainstream economics - Political sciences - Positivist social sciences - Law (state centrism) - NIE - CPRMT - IAD - ABM (e.g. game theory) - CIA and HCIA 	<ul style="list-style-type: none"> - Bunch of individuals - State, market, community - Set of rules and sanctions 	<ul style="list-style-type: none"> - Statistical analysis - Large-N surveys - Database analysis - Comparative research - One-tailed Mann Whitney analysis 	<ul style="list-style-type: none"> - Surveys - Structured questionnaires - Mining of case studies - Coding - Simulation game - PRA - Satellite images
Critical Institutionalism	Realist approaches	<ul style="list-style-type: none"> - Anthropology - Geography - History - Grounded Theory (GT) - Extended Case Method - PDR - Human agency - Actor theory - Institutional bricolage - Legal pluralism - Social capital - Participation - Livelihood strategies 	<ul style="list-style-type: none"> - State, market, community - Set of rules and sanctions - Access, control and management - Authority, norms, beliefs - Legitimacy and discourse - Formal & informal - Bureaucratic & socially embedded - Fluid, complex and multiple layered 	<ul style="list-style-type: none"> - Case study - Single-N research - In-depth inquiry - Ethnography - Stepwise small-N approach - Deliberate casing - Comparative research - Action research 	<ul style="list-style-type: none"> - Extensive field work - Triangulation - Interviews - Participatory observation - Group discussions - Snowball method - Wealth ranking - PRA - Following the actor - Life history - Network analysis - Mapping
	Interpretive approaches	<ul style="list-style-type: none"> - Reflexive position - <i>Reject objective outsider position</i> - Subject is socially embedded - To understand processes - <i>Focus on deconstructing knowledge</i> - Use open research questions - Principle of parsimony - Distil interrelatedness and changes 	<ul style="list-style-type: none"> - Anthropology - Geography - History - Feminist theory - Human agency - Subject theory - Performance theory - ANT 	<ul style="list-style-type: none"> - Authority, norms, beliefs - Legitimacy and discourse - Enactment or performance 	<ul style="list-style-type: none"> - Case study - Ethnography - In-depth inquiry - Ethnography - Deliberate casing

Source: My compilation.

6. Conclusions and discussion

This paper has identified various points of discussion for a study on “methods” to research “institutions” in NRM. Here, three main points are highlighted that especially need reflection for the development of Critical Institutionalism. These points are related to (1) how institutions are perceived; (2) how human agency is understood and investigated in practice; and (3) whether a position of transcendence is considered acceptable. In relation to these points, two broad roadways for future research in critical institutional thinking are identified.

For a study on “methods” for researching “institutions” in NRM, it matters how institutions are perceived. Broadly, the following distinction can be made: Mainstream Intuitionism sees institutions as self-governing, autonomous units, bounded in time and place, and ‘nested’ in larger structures of society. These units are believed to consist of rational, individual actors who seek to secure benefits and protect interests. In this view, institutions are relatively narrowly defined as rules-in-use that ‘sanction’ people’s behaviour. In contrast, Critical Institutionalism sees institutions as fluid, open, multiple-layered and socially embedded constructs, as a complex alchemy of norms, beliefs, and authority and power relations. Here, institutions are perceived as human-nature interactions or rules and social arrangements in which behaviour and practices gain legitimacy, and in which actions are considered fair and just. In the view of Mainstream Institutionalism, rules-in-use ‘emerge’ as a result of mutual consent between individual actors. In the view of Critical Institutionalism, rules, norms and social arrangements are produced through a process of institutional bricolage (or legal shopping, situated learning, processes of adaptation etc.). As can be surmised, the differences in understanding of ‘what constitutes an institution’ are almost irreconcilable, and searching for an integration of the fields might simply not make sense. On a more positive note, both schools of thought can agree that institutions consist of ‘rules’. Illustratively, the ‘agreement’ that institutions consists of ‘rules’ is the red line in the article of Hall *et al.* (2014). If this is true, then there is (theoretically) also scope for the integration of Mainstream and Critical Institutional perspectives.

However, it also needs to be noted that definitions of institutions vary widely within the ‘field’ of Critical Institutionalism – much more than in the ‘field’ of Mainstream Institutionalism. This has been vividly illustrated in the review. More specifically, some authors are unhappy with an understanding of institutions as ‘rules’ in the broadest sense of the word. Here, it is useful to make a distinction between ‘realist’ and (more) ‘interpretative’ approaches in studies on institutions in NRM. Very generally, critical scholars who adopt a realist approach see institutions as ‘rules’ or constructs that exist in reality, and their interpretation is often based on foundational divisions such as nature/culture, formal/informal, conscious/unconscious, bureaucratic/socially embedded, policy/practice – to name a few. In contrast, critical scholars who adopt a (more) interpretative approach reject this view, and they argue that institutions both and at the same time, are a product of ‘local’ actor’s behaviour *and* of the researcher’s view. In this perspective, ‘nature’ is seen, for instance, as an institution itself (Gururani, 2002), and institutions like WUAs are seen as multiple performances or enactments within particular networks, rather than, for example, a set of rule based social arrangements (Verzija and Dominguez, 2015, see p.6). As can be surmised, these *critical interpretative perspectives* within the field of Critical Institutionalism are nearly impossible to reconcile with Mainstream Institutionalism – there are no commonalities to build upon.

The second point worth debating is how human agency is understood and investigated in practice. Clearly, the complexity of human agency is a central principle in Critical Institutionalism, and almost all articles in this review use some understanding of agency. More specifically, an elaboration of human agency often underpins critique on Ostrom’s work as a

step to create space for developing critical institutional perspectives. As argued, it appears (to me) that this is not wholly ‘fair’ and requires some reflection on the side of critical institutional thinkers. Critical scholars emphasize the embeddedness of human agency, conceptualizing agency both as conscious and less intentional acts. In practical analysis, however, it proves almost impossible to differentiate between deliberate and less conscious acts, meaning that ‘we’ end up seeing all behaviour of people as ‘capacities’ – as rational (and thus) strategic acts of resistance and domination. Saliently, this perspective is almost similar to Ostrom’s rational subject position. To recall, Ostrom (1992) argues that institutions shape the patterns of human interactions and the results that individuals achieve. In other words, Ostrom (and others) *do not deny* that institutions and behaviours of people are influenced by a whole bunch of ‘factors’. In principle, they acknowledge – and agree ‘with us’ – that informal norms, everyday contexts, daily practices and other embedded contexts play a role. Their position is merely to focus on what they see as what can be explained in complex realities. In short, they study the ‘rationality’ of ‘individual behaviour’ and also, the often-observed or generalizable principles of cooperation. Other issues, they consider – and they have a point – can hardly be ‘logically’ explained or generalized, and these issues, therefore, are interesting but not seen as belonging to the domain of what needs (or can be) explained.

In this regard, Mainstream and Critical Institutional analyses are perhaps more closely related than we think, we basically study and recognize actors as rational, capable individuals who seek to secure benefits (and prevent loss) in a specific ‘nested’ or ‘situated’ context. In slightly different wording, this argument is also made in Hall *et al.* (2014). This paradox in critical studies is (also) visible, for instance, in the discussion on ‘fields and logic of practice’ (see Behagel and van der Arend, 2013). Theoretically, Bourdieu is often quoted, it tends to be explained that a logic of practice is complex and situated, and is partially conscious and partially unconscious. To illustrate: ‘When we use the term logic, we do not mean to say that such a practice fully conforms to a set of rules, but rather that “practice has a logic which is not that of logic” (Bourdieu, 1977, p.109)’ (Behagel and van der Arend, 2013: 72). And further on in the paper of Behagel and van der Arend: ‘The field of practice in which actors are situated constitutes a meaningful, unfolding totality, and not a set of isolated and abstractly linked variable such as interests, rules, resources, incentives, or goals’ (p.73). This is nicely put in words and it makes theoretical sense, but in practical analysis, it turns out that it is difficult to identify the others’ ‘logic’ and ‘we’ tend to end up focussing on the things we understand: interests, rules, resources, incentives and goals. The only way out of this paradox (and circular reasoning) is perhaps to adopt an explicit critical *interpretative* perspective.

The third point of debate is closely related to these points, the question whether a position of transcendence is acceptable for Critical Institutionalism. This question is particularly relevant for critical scholars who adopt a realist approach in their work. The relevance of the question can be illustrated with an earlier quoted excerpt from Verzijl and Dominguez (2015): ‘we see natural resource institutions as continuously performed and patched together, through heterogeneous elements and practices, by those that live, experience and enact these institutions every day *and* by those who make sense of them (emphasis added) (p.1). In other words, they reject an objective outsider position and argue that ‘our’ understanding of institutions (at local levels) is also a product of our own institutional ‘network’ (e.g. research and policy circles, funding, publications). In this perspective, both Mainstream and Critical Institutionalism produce ‘a particular performative representation of an institution [which] is often itself part of a project (intellectual, political, cultural) of the sense-makers’ (Verzijl and Dominguez, 2015: 5). As can be surmised, this critical interpretative view has serious implications for Critical Institutionalism. It implies for instance the need for a re-assessment of ‘our’ work on

institutions. This may be a disheartening thought, but I (also) believe that it has the prospect to create truly alternative, creative and original research.

These theoretical points of debate are related to the ‘question of method’ in various ways. More practically, I see two possible ways forward for Critical Institutionalism:

First possible way forward – for realist approaches: For those who want to remain faithful to realist approaches and/or believe in the cross-fertilization of Mainstream and Critical Institutional perspectives, comparative case study research, conducted in a structured and (more) explicit way, appears to be the way forward. Here, the stepwise small-N approach as proposed by Mollinga and Gondhalekar (2012) can be used as an inspiring example. The objective is then to move beyond single case study conclusions and arrive at new theory or insightful generalizations, covering the ground between ‘over-generalization’ (Mainstream Institutionalism) and ‘over contextualization’ (Critical Institutionalism).

Second possible way forward – for interpretative approaches: For those who have grown uncomfortable with the objective outsider position, and have begun to see institutions as things that are enacted and performed within the boundaries of particular networks, new case study research and using critical interpretative theories for casing, is the way forward. This approach requires the ‘study up’ of institutions (or networks) at higher levels of governance – not just the ‘study down’ of institutions at lower levels of governance. It also requires (more) reflection on the performative aspects of ‘our’ own intellectual agendas in research on institutions in NRM (e.g. creating legibility for policy makers, reconciling conservation and development objectives). Here, ANT as used by Verzijl and Dominguez (2015) can be used as an inspiring example. The objective is then to deconstruct knowledge claims on institutions and to produce a ‘new’ interpretative tradition of knowledge seeking in NRM.

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