

Analysing Access to Tropical Forests: Analytical Implications of Critical Realism for Community Forestry Management Research¹

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Abstract

This paper argues that much of the literature on community forestry management does not pay sufficient attention to societal structures that impinge on access to tropical forests. It suggests that the philosophical school of Critical Realism has a lot to offer as a basis for research on societal structures. First, it builds on a dialectical understanding of structure and agency. Critical Realism suggests that the interplay of structure and agency is separable over time. This allows embedding the actor in the structures that impinge on his or her access. Second, the ontology of Critical Realism offers a methodological basis to map structures. Given the strategic selectivity of structures that discriminate against poor people's access, this is a substantial contribution to institutional analyses of forest access.

Keywords: Critical Realism, Community Forestry Management, Access, Social Structures, Methodology, Strategic Selectivity of Structures

1 Introduction

The New Institutional Economics (NIE) have substantially influenced our current thinking on the collective management of common pool resources. Research in this tradition on common pool resources convincingly shows that these resources, like tropical forests, can be sustainably managed by its users. The findings additionally show that common property can be superior to other property rights regimes in terms

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of resource sustainability (Ostrom 2001). Hardin's famous metaphor of "the tragedy of the commons" has been proven to be a rather particular case amongst many others (Ostrom 2007). Research advances certain conditions suggesting the cases in which collective management of tropical forests is likely to be successful (Ostrom 1999). This line of thinking is not without criticism. Other scholars point out that the "collective action school" (Johnson 2004) tends to produce apolitical and ahistorical conceptualisations of institutions (Mosse 1997). They explain this by reference to NIE's assumption of "methodological individualism".

Within institutional economics in a Veblenian tradition there is currently a debate on what the philosophical school of Critical Realism can offer for institutional economics (Hodgson 2000; Wilson 2005; Fleetwood 2008). This paper argues that institutional economics' analyses of communal tropical forest management could benefit from this discussion. First, it claims that the dialectical approach to the relation between structure and agency has a lot to offer when we are to understand who has access (understood as the "ability to benefit" from a resource (Ribot and Peluso 2003)) to tropical forests. This understanding is a prerequisite for amending or creating tropical forest governance that lives up to the dual challenge of sustaining poor forest dwellers livelihoods and the sustainable management of tropical forests. Second, it proposes that Critical Realism provides an ontological and epistemological basis for a methodology to identify social structures that influence access.

The paper proceeds by first (section 2) reviewing deforestation dynamics in contemporary tropical forest regions as they highlight who enjoys access. It juxtaposes these dynamics with some of Ostrom's "design principles" to roughly assess the potential of Community Forestry Management in tropical forest frontier regions.³ Section 2 concludes by relating this review to the discussion on methodological individualism mentioned earlier. The following section (3) then outlines the Critical Realism's dialectical perspective of structure and agency and suggests a methodology for mapping structures. A concluding section outlines

³ I use the term forest frontier to denote regions of primary standing forest which are close to already deforested areas and are therefore under increasing pressure by other land uses and large-scale extractive activities.

possible implications of Critical Realism for research on community forestry management.

2 Lost in the Jungle? Reflections on Studies of Community Forestry Management and Tropical Forest Governance

Sustainable tropical forests governance requires coming to terms with deforestation, the most threatening factor to the ecosystem (Bruner, Gullison, Rice et al. 2001). Reasons for deforestation and its extent vary across those regions which still hold primary tropical forests (Geist and Lambin 2002; FAO 2007). Analyses of deforestation dynamics in Asia, Latin America, and Western Africa nevertheless reveal common elements.⁴ These concern the heterogeneity of actors (in agriculture as well as logging), the political character of forest frontier dynamics, and the imprint of history on these dynamics.

First, concerning the actors involved in agricultural activities, their heterogeneity is worth noting. For a comparison of different actors' respective contribution to overall deforestation the World Bank (2003, 166) adopts these – rather gross – categories: large-scale agriculture, smallholders, and those practising shifting cultivation. While in Africa small scale agriculture contributes the most to aggregate deforestation, large scale agriculture is responsible for the bulk of overall deforestation in Asia and Latin America (60% in Asia and 81% in Latin America).⁵ Despite being persistently perceived as the main culprit, shifting cultivation's contribution to overall deforestation is the smallest in Africa (9%) and Latin America (4%) or equals the contribution of smallholders in Asia (20%) (for further evidence on this, see, Geist and Lambin 2002). What do these figures tell us concerning the variables that enhance self-organisation or the attributes of the users in particular as identified by

⁴ The analysis includes 15 cases studies and covered the following countries: i) Asia: Cambodia, Indonesia, Laos, Thailand, and Viet Nam (McCarthy 2000; Johnson and Forsyth 2002; Sunderlin 2006); ii) Latin America: Bolivia, Brazil, Guatemala, Honduras, and Nicaragua (Hecht 2005; Larson, Pacheco, Toni et al. 2007); and iii) Western Africa: Cameroon and Ghana (Brown 1999; Cerutti and Tacconi 2006). Of course, this review is not comprehensive. But, due to the similarities that occur across these diverse settings, the identified pattern is at least indicative to the processes at work.

⁵ Author's calculation based on based on World Bank (2003, 166). The full regional breakdown is: i) Africa: shifting cultivation: 9%, smallholders: 75%, large-scale: 16%; ii) Asia: shifting cultivation: 20%, smallholders: 20%, and large scale: 60%; and iii) Latin America: shifting cultivation: 4%, smallholders: 15%, large-scale: 81%.

Ostrom? Take the example of the attributes of the users “salience” and “discount rate”. According to Ostrom self-organisation becomes more likely, if users depend on “the resource for a major proportion of their livelihood” and have a “sufficiently low discount rate in relation to future benefits to be achieved from the resource” (Ostrom 1999, 4). The salience of the standing forest to smallholders or those practising shifting cultivation depends on the characteristics of the livelihood strategies adopted by them. The same holds true for the discount rate. Usually, the livelihoods of smallholders or those practising shifting cultivation depend on a wide variety of livelihood strategies (Ellis 1998) which in part depend on the standing forest (Sunderlin, Angelsen, Belcher et al. 2005). While there will most likely be a variation among the livelihood strategies adopted, we can assume that the activities of these two groups of users do not per se preclude collective action for community forest management (CFM). The situation is substantially different when we turn to large-scale agriculture. Agricultural enterprises that, for example, cultivate palm oil plantations, produce soy beans, or raise cattle pursue economic activities that involve competing land uses. The standing forest is not salient to large-scale agriculture. That is, a group of actors responsible for a substantial part of worldwide deforestation lacks one of the key attributes crucial to collective management. While this is not much more than stating the obvious, it is a fact that somehow disappeared in much of the current discourse on community forestry management. When we broaden the perspective a little and consider other motives for deforestation, the prospects for collective management of forest resources become even gloomier. Take, for example, Bolivia and Brazil. Among other reasons, deforestation occurs to capture benefits like minerals, because of land speculation, or investments to launder drug money (Hecht 2005; Fearnside 2008). What scope for collective management when actors using the forest for the aforementioned reasons are involved? Prospects seem to be bleak. Similar actor constellations as in agriculture occur in logging activities. In all the cases under analysis an industrial logging sector exists alongside smallholder logging activities. In terms of the dependence of the different groups of actors on the forest in a particular region similar points can be made as in the case of agriculture. Although industrial logging enterprises have a low discount rate regarding the resource unit log, in comparison to smallholder logging, it matters significantly less to them whether the log stems from a particular region. Whereas smallholders find it more difficult to carry out their activities in other regions

(labour migration aside). So, with regard to a specific region (in which communal forest management could be practised) the discount rates of the logging industry and smallholder logging differ significantly. Another point that needs to be mentioned here refers to the relationships between the industrial logging sector and the communities. Companies often hire members of the local communities to do the logging for them, or co-opt community leaders.

Second, when we turn to logging activities the political character of processes of deforestation becomes obvious. Across the cases collusion and corruption characterise the relation between the industrial logging sector and state agencies at differing levels. Often, the municipal governments mirror the local power relations which are dominated by the economic elites. The outcome is decisions on timber rights allocations that tend to favour the logging industry. Logging concessions in Nicaragua, for example, are quickly given to the logging industry whereas petitions of communities – which find it already more difficult to comply with the legal prescriptions – are being delayed by the local governments (Larson, Pacheco et al. 2007). By means of their relationships with state agencies the logging industry is able to influence the political agenda, to delay or obstruct law enforcement, or to exert influence over the timber rights allocation process itself. Initiatives to change the status quo also disclose the political nature of timber rights allocation. Legal reforms in favour of smallholders need substantial political leverage through coalitions with NGOs or the urban middle class in order to materialise (Johnson and Forsyth 2002). Even if formal reforms in favour of smallholders take place, it is uncertain whether the intended benefits come about. In Indonesia, for example, after the collapse of the Suharto regime several forest sector reforms took place. Among them was the allocation of 3 million ha of forest to co-operatives and small to medium size enterprises. These co-operatives remain susceptible to the influence of the entrenched regional and local elites (McCarthy 2000; McCarthy 2004). This leads to the third similarity that holds across the cases: the imprint of history on the processes of frontier progress. The current distribution of property rights to land and forest still reflects past inequities and influences who has superior influence over decisions that would affect this distribution (compare, Sikor and Nguyen 2007, 2022). The experience of programmes that devolved forest management demonstrates this. Analyses of such programmes in Asia and Latin America show that specific

measures need to be employed to make the forest dependent poor benefit (Sunderlin 2006; Larson, Pacheco et al. 2007).

When we turn to the current discourse on community forestry management considerations of the type above are largely absent. Research focuses on the conditions that make the success of communal natural resource management likely but often accords “low analytical priority to the effects of larger economic and political forces” (Sikor 2006, 341) (see Bromley (2006) for an assessment along similar lines). Take the example of secure property rights to land and forests. A recent meta-analysis of the factors that make community forestry a successful enterprise finds that secure property rights – what the authors call tenure security – is among the key factors impacting on the success of communal management (Pagdee, Kim and Daugherty 2006). Although the design principles for robust and long-enduring common pool resource management institutions include the ability to “effectively defend the resource from outsiders” (Ostrom 2005), the implications are not given much attention in a bulk of the literature on community forestry. This is puzzling as secure property rights often remain elusive for a majority of the rural poor in general and the forest dependent poor in particular (Quan 1998).⁶ If processes that lead to secure property rights for the forest-dependent poor were given analytical attention, completely different factors than those that are currently dealt with in depth in the community forestry literature would need to be considered. Even a cursory review of the literature dealing with processes that aim at securing the rights to land and forest for the forest-dependent poor, reveals that these are in most of the cases *de facto* redistributions of property rights (Silva 1994). For example, the ability of communities (and their organisations) to forge alliances with external actors is a recurrent characteristic of these processes. The land reform literature in general would hold more lessons to be learned (see, for example, Ghimire (2001)).

So, what conclusion can we draw from these considerations? First, the majority of studies on community forestry management focus on cases that exhibit characteristics that are fundamentally different from those that we encounter in the frontier regions of today’s tropical forests (see for an assessment along similar lines,

⁶ Encroachment of indigenous land provides a well documented example from the tropical forests (see, for example, Cotula, Toulmin and Quan 2006).

Brown 1999, 9; Campbell, Mandondo, Nemarundwe et al. 2001). Second, if we are to understand i) how access at the frontier changes and ii) the processes of institutional change that secure property rights to land and forest (so fundamental to the probability of success of communal forestry management) we need to choose a research focus that stretches well beyond the local level. Studies on community forestry could benefit from recent developments in the study on communal water management. (Mollinga, Meinzen-Dick and Merrey 2007), for example, suggest moving from a geographically defined unit of analysis (a watershed) to what they call a “problemshed”. The term “problemshed” carries the notion that it is a place where access strategies of several stakeholders manifest themselves. Sikor (2006) has begun to outline a perspective that he calls “agrarian forest” that – in my reading – takes into account these elaborations. Third, and related, theoretical explanations of institutional change and access at the frontier need to build on a structurally embedded actor. Conceptualising the actor in this way attributes causal powers to the relations between forest users and focuses attention on them. Whether it is justified to locate scholars of the collective action school in the philosophical tradition of methodological individualism or not remains an open question (see, for example, the discussion on Ostrom’s work in the *Journal of Economic Behavior and Organization*, (Boettke and Coyne 2005; McGinnis 2005)). The consideration of social structures as entities which hold causal powers is, however, largely missing in the current community forestry literature.

3 Mapping Structures: Initial Ontological and Methodological Considerations

The need to identify structures stems from their capacity to influence actor’s behaviour and bring about events. Hence, any attempt at identifying structures need to start from an elaboration on causality and the causal powers of structures. This paper suggests that the philosophical branch of Critical Realism offers a promising

ground for such an endeavour.⁷ It outlines Critical Realism's conceptualisation of reality and causality. It then proceeds to elaborate on the causal powers of structures and how they influence agent's behaviour. Finally, this section provides some methodological considerations.⁸

Like other realist approaches within the philosophy of the social sciences Critical Realism⁹ holds the ontological conviction that there is a reality outside of our conceptualisations of it. It parts company with the positivist-realist stance, however, when it comes to the way how we acquire knowledge about this reality. Critical realism embraces an epistemic relativism acknowledging that our knowledge is "historical, value-laden and situated" (Carter and New 2004, 2). It acknowledges the "double hermeneutics" involved in social sciences. That is, while natural scientists have to interpret their results, social scientist need to interpret their respondent's interpretations (Danermark, Ekström et al. 2002, 32). A further distinguishing mark between the positivist-realist stance and Critical Realism is the conceptualisation of causality. The positivist-realist conceptualisation of causation rests on the "regularity view of causation". On this view we cannot perceive causal relationships but only the constant conjunction of events. It is through the identification of regularities between events that we can establish causal relations. This approach is challenged by a position that "sees causality as fundamentally referring to the actual causal mechanisms and processes that are involved in particular events and situations" (Maxwell 2004, 4). Critical Realists endorse this position that is also denominated "generative theory of causality" (Ekström 1992, 114). They maintain that reality is differentiated. It consists of three different domains: the "real", the "actual" and the "empirical". Within the domain of the "real" lie the objects that by force of their causal powers are able to bring about events. These objects are not necessarily observable but known by their effects. The domain of the "actual" comprises events or

⁷ The presentation of Critical Realism offered here mainly draws on Danermark et al. (2002) and Sayer (1992).

⁸ The following elaborations do not capture all the differences that exist within Critical Realism. For these, refer, for example, to the Journal of Critical Realism or the debates on Critical Realism within the Journal for the Theory of Social Behaviour.

⁹ Brief introductions into Critical Realism can be found in the first chapter of Sayer (2000) and in (Carter and New 2004). A book-length introduction is Danermark et al. (2002). Sayer (1992) outlines the realist methodology.

phenomena that happen irrespective of whether they are observed or not. If they are observed they enter the domain of the “empirical”.

How does a Critical Realist causal claim look like? A causal claim in this understanding is “not about a regularity between separate things or events but about what an object is like and what it can do and only derivatively what it will do in any particular situation” (Sayer 1992, 105). The starting points are social objects (individuals, social relations) that have causal powers. Causal powers exist by necessity of the internal structure of the objects irrespective of whether they are exercised or not. Human beings hold the causal power, for example, to be able to co-operate for sustainable resource governance although this power might not be exercised in particular circumstances. These circumstances vary, as social reality is an open system. That is, a particular object with its causal powers always coexists with other objects with their causal powers. Events are the effect of “multiple determination” (Elder-Vass 2007, 472). Hence, if we do not observe an event *a'* that we would expect if a particular causal power *a* would operate, it does not mean, that this causal power was not exercised. It might well be, that an opposite causal power *b* was operating at the same time. Note that in the actual domain the unexercised causal power *a* does has the same effect as, for example, the exercised causal power *a* and the exercised causal power *b* operating in an opposite direction at the same time. The relationship between an object *A* and its causal power *a* is internal. Internal relations are defined as: “A relation R_{AB} may be defined as internal if and only if *A* would not be what it essentially is unless *B* is related to it in the way that it is” (Danermark, Ekström et al. 2002, 46). But, the relationship between the causal power *A* and the effect *a'* is contingent, it depends on other causal powers operating (or not) at the same time. Within the Critical Realist model of causality other causal powers that coexist with a given causal power and that influence the actual event are called “conditions” (see figure 1).

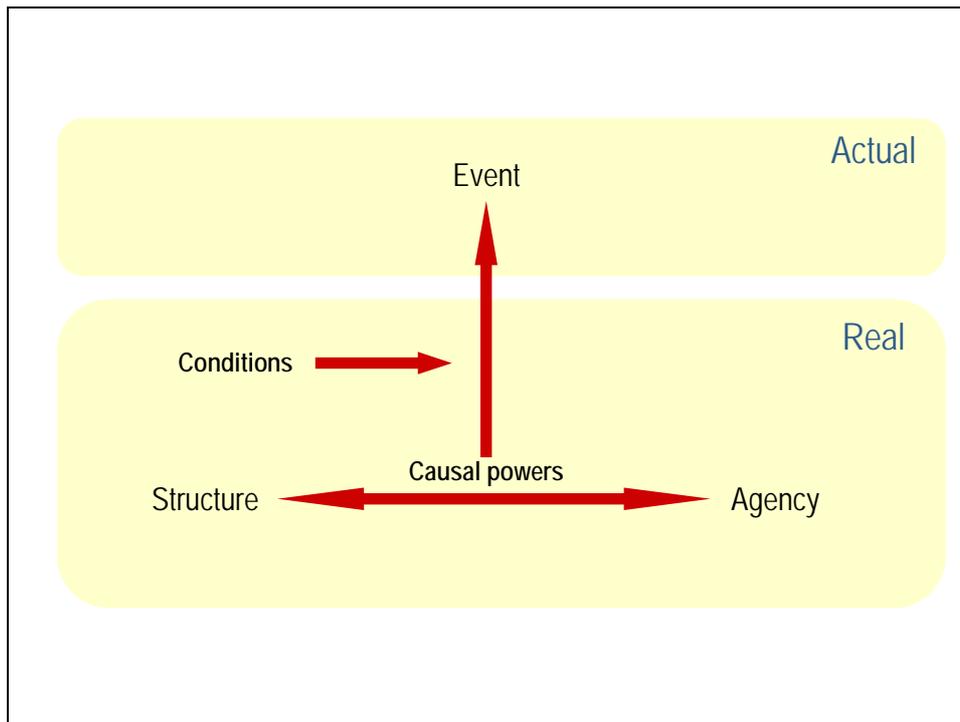


Figure 1: Domains of reality and schematic presentation of Critical Realism’s conceptualisation of causality

Before we can begin to map structures, that is, to identify the structures that influence the behaviour of actors, I need to clarify what I mean when I talk of structures and to sketch out Critical Realism’s conceptualisation of the relation between structure and agency. Scientists use the term structure to refer to completely different things. These definitions range from structures as patterns of aggregated individual behaviour to structures that are the prime causal powers in society (Porpora 1998). In this paper structure refers to social entities, that is groups of individuals and the social relations between them (Elder-Vass 2007, what Elder-Vass calls “social structures as wholes”). To be causally efficacious social structures need to have properties that can not be reduced to the sum of individuals making up the group. The key concept here is emergence. The concept of emergence establishes that “novel properties may emerge when entities interact, properties that are not possessed by the entities [in our case the group members, J.W.] taken in isolation” (Hodgson 2007, 220). The classical example is water. Most of us would trust water to do its job when the Christmas tree is alight, however, many of us would refrain from using oxygen and hydrogen separately for the purpose of extinguishing fire (with good reason). The property of water to be able to extinguish fire is emergent. It

can not be reduced to water's constituent parts. To provide an example from the social world: In a large part of the Brazilian Amazon, employees of logging companies are in a position to buy logs at very low prices from smallholders. This causal power of this employee does not stem from his or her individual negotiation capacities. It rests upon the dependency of the smallholders on the logging companies that arises – given the absence of the state in many regions – because logging companies are often the only actors able to provide crucial services (like taking an ill family member to a hospital) (Medina 2004). If we accept that social structures have emergent properties, they have causal powers on their own. Social science explanations then have to start from individuals plus the social relations between them. This is not to say that structures are independent of actors. Of course, if all actors cease to exist, so do structures (Hodgson 2007, 221). To avoid another misunderstanding that might arise: To maintain that structures have emergent properties and causal powers does not mean that they determine the behaviour of individuals. Given the Critical Realist understanding of causality that rests on multiple determination (several causally efficacious mechanisms operating at the same time), individuals still hold their causal powers to be, for example, capable of choosing between actions (Elder-Vass 2007).

With regard to Critical Realism's conceptualisation of the relation between structure and agency, I will focus on Margret Archer's elaborations on this point (Archer 1998). First, structure and agency are separate entities that can not be reduced to each other. Methodological individualism and holism are both considered to be inadequate (see above). Second, Critical Realism maintains that the interaction between structure and agency can be analysed by separating their interplay over time. This analysis of the interplay between structure and agency rests upon the following assumptions: pre-existence of structures and structural elaboration that post dates our actions. Structures are pre-existent. We are born into social relations that are not of our choosing. "People choose what they do, but make their choices from a structurally and culturally generated range of options – which they do *not* choose" (Carter and New 2004, 3, emphasis in original). Archer calls this "structural conditioning". Within these structures we formulate our strategies to achieve our goals and realize our interests ("structural interaction" in Archer's terminology). Through our actions we are able to change the social structures in which we are

embedded. “Structural elaboration” follows our actions. I will briefly touch upon a related issue. How do structures, how do institutions (as a particular type of social structure (Hodgson 2006, 17f)) influence the behaviour of individuals? In a recent review article Fleetwood (Fleetwood 2008) argues that it is necessary to distinguish between the way institutions form habits of actors and the way actors deliberately reflect on their structural context and formulate courses of action.

What results from these considerations with regard to the methodology of mapping structures? An approach that sets out to map the structures relevant to a phenomenon under analysis that takes into account the model of causality outlined earlier needs to build on the interplay between conceptualization and the building of theory and contextualization (Ekström 1992). Conceptualization and the building of theories refer to “a process whereby we abstract from context-dependent data in an endeavour to capture the not-directly-observable phenomena and events” (Ekström 1992, 117). The mode of inference used in Critical Realism to arrive at appropriate concepts and theories is “retroduction”.¹⁰ Retroduction is a mode of inference “in which events are explained by postulating (and identifying) mechanisms which are capable of producing them” (Sayer 1992, 107). Departing from observed phenomena (in the empirical domain) through retroduction we acquire knowledge on those structures and mechanisms which are not directly observable (within the domain of the real). Retroduction proceeds by asking “What qualities must exist for something to be possible?” (Danermark, Ekström et al. 2002, 80). To understand concrete (multiply determined) phenomena we must start by abstracting the diverse determinations. Our concepts of concrete phenomena are likely to be inadequate in the beginning. In order to arrive at concepts that grasp the objects it will be necessary to move from the concrete to the abstract and back to the concrete. To justify the claim that a particular causal power so identified was indeed efficacious, Elder-Vass (Elder-Vass 2006) proposes “a method for social ontology”. His method builds on the ontology of causal powers outlined earlier. It requires us to identify the parts and the relations between them that make up the social structure and to validate these by corroborating them with empirical evidence.

¹⁰ See Danermark et al. (2002, 80f) for a systematic juxtaposition of deduction, induction, abduction, and retroduction.

Recall the importance of conditions in bringing about events. The other causal powers operating – the conditions – that in their sum make up the context are crucial to understand events when we acknowledge the “generative view of causality”. Context in this understanding is not noise that prohibits us from generalising but is intrinsically involved in the process of generating events. Hence, the focus on context as an equally important part in the overall approach to map structures (Sayer 2000, 114-118; Maxwell 2004, 6f). What to actually study when we try to get a grip on context? The answer, of course, depends on the case under analysis and the research question pursued. I will highlight two aspects that are frequently mentioned in the institutional research on the commons: the importance of history and the physical basis of institutions. The research by Mosse (Mosse 1997) convincingly shows that history matters in the creation of institutions for common pool resource management. The focus on institutions as created by rationally acting individuals therefore needs to be complemented by an approach that acknowledges their historical evolution and situates these institutions in their historical context.¹¹ Other scholars have repeatedly pointed out that the physical world is as important to institutional analysis as the social world (Hagedorn, Arzt and Peters 2002; Ostrom 2005).

I will close by sketching out some methodical implications. The importance of context as causally efficacious points to the limits of approaches that aim to identify causality based on correlations between variables. In other words, “what causes an event has nothing to do with the number of times it has been observed to occur and nothing to do with whether we happen to be able to predict it” (Sayer 1992, 110). Research approaches that are more sensitive to context (e.g. case studies) are in a better position to identify causal powers.

¹¹ Layder (1993, 72) offers some guidance on how to operationalise historically embedded research by suggesting what he calls a “research map”.

5 Discussion

So, what's there to be gained for NIE approaches to community forestry from Critical Realism? Critical Realism's approach to analyse the interplay of structure and agency over time would allow taking into account the structural embeddedness of actors. This is crucial as forest policy and social structures in the forestry sector discriminate against the poor. A situation Larson and Ribot (2007) describe as "double standards on an uneven playing field". Jessop (2008, 36-53) suggests that structures are "strategically selective" that is "(...) [they] are more open to some types of political strategy than others" (ibid, 36). The analysis of structures is therefore crucial to understand who has access to tropical forests and to construct adequate governance systems. Recently, leading scholars of the collective action school apply actor conceptualisations that move beyond methodological individualism. Based on his analysis of how community members come to care about the environment Agrawal (2005) shows that their involvement in forest protection measures leads to changes in attitude towards the environment. That is, institutions influence the preferences of the actor. Ostrom (2007) describing the characteristics of complex systems acknowledges that "these complex systems are greater than the sum of their parts". Along similar lines, she recognizes that coupled human and natural systems exhibit emergent properties (Liu, Dietz, Carpenter et al. 2007). The acknowledgement of emergent properties in complex systems which can not be reduced to the system's micro components is used by other scholars to establish the autonomy of social structures (Hodgson 2000). Social structures which can not fully be reduced to individuals, however, mark an end of any concept that can meaningfully be called methodological individualism (Hodgson 2007). Whether the acknowledgement of emergent properties of social systems will lead to a change in research emphasis remains to be seen. Acceptance of the importance of social relations does not necessarily lead to a broader research focus (Lukes 1968). This broader research emphasis which would also encompass the structural context is not only relevant from an analytical point of view. It is also necessary to counter the claims that New Institutional Economics' models serve to depoliticise a debate on an inherently political subject (compare, Mosse 2006, 720).

Critical Realism's ontology also offers a route on how to go about mapping structures. Given the importance of structures this is already a significant contribution. But, there are other methodological and theoretical implications to studies of common pool resource management as well. The Critical Realist model of causality questions the possibility of generalisation. Which event a causal power will bring about depends on the context (other causal powers operating). It would provide a basis for discussing the contributions of large-N studies of on common pool resource management, that are currently demanded (Poteete and Ostrom 2008).

I would like to close with the practical implications of institutional research on tropical forest management. While the mismatch between the discourse on community forestry institutions and deforestation dynamics in tropical forest frontier regions might leave one simply puzzled, there are aspects to this that are of importance to the state of the forests and the people who depend on it. The New Institutional Economics' conceptualisation of natural resource management institutions has substantially influenced what donor agencies think (for example, IFAD 2001, 187ff) and do about forest management (Sunderlin 2006). In effect, policy initiatives and development projects developed against this background demonstrate this lack of attention to structural factors influencing the possibilities of common resource management. This might already imply substantial risks for the communities involved. Furthermore, given that development policy is frequently driven by fashion (see, Rauch 1996, for an example on participation) and its changes in policy prescriptions tend to resemble pendulum swings rather than amendments to the course, this inattention might lead to a situation in which "the baby communal resource control may be thrown away with the bathing water" in the future. To the detriment to the forest dependent poor and the forests alike.

References

Agrawal, A. (2005). "Environmentality: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India." Current Anthropology **46**(2): 161-190.

Archer, M. (1998). Realism and Morphogenesis. Critical Realism. Essential Readings. M. Archer, R. Bhaskar, A. Collier, T. Lawson and A. Norrie. London, Routledge: 356-381.

Boettke, P. J. and C. J. Coyne (2005). "Methodological individualism, spontaneous order and the research program of the Workshop in Political Theory and Policy Analysis." Journal of Economic Behavior & Organization **57**(2): 145-158.

Bromley, D. (2006). Poverty and Resource Use in the Commons: Accounting for Institutional Isolation. Economics of Poverty, Environment, and Natural Resource Use. Wageningen.

Brown, D. (1999). Principles and Practices of Forest Co-Management: Evidence from West-Central Africa. London, Overseas Development Institute.

Bruner, A. G., R. E. Gullison, R. E. Rice, et al. (2001). "Effectiveness of Parks in Protecting Tropical Biodiversity." Science **291**: 125-128.

Campbell, B., A. Mandondo, N. Nemarundwe, et al. (2001). "Challenges to Proponents of Common Property Resource Systems: Despairing Voices from the Social Forests of Zimbabwe." World Development **29**(4): 589-600.

Carter, B. and C. New (2004). Introduction. Realist Social Theory and Empirical Research. Making Realism Work. Realist Social Theory and Empirical Research. B. Carter and C. New. London, Routledge. **17**: 1-20.

Cerutti, P. O. and L. Tacconi (2006). Forests, Illegality, and Livelihoods on Cameroon. CIFOR Working Paper. Center for International Forestry Research. Bogor, Center for International Forestry Research.

Cotula, L., C. Toulmin and J. Quan (2006). Policies and Practices for Securing and Improving Access to Land. International Conference on Agrarian Reform and Rural Development. Porto Allegre, Food and Agriculture Organization of the United Nations.

Danermark, B., M. Ekström, L. Jakobsen, et al. (2002). Explaining Society. Critical Realism in the Social Sciences. London, Routledge.

Ekström, M. (1992). "Causal Explanation of Social Action: The Contribution of Max Weber and of Critical Realism to a Generative View of Causal Explanation in Social Science." Acta Sociologica **35**: 107-122.

Elder-Vass, D. (2006). A Method for Social Ontology. International Association for Critical Realism Annual Conference. Tromso.

Elder-Vass, D. (2007). "Social Structure and Social Relations." Journal for the Theory of Social Behaviour **37**(4): 463-477.

Ellis, F. (1998). "Household Strategies and Rural Livelihood Diversification." The Journal of Development Studies **35**(1): 1-38.

FAO (2007). State of the World's Forests 2007. Rome, Food and Agriculture Organization of the United Nations.

Fearnside, P. M. (2008). "The Roles and Movements of Actors in the Deforestation of Brazilian Amazonia." Ecology and Society **13**(1): art. 23 [online].

Fleetwood, S. (2008). "Structure, institution, agency, habit, and reflexive deliberation." Journal of Institutional Economics **4**(02): 183-203.

Geist, H. J. and E. F. Lambin (2002). "Proximate Causes and Underlying Driving Forces of Tropical Deforestation." BioScience **52**(2): 143-150.

Ghimire, K. B., Ed. (2001). Land Reform and Peasant Livelihoods. The Social Dynamics of Rural Poverty and Agrarian Reform in Developing Countries. London, ITDG Publishing.

Hagedorn, K., K. Arzt and U. Peters (2002). Institutional Arrangements of Environmental Co-operatives: a Conceptual Framework. Environmental Cooperation and Institutional Change: Theories and Policies for European Agriculture. K. Hagedorn. Cheltenham, Edward Elgar: 3-25.

Hecht, S. B. (2005). "Soybeans, Development and Conservation on the Amazon Frontier." Development and Change **36**(2): 375-404.

Hodgson, G. M. (2000). From micro to macro: the concept of emergence and the role of institutions. Institutions and the Role of the State. L. Burlamaqui, A. C. Castro and H.-J. Chang. Cheltenham, Edward Elgar: 103-126.

Hodgson, G. M. (2000). Structures and Institutions: Reflections on Institutionalism, Structuration Theory and Critical Realism. Hertfordshire, The Business School, University of Hertfordshire.

Hodgson, G. M. (2006). "What are institutions?" Journal of Economic Issues **40**(1-25).

Hodgson, G. M. (2007). "Meanings of methodological individualism." Journal of Economic Methodology **14**(2): 211 - 226.

IFAD (2001). Rural Poverty Report. New York, Oxford University Press.

Jessop, B. (2008). State Power. Cambridge, Polity.

Johnson, C. (2004). "Uncommon Ground: The 'Poverty of History' in Common Property Discourse." Development and Change **35**(3): 407-433.

Johnson, C. and T. Forsyth (2002). "In the Eyes of the State: Negotiating a "Rights-Based Approach" to Forest Conservation in Thailand." World Development **30**(9): 1591-1605.

Larson, A. and J. Ribot (2007). "The poverty of forestry policy: double standards on an uneven playing field." Sustainability Science **2**(2): 189-204.

Larson, A. M., P. Pacheco, F. Toni, et al. (2007). "The Effects of Forestry Decentralization on Access to Livelihood Assets." The Journal of Environment & Development **16**(3): 251-268.

Layder, D. (1993). New Strategies in Social Research: An Introduction and Guide. Cambridge, Polity Press.

Liu, J., T. Dietz, S. R. Carpenter, et al. (2007). "Coupled Human and Natural Systems." Ambio **36**(8): 639-649.

Lukes, S. (1968). "Methodological Individualism Reconsidered." The British Journal of Sociology **19**(2): 119-129.

Maxwell, J. A. (2004). "Causal Explanation, Qualitative Research, and Scientific Inquiry in Education." Educational Researcher **33**(2): 3-11.

McCarthy, J. (2000). "The Changing Regime: Forest Property and Reformasi in Indonesia." Development and Change **31**(1): 91-129.

McCarthy, J. F. (2004). "Changing to Gray: Decentralization and the Emergence of Volatile Socio-Legal Configurations in Central Kalimantan, Indonesia." World Development **32**(7): 1199-1223.

McGinnis, M. D. (2005). "Beyond individualism and spontaneity: Comments on Peter Boettke and Christopher Coyne." Journal of Economic Behavior & Organization **57**(2): 167-172.

Medina, G. (2004). "Ocupação cabocla e extrativismo madeireiro no alto capim: uma estratégia de reprodução camponesa." Acta Amazônica **34**(2): 315-324.

Mollinga, P. P., R. S. Meinzen-Dick and D. J. Merrey (2007). "Politics, Plurality and Problemsheds: A Strategic Approach for Reform of Agricultural Water Resources Management." Development Policy Review **25**(6): 699-719.

Mosse, D. (1997). "The Symbolic Making of a Common Property Resource: History, Ecology and Locality in a Tank-irrigated Landscape in South India." Development and Change **28**: 467-504.

Mosse, D. (2006). "Collective Action, Common Property, and Social Capital in South India: An Anthropological Commentary." Economic Development and Cultural Change **54**(3): 695-724.

Ostrom, E. (1999). Self-Governance and Forest Resources. CIFOR Occasional Paper. Center for International Forestry Research. Bogor, CIFOR.

Ostrom, E. (2001). The Puzzle of Counterproductive Property Rights Reforms: A Conceptual Analysis. Access to Land, Rural Poverty, and Public Action. A. de Janvry, G. Gordillo, J.-P. Platteau and E. Sadoulet. New York, Oxford University Press: 129-150.

Ostrom, E. (2005). Understanding Institutional Diversity. Princeton, Princeton University Press.

Ostrom, E. (2007). "Going Beyond Panaceas Special Feature: A diagnostic approach for going beyond panaceas." Proceedings of the National Academy of Sciences of the United States **104**(39): 15181-15187.

Pagdee, A., Y.-s. Kim and P. J. Daugherty (2006). "What Makes Community Forest Management Successful: A Meta-Study From Community Forests Throughout the World." Society and Natural Resources **19**(1): 33 - 52.

Porpora, D. V. (1998). Four concepts of social structure. Critical Realism. Essential Readings. M. Archer, R. Bhaskar, A. Collier, T. Lawson and A. Norrie. London, Routledge: 339-355.

Poteete, A. R. and E. Ostrom (2008). "Fifteen Years of Empirical Research on Collective Action in Natural Resource Management: Struggling to Build Large-N Databases Based on Qualitative Research." World Development **36**(1): 176-195.

Quan, J. (1998). Land Tenure and Sustainable Rural Livelihoods. Sustainable Rural Livelihoods. What contribution can we make? D. Carney. London, Department for International Development: 167-180.

Rauch, T. (1996). "Nun partizipiert mal schön. Modediskurse in den Niederungen entwicklungspolitischer Praxis." Blätter des iz3w **213**: 20-22.

Ribot, J. C. and N. L. Peluso (2003). "A Theory of Access." Rural Sociology **68**(1): 153-181.

Sayer, A. (1992). Method in Social Science: A Realist Approach. London, Routledge.

Sayer, A. (2000). Realism and Social Science. London, Sage Publications.

Sikor, T. (2006). "Analyzing community-based forestry: Local, political and agrarian perspectives." Forest Policy and Economics **8**(4): 339-349.

Sikor, T. and T. Q. Nguyen (2007). "Why May Forest Devolution Not Benefit the Rural Poor? Forest Entitlements in Vietnam's Central Highlands." World Development **35**(11): 2010-2025.

Silva, E. (1994). "Thinking Politically about Sustainable Development in the Tropical Forests of Latin America." Development and Change **25**: 697-721.

Sunderlin, W. D. (2006). "Poverty alleviation through community forestry in Cambodia, Laos, and Vietnam: An assessment of the potential." Forest Policy and Economics **8**(4): 386-396.

Sunderlin, W. D., A. Angelsen, B. Belcher, et al. (2005). "Livelihoods, forests, and conservation in developing countries: An Overview." World Development **33**(9): 1383-1402.

Wilson, M. (2005). "Institutionalism, critical realism, and the critique of mainstream economics." Journal of Institutional Economics **1**(02): 217-231.

World Bank (2003). Sustainable Development in a Dynamic World. Transforming Institutions, Growth, and Quality of Life. New York, Oxford University Press and the World Bank.