Constitutional Rules in the Study of Evolutionary Institutional Change: A Research Heuristic for Agent-based Modelers and Experimentalists

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Abstract

A wide range of methods has been successfully employed for evaluating the performance of static alternative institutions. It is much more challenging, however, to study the effects of institutions if these are considered to be dynamically changing. Although theoretical contributions on institutional change are relatively abundant, because of a lack of appropriate methods, empirical applications are rare. Recently, some experimentalists and modelers have started to endogenize institutions, i.e., they allow rules to be changed dynamically by agents. In this paper we review some of the literature in this field, focusing especially on natural resource management. We argue that some higher-level institutions always remain constant and have to be exogenously chosen by the researcher. We propose a pragmatic approach to address this problem. Specifically, we develop a guiding list of nine questions, seeking to assist empirically working scholars. Viable institutional alternatives, institutional status quo, and costs of institutional change are among the important variables to be considered when developing an empirical project. The list aims at ensuring transparency in communicating trade-offs faced when designing economic experiments or agent-based models on institutional change.

Keywords: Agent-based Modeling; Evolution; Experiments; Institutions; Methods
1 Introduction

Institutions are at the core of many questions in the social sciences. It is now widely acknowledged that they play a key role in the development of economic systems (North 1990; Ostrom 1990; Acemoglu et al. 2012). With some success, a broad set of methods has been employed to study the impact of institutions on economic performance empirically (Beckmann & Padmanabhan 2009). Careful case study analysis (Ostrom 1990), economic experiments (Ostrom et al. 1994), or econometric and historical analysis (Acemoglu et al. 2012) are among the many methods used for static institutional analysis.

Much less is known about the change of institutions, however. Although a wide range of theoretical concepts exists in this field (Bromley 1989; North 1990; Knight 1992; van Bergh & Stagl 2003; Greif & Laitin 2004; Hodgson 2004; Aoki 2007; Kingston & Caballero 2009), applied work is still relatively rare, because of the dynamic and complex relationships involved that do not naturally lend themselves to the methods commonly used in economics (Alston et al. 1996; Hodgson 2004; Ostrom 2008; Schlüter 2010). Recently, it has been argued that economic experiments (cf. Rommel 2014) or agent-based models (e.g., Janssen & Ostrom 2006a; Smajgl et al. 2008, 2010) can be used to model the evolution of institutions. Ontologically, these methods are compatible with the Darwinian (meta-)framework of evolutionary economic change proposed by Hodgson & Knudsen (2010) and allow for complex relationships of agents and institutions.

Both methods require researchers to make decisions on how to translate empirical realities into models. Ideally, the basis of these decisions should be well-documented. Although a culture of documentation exists in the ABM community and various protocols have been developed for this purpose (e.g., Grimm et al. 2006), modeling of endogenous institutions suffers from a lack of transparency.

Without appropriate methods, theories cannot be tested, compared, and developed, and we acclaim the strengths of experiments and ABMs for advancing our empirical knowledge of institutional change. Conversely, it is even much needed to consider endogenous institutional change in ABMs if scenarios develop over longer time periods and hence change is likely to occur (Smajgl et al. 2008, 2010). Yet, it is also important for us to point out that even if some institutions are made endogenous to the model, at some stage, there is always a higher-level
institution that is exogenous to the experimental subject or agent. In both, experiments and ABMs, researchers still rely on critical assumptions regarding these institutions. For example, if experimental subjects or agents are allowed to change rules as part of the experimental game or ABM, it has to be explained to participants, or modeled as part of the ABM, what the underlying (constitutional) rules for changing a particular rule are. Rules may change by an individual’s (e.g., the most powerful member of a group) decision or through democratic votes of various kinds (e.g., simple vs. absolute majority vs. unanimity). In addition, the institutional status quo, the point of time, available alternative institutional options, etc. may all matter for outcomes.

We propose a pragmatic approach to this problem. Assumptions on (exogenous) higher-level institutions should be empirically grounded and documented in a transparent manner. We show that Elinor Ostrom’s (2005) concept of multiple levels of institutional analysis provides a useful starting point for such an endeavor. Based on this framework, we develop a guiding list of questions aimed at assisting empirically working social scientists interested in evolutionary institutional change to communicate their implicit decisions explicitly.

The paper is structured as follows. First we review the empirical literature on experiments and agent-based models that involve endogenous institutional change through experimental subjects’ or agents’ choice. We then introduce the framework of Ostrom (2005). On this basis we derive a set of questions that might be helpful for experimentalists and modelers seeking to run an experiment or to develop an ABM. In a final section we summarize our work and conclude.

2 Empirical Applications: Experiments and ABM with Endogenous Institutions

2.1 Economic Experiments

Economic experiments can be distinguished by the underlying concept of institutions and institutional change. In a structure–agency typology three viewpoints can be identified (Rommel 2014). Firstly, in treatments, experimentalists can manipulate the rules of the game in order to compare behavioral differences under varying institutions. In this approach, institutions function as structures that constrain and enable the choice set of agents. Secondly, variations in experimental framing or the subject pool can be used to study the impact of
(internalized) norms on behavior. In this approach, institutions are part of the agent’s internal belief system. Thirdly, institutions may be an endogenous variable under investigation in a particular experiment. Subjects may be allowed to change the rules within a given experiment (Rommel 2014). This third approach has perhaps been best described by Botelho et al. (2005, p.1; Emphasis in the original):

[I]nferring preferences from the outcome of play under different institutions is a difficult, if not impossible, task. The solution to this problem is to expand the experimental design to allow subjects to directly choose which institution they would prefer to operate under.

The idea behind this is to endogenize institutions, if these institutions are an important aspect of the empirical question under investigation:

If subjects in the field have mechanisms by which they can avoid, lobby or self-select into or out of institutions, we must consider the effects of those margins of choice before drawing conclusions about which institutions are best. Another way to express this is to consider if the laboratory environment that takes a particular institution as fixed is correctly modeling the naturally occurring environment in it’s [sic!] salient features, if that environment includes ways in which subjects can endogenously opt out of that institution. (Botelho et al. 2005, p.4)

Only recently have researchers started to take up this idea in empirical applications, often focusing on the (endogenous) evolution of sanctioning and reward systems (e.g., Sutter et al. 2010; see Puterman 2014 for a review) or the emergence of self-crafted rules for collective natural resource management (cf. Rommel 2014).

There are many possible ways in which experimental subjects could alter existing institutions of such experiments. Most commonly, in a vote, participants are asked to select their favorite option from a set of pre-defined institutional alternatives. The option which is preferred by the (simple) majority of participants is then implemented in the next round of repeated play. For instance in the common pool resource game by Janssen et al. (2013), subjects appropriate trees from an open access forest. In a second stage of the game, participants can agree on a change in rules. They can choose between (1) random allocation of harvesting rights, (2)
rotating allocation of harvesting rights, or (3) a limit in harvesting rights that is monitored and – in case violations occur – sanctioned with some give probability.

The experiments of Janssen et al. (2013) have been conducted in villages of Colombia and Thailand. Otto and Wechsung (2014) transfer a similar experimental protocol to rural China. On the one hand, such replications in other context are desirable to allow for the (cross-cultural) comparison of experimental results. On the other hand, it can be questioned whether the pre-selection of rules to endogenously choose from is applicable across arguably different empirical contexts. We are well aware of the fact that economic experiments involve simplifications of actual decision environments. Narrowing down the set of available options is essential for analyzing experimental data quantitatively. Yet, we believe that more care is needed to document the empirical basis and unavoidable simplifications for certain rules proposed to participants in such experiments. Field experiments usually involve context-specific framing, because it “is not the case that abstract, context-free experiments provide more general findings if the context itself is relevant to the performance of subjects” (Harrison & List 2004, p.1022). Chinese, Colombian, and Thai farmers who participate in the experiments should be familiar with and able to relate to the experimental tasks. This also concerns the set of rules to choose from. One should always ask and document whether the proposed rules are viable options in the specific empirical context. More importantly, it will also be crucial to consider voting mechanisms that are different from the conveniently used democratic referendums.

2.2 ABMs and Endogenous Institutions

An ABM consists of agents, an environment, and interactions between them. ABMs are employed for answering a wide range of questions spanning from the natural to the social sciences, and they are often used to model human-environment interactions or social-ecological systems (An 2012). In an ABM, agents’ behavior is subject to rules defined by the modeler, and so far only few empirical applications struggle with endogenizing institutions into ABMs, although this field has been identified as promising (Janssen & Ostrom 2006b, p.4). Increasingly, economic experiments are used to develop empirically grounded ABMs (e.g., Bravo 2011; cf. Janssen & Ostrom 2006b), and sometimes software environments resembling ABMs are used in lab experiments (Janssen et al. 2008; Appel et al. 2010), but modeling endogenous institutional change does not yet appear on the agenda.
Most ABMs of coupled human and natural systems with an explicit institutional focus test the change of regulations and policies, including subsidies and taxations, land use restrictions, or government regulations (An 2012). According to the authors’ knowledge, however, neither of these has so far endogenized constitutional change.

For example, Manson (2006) builds an ABM of land use change, where communal land management councils as collective entities (ejidos) are modeled via the rule set of the IAD framework (cf. Ostrom 2005) and provide land use controls and allocation rules for the households. Households are the main actors, equipped with a land use decision module that can be influenced by institutions. Institutions, including ejidos, markets, and conservation programs, are modeled as “institution-agents.” However, the institutional change from communal ownership and allotment via ejidos towards private land ownership, which happened during the 90s, is modeled via two alternative scenarios, and is thus not endogenized, but studied by comparing differences in static institutions.

Unlike these models of Social-Ecological Systems, ABMs of collective decision making processes have been developed more explicitly in the political sciences, where explicit constitutional alternatives are tested and even compete against each other, almost resembling endogenous institutional change.

Kollman et al. (1997) develop an ABM of sorting behavior to test the Tiebout hypothesis (1956) and to identify the most efficient political institutions. They test how different political institutions of decision making aggregate individual choices and affect the social outcome. The empirical context is the provision of local public goods or policies, such as a community swimming pool or smoking restrictions. The tested political institutions include direct party competition with winner-take-all characteristics, proportional representation with the number of seats representing the votes, but also democratic referenda. In each time step, citizens “vote with their feet” and move to their preferred jurisdiction. Citizens relocate according to their preferred local policy positions. Policy positions can also change according to the citizens’ preferences. The authors find that, unexpectedly, direct party competition or proportional representation perform best, because they encourage citizens to enter a phase of experimentation with frequent relocations to other jurisdictions.
McGann et al. (2002) develop a computational model to study differences in electoral rules. Various empirically observable voting behaviors and results are replicated under varying voting regimes. Contingent on the particular electoral system, voting results may be more or less biased against the median voter’s preferences. Although this model is not a typical ABM – because it does not involve interaction of agents – it highlights the importance of constitutional rules for determining outcomes of collective decision-making processes.

In the cases above, discrete structural alternatives of institutions have been tested that could be endogenously chosen by agents. Smajgl et al. (2010) develop an ABM of irrigating farmers with a shared water stock, where agents are equipped with a decision heuristic that also involves causality learning. More interestingly for our case, they develop a rule generation module based on the grammar of institutions (Crawford and Ostrom 1995). When agents start to become unsatisfied, not achieving their aspiration level, they start to develop rules of what all agents must or must not do with regard to the water stock. The syntax is simplified, excluding for example rule breaking, but the possible combinations of water extraction limits are endogenously developed. Each unsatisfied agent evaluates the potential success of the rules she generates, and if potentially profitable, communicates the rule to all other agents. If more than 50% of the population is unsatisfied with its current profit level, one of the proposed rules will be randomly drawn. The main contribution is to demonstrate how agent heterogeneity and environment complexity lead to dynamic norms and rules. The key message is that general conclusions from simplified ABMs for real world stakeholders may be misleading without understanding institutional dynamics.

Both, economic experiments and ABMs with endogenous institutional change are compatible with the ontology of evolutionary economics (cf. Hodgson 2004). Conceptually, one major difference between the two methods lies in the role of human subjects. In experiments, behavior of actual human subjects is observed. In ABMs, agents are modeled on the basis of behavioral assumptions or empirically observed behavior, but understanding the behavior itself with regard to a given interaction structure is of less relevance.
3 Structuring Institutional Analysis

3.1 Elinor Ostrom’s Multiple Levels of Institutional Analysis

A central notion put forward in the work of Elinor Ostrom is the concept of nested games and the idea of decomposing multiple levels of institutional analysis (e.g., Ostrom, 2005). As far as institutional change is concerned, Ostom points out that:

All rules are nested in another set of rules that define how the first set of rules can be changed. […] What can be done at a higher level will depend on the capabilities and limits of the rules at that level and at a deeper level. Whenever one addresses questions about institutional change, as contrasted to ongoing actions within institutional constraints, it is necessary to recognize that:

1. Changes in the rules used to order action at one level occur within a currently “fixed” set of rules at a deeper level.

2. Changes in deeper-level rules usually are more difficult and more costly to accomplish, thus increasing the stability of mutual expectations among individuals interacting according to the deeper set of rules. (Ostrom, 2005, p.58; emphasis in the original)

For the empirical work considered here, the implications are straightforward. Firstly, rules can never be fully endogenized. Some “deeper-level rules” always need to be fixed by assumption. Empirically it has been useful to distinguish multiple levels of institutional analysis (Fig. 1).
The figure shows the nested structure of the various levels of institutional analysis. While most experiments in the context of common-pool resources are concerned with appropriation, provision, or investment dynamics at the operational level, few experiments have been explicitly designed to cover a collective choice sequence, where subjects make explicit collective decisions, for example on appropriation limits. The collective choice sequence can comprise a variety of voting mechanisms, and many have already been tested in the laboratory or field. In this case, subjects make a decision on how to decide at the operational level. But the collective decision process itself, comprising of a set of institutions, is given. When even
the voting mechanism is subject to decisions, an endogenous constitutional choice level is reached. Subjects make decisions on how to decide collectively, which rules their daily operational decisions should be governed by. However, the available set of voting mechanisms is usually designed by the experimenter. Only very few experiments have allowed for open institutional design by the subjects.

An interesting anecdote has been reported for the appropriation CPR game designed by Marco Janssen. In this game, subjects operate in a patchy structure and harvest resources. Stochastic re-growth of resources depends on the state of adjacent fields. While separated by boxes to enable anonymity and prevent communication, in one instance, subjects started to coordinate – and to limit – their harvests through the acoustics of mouse clicks, which enabled coordination. A (slow) rhythm prevented over-exploitation of the resource and ensured the equal distribution of tokens. Subjects implicitly subscribed to a collective rule of simultaneous harvests. This rule also led to the implicit subscription to a constitutional rule of equal distribution, which may not necessarily be the fairest. Yet, this is probably the only possible alternative, given the available information to each subject and coordination on the acoustic signals.

This case also neatly demonstrates that neither collective nor constitutional choices must be necessarily the result of a design intended by the experimenter, or even subjects themselves. Quasi-constitutional rules can endogenously emerge via variations in daily operational decisions. These rules emerge by choice, but it is the often implicit, tacit, or subliminal acceptance or rejection of certain operational actions via norms that shape quasi-constitutional rules. Even a collective choice level implicitly assumes a collective decision forum. Kimmich (2013) has shown how such institutions can emerge decentrally in an “Ecology of Games,” via the multiple interactions of only two players.

To avoid a normative bias towards conscious, explicit, and hierarchical decision making procedures, one may extend the Ostrom framework by the four level framework proposed by Willamson (2000) that explicitly accounts for norms and culture as part of the institutional change process.
4 A Guideline for Designing Experiments or ABMs with Endogenous Institutions

4.1 Asking Questions

When developing an empirically grounded economic experiment or ABM that involves the endogenous variation of institutions, researchers face several critical decisions. Consider the following example of a pastoralist community. Community members may allow everyone in the community to place a certain number of cattle on a common pasture. At some point in time the distribution of cattle may have been relatively equal and for simplicity it has been agreed upon that everyone receives the same amount of grazing time. Over time inequality may develop and pastoralists with a larger herd may demand more time on the pasture. They may call for a new rule that relates grazing time to herd size. If such a decision situation is modeled and investigated as an economic experiment or ABM, several assumptions need to be made. These should be made explicit and ideally grounded in empirical context.

The following list of questions is a first attempt to provide a guideline for assisting empirically working scholars interested in these questions. The first questions are more fundamental in that they more generally address the role of human agency in institutional change. The later questions go into the details of how to develop empirically grounded experiments and models for studying institutional change.

(1) How do institutions change in a specific empirical context? Institutions may emerge and change spontaneously and do not necessarily need to be the result of deliberate human action (cf. Vatn 2005, Chapter 8; Kingston & Caballero 2009). In such cases there is also no role for experimental subjects or agents to deliberately change an institution.

(2) Who changes a particular institution? Is it the parties affected or is it an external agent? Perceived legitimacy of a new rule can differ substantially depending on the way it is implemented. In particular, exogenously imposed rules typically perform worse than endogenously chosen rules (cf. Dal Bó et al. 2010). If institutions are imposed on the affected parties, experiments or ABMs may be useful to evaluate institutional performance of alternative institutional options as has been done by much of the classic work in the field (cf. Rommel 2014). Yet, agents then may not have a role in institutional change themselves.
(3) If rules are indeed changed by the parties affected, which members of the group are eligible to change these rules? Not necessarily all people affected by a change in rules, may also be eligible to change them. For instance, leaders or elected personnel may decide on new rules, rather than all people involved.

(4) What is the mechanism for change? If only one person is involved in changing a rule, are there limits within which this person operates? If more than one person is involved how is the decision reached? Is there open communication, a (secret election)? Which types of majorities are needed? Is unanimous agreement needed or is a simple majority sufficient to reach change?

(5) What is the point of departure for institutional change? If a particular institution is already in place, the status quo is likely to determine people’s perception of what is legitimate and normal (cf. Kingston & Caballero 2009). For instance, Liebig and Rommel (2014) show that the status quo rule can have strong effects on what is perceived to be socially accepted behavior in a particular decision context. Under different status quo rules, not only behavior is likely to differ; also the willingness to accept new rules may be driven by the institutional status quo. Thus, systems may also evolve differently according to the institutional starting conditions.

(6) What are viable institutional alternatives? If an institution changes through human agency, what are the alternatives considered by those who intend to develop a new or change an existing rule? Where do these alternatives come from and how many are there? Smajgl et al. (2010) nicely demonstrate how even the rule-finding process can be endogenized, but the building blocks and conceptual structure of institutions is still developed by the modeler.

(7) What are the costs and benefits of institutional change and who bears these costs and who benefits? If a new institution is established, this may entail costs of changing existing rules. There may be one-time fixed cost elements, as well as variable costs of a change in institutions. For instance, a new system may be needed to monitor and enforce a new rule. It also has to be clear who has to bear how much of this cost in order to fully understand institutional preferences.

(8) What is the frequency of change? Are rules regularly discussed and subject to frequent change or is there rather slow progress and institutions hardly ever change? For rules that
change in greater frequency, it may be more realistic to assume familiarity with the task of experimental subjects or artificial agents.

(9) Finally, one may need to consider the dynamics of change. Change at one level may affect change and preferences in “adjacent action situations” in complex ways (Kimmich 2013). Changes at one level may thus steer unforeseen change at other levels. The ABM by Kollman et al. (1997) nicely demonstrates how the presence of multiple jurisdictions and respective linked action situations completely changes the performance of different constitutional rules.

4.2 An example

To provide an example, we would like to demonstrate how the heuristic list may be used in the aforementioned case of a (hypothetical) pastoralist community. Suppose one is interested in understanding how pastoralists adjust rules on who is allowed to graze for how much time. For this purpose an economic experiment or ABM with endogenous institutions is considered. Table 1 lists the questions from above and provides some (hypothetical) answers.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>(1) Deliberate institutional change by humans?</td>
<td>No spontaneous change involved; decisions designed/crafted by humans.</td>
</tr>
<tr>
<td>(2) Exogenous or endogenous change?</td>
<td>Endogenous; community designs their own rules and these are recognized by higher-level authorities.</td>
</tr>
<tr>
<td>(3) Who decides?</td>
<td>All herders having at least five cattle are allowed to decide.</td>
</tr>
<tr>
<td>(4) Mechanism?</td>
<td>Everyone is allowed to propose new rules in a general assembly. After a short discussion, an election is held. At least one quarter of the eligible members have to be present in the general assembly. An absolute majority is needed for a new rule to become effective.</td>
</tr>
<tr>
<td>(5) Current rule?</td>
<td>Currently, everyone is allowed to let up to 50 cattle graze for three months per year on the common pasture independent of individual herd size.</td>
</tr>
<tr>
<td>(6) Institutional The member that proposes the new rule has a large herd. He</td>
<td></td>
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alternatives? believes that he deserves more time on the common pasture. He has heard that in a neighboring village grazing times are proportionate to herd size. In this village, everyone is allowed to spend three days per cattle on the pasture.

(7) Costs of change For monitoring and enforcing the proportional rule, higher variable costs occur. These should be shared equally among the members.

(8) Frequency of change? Rules of this kind do not change very often. In the village under investigation, rules have been altered only twice over the last 50 years. Yet, people can relate to the problem and understand the idea of institutional change if the problem is rightly framed.

(9) Dynamics? If the rule is changed from “fixed grazing” to “proportionate grazing” this may have strong effects on outcomes. In particular the distribution of wealth may change. The previous rule has prevented the accumulation of wealth in the hands of a few herders. With the new rule some herders may become very wealthy or powerful. As a consequence, they may seek for alternative income sources, and they may leave the community (which has implications on who is eligible to participate in institutional change). Wealthier herders may also use their resources to impose rules that further aggravate inequality. Finally, this might also affect answers to questions 1–7 if the research was to be repeated in the future.

Source: own design

It can be seen from the table that in our hypothetical example an economic experiment with endogenous institutional choice would be feasible. One could design a modified CPR game adapted to the local particularities. After each round of “grazing” in the game, a voting could be held considering proportionate grazing as an institutional alternative to fixed appropriation. If these questions are of relevance in the empirical context, the effect of heterogeneity in herd sizes or alternative voting rules could be considered as treatments. The complex dynamics and possible effects of a change in rules on future developments could also be picked up in post-experimental debriefing workshops or group discussions (Lopez 2008). The institutional design process could also be left to the group itself and the discussion protocols analyzed afterwards. One could even imagine a design where an institutional design stage is not
explicitly modeled, but left to the endogenous decision of the agents or subjects and thus find out, if, when, how, and under what circumstances subjects decide to propose new rules. The how question is crucial, because this may entail hints on which constitutional rules for the collective choice level are taken.

4.3 Discussion

It is in principle desirable to design empirically grounded experimental games as close to field contexts as possible. Yet, it is also important to keep such games simple enough to be understood by participants. Experiments are conducted to test hypotheses on human behavior, given a certain interaction sequence and potential framing. Such tests and data analysis demand that the games are relatively simple. Our guideline should, thus, not be misunderstood as a call for more complexity or realism in experimental games or ABMs. Simplifications of the real world are inherent in all model building. In this process, researchers face trade-offs between parsimony and realism. Thus, our list should rather function as a tool to communicate decisions taken in the course of designing an experiment or ABM. Smajgl et al. (2010), for example, take the constitutional choice level as given, implementing a simple majority rule. The main focus is on endogenous collective choice rules, emerging from the interactions, and the quasi-constitutional rules that are given by the flexibility of the grammar of institutions. It may also be helpful to become aware that other methods or mixed methods designs (cf. Poteete et al. 2010) are better suited to address additional issues in complex field contexts, as demonstrated by best practice in economic field experiments (Prediger et al. 2010; Werthmann 2011) or ABMs (Voinov & Bousquet 2010).

A main lesson is that rules should be well documented by the researcher. Deeper level rules change at a slower pace. Consequently, agents of change may be less experienced with crafting such rules. This needs to be taken into account in empirical applications. Specifically, one should carefully consider whether it can be reasonably assumed that agents are the drivers of change and that they can relate to the task of crafting institutions at deeper levels.

Our framework is adapted to a particular set of ideas in experimental economics and agent-based modeling. It can be understood as a more specific methodical complement to the more general frameworks of Ostrom (2005) or Williamson (2000). As far as particular rules are concerned, it may also be useful to decompose single rules using frameworks for the analysis
of single institutions (Crawford & Ostrom 1995). It will be critical to clearly distinguish between the structural aspects of external sanctions and rewards and the agent-centered ideas of internalized norms – or so-called delta parameters – in empirical work (cf. Schlüter & Theesfeld 2010).

5 Summary and concluding remarks

Empirical work on institutional change is difficult. Few methods exist for the study of dynamically changing institutions. Experimenters and agent-based modelers have accepted the challenge, and over the last ten years a couple of empirical applications have started to endogenize institutions. In this paper we have argued that some deeper-level institutions necessarily remain exogenous to any model. In model development it is important to carefully document the empirical basis of a model. For this purpose we have designed a list of guiding questions directed at the study of institutional change. We believe that protocols generated by such a list fosters transparency of empirical work very much like the ODD protocol (Grimm et al. 2006) and similar initiatives did for more general assumptions in model development.

Our guideline also offers a fresh perspective on the field and is, as we believe, helpful for identifying promising future research areas. It becomes apparent that constitutional rules – i.e., rule on how to change rules – are a much overlooked issue in applied work. Although experiments sometimes compare endogenously chosen and exogenously imposed rules, little is known about the perceived legitimacy and performance of endogenously chosen institutions under different constitutional rules (e.g., absolute vs. simple majority). By the same token, we believe that the costs and benefits of changing institutions should receive more attention. In current experiments, for instance, changing and running alternative institutions comes at no cost. Introducing such costs into experimental work under varying status quo rules, may yield new insights on the persistence of “inefficient” institutions.
References


