



Institutional function versus form: The evolutionary credibility of land, housing and natural resources[☆]

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ARTICLE INFO

Keywords:

Credibility theory
CSI checklist
Institutional function
Endogeneity and disequilibrium
Urban and regional planning

ABSTRACT

This special issue addresses a critical question in the studies regarding land, housing, and natural resources: how does institutional form relate to performance? The question has spawned numerous studies that examine the (cor)relation between formal, private, and titled rights in relationship to development and growth. Contrarily, the contributions posit that the question lacks meaning as institutional Form follows from Function. This premise—known as the “Credibility Thesis”—entails that enduring institutions have been formed through endogenous evolution. As such, they are likely functionally adapted and, in effect, credible; otherwise, they would have changed, atrophied, or become extinct. Ergo, the speed of institutional change reflects credibility, and when informal or communal institutions apparently “persist”, it is not to be defined in terms of being inefficient, perverse, or “second-best”. Interventions such as titling and formalization that intend to alter enduring institutions should be performed with care and paying attention to their function. A crucial step towards achieving this is the execution of an “institutional archaeology”, to dissect institutional structures within spatio-temporally determined contexts and consider their credibility, as is done by the contributions here. The expounded theory is substantiated through a series of in-depth cases in different geographical and socio-economic settings. They range from construction land in urban China (as done by Clarke) to artisanal mining in Ghana (see Fold) as well as from informal settlements in India (see Zhang) to land-enclosed water rights in Bangladesh (Gomes and Hermans).

1. Introduction

A big problem that dogs the current orthodox literature on institutions and development is its inability to clearly distinguish between the forms and functions of institutions (Chang, 2007:19).

An ongoing debate in the studies on land, natural resources, and housing is that which is regarding the role of institutional form in relationship to economic performance. Mainstream (economic) theories of development presuppose a straightforward relationship between the two with certain institutional forms—such as formal, private, and titled property rights—regarded as imperative for economic growth. As, for instance, Haas and Jones (2017: 2 and 5) claim:

[S]ecure property rights are believed to raise incomes by encouraging people to invest in both themselves and in different forms of physical capital. (...) There is now a growing body of empirical evidence which reveals how the formalization of property rights—specifically land titling—can raise the level of investment in

developing countries.”

However, the empirical evidence on the assumed relationship between institutional form and performance is often contradictory. Reality demonstrates highly complex, co-existing structures of “institutional informalities and formalities” that have only minimal direct relationship to economic performance.

Let us, for instance, consider the titling of land and what is on top of that land. Some studies ascertained that informal tenure is economically inefficient (e.g., Micelli et al., 2000). In contrast, others furnished evidence that informal property rights are economically efficient, irrespective of whether those rights are measured in terms of investment and income (Pinckney and Kimuyu, 1994; Atwood, 1990), transaction costs (Lanjouw and Levy, 1998), or land value (Monkkonen, 2012). Such findings not only pertain to land but have also been determined regarding housing (Payne, 2009). Case-studies ranging from the United States, Colombia, and Peru ascertained no direct relationship between formal title and economic performance regardless of whether that was

[☆] This research has been partly supported by the China National Science Foundation, project number 71473286 and partly by the European Research Council, RECOLAND GA 282690.

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expressed concerning a mortgage, home improvement, property value, or poverty reduction (Ward et al., 2011; Gonzalez, 2009; King, 2003).

A similar discussion has divided the research over the property rights of tenancy or sharecropping. Under share-tenancy, a landowner (or landlord) allows a tenant to use the land in return for a share of the crop rather than the landowner working and investing in the land. As a result, the division of rural labor becomes fragmented over many individual workers with large(r) farms no longer benefiting from economies of scale. Land tenancy was, and still is, in widespread use over time and space ranging from the post-slavery United States of the 1880s (Reid, 1973) to today's rural India (Lahiri-Dutt and Adhikari, 2016).

From a purely (neo)classical perspective, sharecropping is deemed economically inefficient (Marshall, 1920; Issawi, 1957; Sen, 1966),¹ subject to moral hazard and free-riding (Reid, 1976; Hallagan, 1978) or, at most, a “second-best” institution (Stiglitz, 1974). As such, the system is regarded as an impediment to agricultural modernization which should or would yield to private, formal property over time. Yet, its endurance throughout human history has challenged this view (Byres, 1983). In accounting for its endurance, Cheung (1968) posited that sharecropping is efficient.² His position has been followed and confirmed in other studies (Kassie and Holden, 2007; Bhandari, 2007; Caballero, 1983).

To solve the scholarly paradox between form and performance, this special issue proposes a paradigmatic shift along a dual dimension. One, for a more comprehensive understanding of the role of institutions in development, it is better to forego the focus on institutional form in lieu of function. This postulate accentuates institutions as they exist and studies them in that existence rather than *a priori* labeling or condemning their form. Two, while acknowledging human action (Aligica and Boettke, 2009: 25), it is simultaneously posited that institutions do not arise from willful design but, instead, emerge *endogenously*³ in the interaction with other actors and a spatio-temporally determined context. Differently worded, although actors have, employ, and project their intentions to shape institutions, these are invariably adulterated into something different than first intended due to continuous negotiation, bargaining, and conflict. It is what we term a Dynamic Disequilibrium (see Ho, this volume) which pushes change forward through the continuous destabilization of institutions at any given infinitesimal point in time.

The argument is related to a growing body of literature on the relevance of function for understanding institutional change (e.g., Ho, 2017; Monkkonen, 2016; Miyamura, 2016; Dixon, 2012; Chang, 2007: 19–20; Aron, 2000: 128). In this context, Agrawal et al. (2014: 277) duly noted that empirical studies “demonstrate the difficulty of meaningfully interpreting interventions or their effects from their form alone” and, therefore, “highlight the importance of focusing on how interventions function in specific contexts”. Building on this literature, the Credibility Thesis (Ho, 2014: 14) posits:

“[W]hat ultimately determines the performance of institutions is not their form in terms of formality, privatization, or security, but their spatially and temporally defined function. In different wording, institutional function presides over form; the former can be expressed by its credibility, that is, the perceived social support at a given time and space.⁴”

The contributions assembled in this volume attempt to validate the Credibility Thesis by examining what types of support institutions rally amongst social actors and, if they do, whether that must be considered

as being separate from form. Moreover, the contributions consider whether and how credibility is related to disequilibrium and conflict as well as the degree to which a given function—be it for social welfare, political influence, cultural cohesion, or economic transaction—is considered as a shared arrangement.

This article serves as the overarching framework for the special issue, and is divided into three sections. The first section provides a theoretical review on institutional function and introduces its defining parameters while interrogating the concepts against which it is positioned—in particular, structural functionalism and equilibrium. The review is followed by an empirical section that discusses the various contributions of this special issue with regard to the role of land, housing, and natural resources in development. The final section elaborates on the papers' implications for the credibility theory in terms of its validation and a consistent explanation of three empirical inconsistencies inherent to mainstream economic theory (discussed below).

2. Theoretical review: leaving parsons for lamarck

2.1. The issue with morality in economics

It is virtually impossible to explain development from within a mainstream economic paradigm. One of the significant issues is that it takes human behavior as a personalized subject of study, reasoned and conceptualized from an individual's own institutional habitat. As a result, during the analysis, it is difficult to remain unbiased about that subject and thus to express something about it without making normative statements. Terms such as “second-best”, “perverse”, and “inefficient” are inherently moral. It is why Freeman and Carchedi (1995: ix) noted:

“Official economics, for deep material reasons, is an ideological endeavor. It sanctions what is (...). This lends it a deeply apologetic character.”

The natural sciences appear to suffer substantially less from such problems. It seems ludicrous if an astronomer maintains that the moon is an inefficient or perverse celestial entity as it has not been able to preserve oxygen in its atmosphere or if a micro-biologist contends that a phage is only “second-best” compared to a “best” bacteria. Then, why does it not seem equally ludicrous when someone maintains the same about, for instance, land property rights or housing institutions?

Apart from defending the institutions that are deemed by mainstream economics as being necessary by humankind, another problem might be caused by frustration over the “persisting” and “stagnating” institutions that surround and constrain us. Mainstream economics consequently becomes an instrument to push for change. Activism can be an important, commendable human endeavor to take to the streets in order to engage in a movement and collective action for better wages, human rights, or social equity. This special issue makes no judgment on such endeavors nor is it a plea to condone a certain status-quo or reject formal and private property as a possible arrangement to structure economic transactions. Yet, the contributions in this special issue do caution that there are times when pushing for institutional change will lead to increased conflict and, in effect, can even be extremely harmful for a country's or community's socio-economic fabric.

The contributions also maintain that development is, by definition, coupled to social rupture and cleavage and that institutional change is never a simple matter of oppressed versus oppressors, winners versus losers, or governors versus governed but that all are intricately intertwined in the same *endogenous* game. In effect, what the contributions contend is that institutions evolve from a spontaneous order that transcends the intentions and powers of individual actors and that, from this evolution, this order is essentially conflicting in nature with institutions emerging as the crystallization of economic, socio-political, or cultural functions that actors accord to them in adaptation to the environment.

¹ See the footnote in Book VI, Chapter X.14 (Marshall, 1920).

² Cheung posited this under conditions of competition and no transaction costs.

³ “Endogeneity” in this regard refers to the premise that institutions cannot be designed externally, for instance, by the government, but develop in a spontaneously ordered fashion from actors' multitudinous interactions. See also (Ho, 2013).

⁴ A detailed description of the theoretical underpinnings and positioning of the Credibility Thesis is described in (Ho, 2013).

Based on these principles, the special issue also seeks to identify the conditions under which institutional intervention could perhaps be more successful as well as to precisely identify the circumstances under which such intervention might better be aborted. For this purpose, the Credibility Scales and Intervention or CSI Checklist was developed (Ho, 2017: 245–6). This tool originates from a series of case-studies on the failure and success of resource management and privatization. The cases included cropland, forest, grassland, water and wasteland, and were spread over various geographical locations ranging from China, India and Malaysia (e.g. Nor Hisham and Ho, 2016; Zhao and Rokpelnis, 2016; Ho, 2016; Mollinga, 2016; Ho, 2006; Bromley, 2005). Whereas excellent research has been conducted on the conditions for successful common property management (Ostrom, 2009; Ostrom, 1990), a significantly less-researched question is: what are the pre-conditions that constitute a potential “no-go-area” for formalization and privatization? (Nor-Hisham and Ho, 2016: 1177; Zhao et al., 2017). This is the common, yet, vexing question that also arose from and binds the case-studies.

In seeking to answer this question, the contributions ascertain that the level of institutional credibility is crucial. However, as credibility is an expression of reality's multi-layered, multi-dimensional and co-existing structures of “institutional informalities and formalities” it can never be binary, yet, is by definition positioned on a spectrum or scale. From this follows, in turn, that institutional interventions should not be regarded as binary either, but, equally, as positioned on a scale in which they may appear as complex, co-existing hybrids. Differently worded, interventions are not a simple choice between formal versus informal, common versus private, and titling versus non-titling, but represent a scale that may include a mix of policy tools ranging from prohibition to facilitating, and from cooptation to non-intervention. This principle forms the core of the CSI Checklist, which has been further refined here, both for academic and policy purposes (see Sun and Ho, this volume).

There is a vital, remaining question to be addressed by the contributions: what drives the changes in institutional credibility over time and space? Our special issue argues that the concept of institutional function is important in this regard. Within mainstream economics, the concept of function has generally been neglected. Within sociology, however, the concept was picked up where it gained prominence in the 1950s and 1960s.⁵ Moreover, evolutionary theory—from which the thinking on institutional change in economics, sociology, and political science frequently borrowed—could not do without function. Yet, as we will ascertain in the next sub-section, there are crucial differences in the conceptualization of function in the social sciences vis-à-vis the natural sciences.

2.2. A static interpretation of function

To demonstrate where this special issue is positioned on the idea of function in relationship to adaptation, we will delve into its conceptual past.⁶ Parsons has perhaps become the 20th century personification of what is known as “structural functionalism” in sociology.⁷ In his opinion, society or the “social system” is considered as consisting of various parts each of which fulfils a specific function. An important axiom underlying his work is that society and changes therein are predicated upon static or, at most, dynamic equilibrium. Thus, if the system is disturbed through an external force, it will automatically return to its

original balance (=static equilibrium) or a new equilibrium (=dynamic equilibrium) through specific forces, identified as social roles and approval.⁸ Parsons put forward:

“[T]his maintenance of equilibrium, as we have seen, revolves about two fundamental types of process. The first of these are the processes of socialization (...); the second type are (...) the mechanisms of social control (Parsons, 1951: 324).⁹

In effect, Parsons used function for explaining ‘the stability and ongoingness of systems of interaction’ (Johnson, 1993: 117). It is why his idea of function has also become short shrift for balance and consensus.

To better account for change, conflict, and crisis in a social system otherwise characterized by self-correcting mechanisms towards equilibrium, Merton, one of Parsons' students, introduced a refinement of his conceptualization of function. He proposed a distinction between function/non-function (dysfunction) and intended (manifest)/unintended (latent) functions.¹⁰ However, what he and Parsons did not consider is that social change might not derive from an anomalous, socially disruptive dysfunction, be it intentionally or unintentionally, but from the very nature of society and the economy itself. Thus, rather than being an aberration, the driving forces of human interaction are change, conflict, and instability.

To acknowledge this, Parsons and Merton would have had to discard equilibrium. For some, this is a daunting undertaking as it inadvertently relates to humans' innate fear of and resistance to change and chaos. However, this may possibly be based on a misunderstanding of the essence of disequilibrium. As MIT economist Fisher (1989: 6) worded:

“Instability need not mean explosion but rather a lack of a tendency to converge to a particular equilibrium.”

To account for the apparent cohesion and “persistence” of institutional structures, one need not adhere to equilibrium just as much as one does not need to conform to principles of intentionality and dysfunction to explain for change, conflict, and crisis. It all begins from function in relationship to adaptation, although one must return to its early conceptualization outside of the social sciences to see how it may unite endurance with conflict and change without collapse.

2.3. An evolutionary reading of function

A contemporary of Charles Darwin, French biologist Jean-Baptiste Lamarck (1744–1829), is often (erroneously) remembered for his theory on the inheritance of acquired characteristics.¹¹ However, he also drew attention to the evolution of organs as a measure of their function in the environment. In a Lamarckian view, the use and disuse of an organ or body part determines its survival or extinction. Its form is a result of adaptation over time and inherently represents an

⁵ The notion was first introduced in the social sciences by Herbert Spencer (1820–1903) in his work *Principles of Sociology*.

⁶ This section is not meant to provide a comprehensive overview of functionalism in sociology, rather it focuses on uncovering its main premises in order to contribute to the discussion on function.

⁷ Of course, acknowledging for the fact that he was influenced by the functionalist thought of Durkheim (e.g., 1915) and, as we will see below, accounting for the fact that Durkheim, in turn, was influenced by the theory of evolution and the function of organs developed by Lamarck and published in seven volumes as *Histoire naturelle des Animaux sans Vertèbres* from 1815 to 1822.

⁸ Parsons named this a “boundary-maintaining system” (1951: 23, footnote 7).

⁹ Yet, it needs mentioning that Parsons never discussed a conflict-free system and, as he later added, his concept of equilibrium “does not imply the empirical dominance of stability over change” (Parson, 1951: 39). Yet, Parsons does posit that changes occur in a relatively smooth way (Mayhew, 1982). Due to this postulate, his theory is generally considered as insufficiently capable of explaining phenomena as distributional conflict, social discontent, and revolutions.

¹⁰ As he wrote: “[T]he distinction between manifest and latent functions was devised to preclude ... confusion ... between conscious motivations for social behavior and its objective consequences” (Merton, 1949: 61).

¹¹ When Lamarck is remembered, it is often in reference to his much ridiculed idea that the giraffe's long neck is a result of its behavior of foraging in trees, i.e., the result of non-hereditary (epigenetic) rather than genetic factors. His theory, however, was much more comprehensive and, as Gould (2002: 174, footnote 20) writes: “Lamarck holds a special place as the first (...) to formulate a consistent and comprehensive theory of evolution.” Moreover, recent research is also furnishing increasing empirical evidence for epigenetic evolutionary change, pushing towards a synthesis between Darwinian and Lamarckian theories (see, e.g., Koonin and Wolf, 2009; Por, 2006).

evolutionary history. For instance, the current function of a bird's feather is to support flight whereas, in a distant past, it may have primarily functioned to retain heat on a small dinosaur. The feather thus has a history which is about how adaptation to the environment shaped and maintained the feather for its function in aiding flight or regulating heat (a function that it may still perform for certain birds such as penguins or ostriches). If not, the feather would not have survived to date.¹² Or, in Lamarck's (1809: 113) words:

“[A] more frequent and continuous use of any organ gradually strengthens, develops and enlarges that organ, and gives it a power proportional to the length of time it has been so used; while the permanent disuse of any organ imperceptibly weakens and deteriorates it, and progressively diminishes its functional capacity, until it finally disappears.”

If we apply Lamarckian thinking to the understanding of economy, society, and polity, it may bear a triple significance for the analysis of institutions in general and land-based property rights in particular.

First, it draws attention to change as *part* and *parcel* of institutional adaptation instead of a Parsonsian interpretation of stability, cohesion, and consensus as being inherent to function. Second, by doing so, it underscores institutions as they *are* and the need to question them in terms of what they do rather than *a priori* labeling institutions as inefficient, perverse, or authoritarian when they do not meet the expectations as to what one believes institutions should be. Third, probing into function always requests probing into history. This does not imply that uncovering history is tantamount to understanding function. Yet, it does mean that history is a *condicio sine qua non* to understanding what institutions do just as much as minutely studying the petrified remains of an *Aurornis xui* from the Jurassic period might be crucial to comprehending the function of feathers (Godefroit et al., 2013).

2.4. Defining institutional function

To accord function with an institution is to relate something about what it does for a group of actors whether it is in terms of income generation, investment, trust, social welfare, or security. It also says something about its history: how the institution has come about and what changes it went through, as functional adaptation is an aspect of institutions' developmental trajectory that enhances their survival. That development knows no teleology nor does it have anything to do with progression in terms of second-best or best institutions. Certain institutions intrinsically move to greater complexity as a result of their past adaptations to the “institutional niche” (i.e., space and time) in which they fit. Other institutions do not as they are already optimally appropriate for the environment in which they are positioned. It is the reason why customary village meetings may co-exist with representative, coalition-building democracies as much as why informal irrigation arrangements coexist with governance structures over IT infrastructures and big data.

However, there are three things that institutional function does *not* say. One is that it reaches a steady-state or sequential steady-states. Two, stability, consensus, and cohesion are inherent to function rather than change, conflict, and instability. Three, functional adaptation can be *intentional*. These are assumptions added by Parsons and Merton and were not present in original Lamarckian thought. It is in *divergence* from these three points, as well as from structural functionalism as a body of thought, that the concept of “institutional function” is defined in this

special issue.¹³

Thus, accentuating the functionality of institutions means to begin from conflict as incited by the externalities and social cleavages of economic growth and development. As argued elsewhere, conflict is present in any institutional constellation regardless of its credibility and functionality (Ho, 2014; Libecap, 1989: 2; Coser, 1956: 31). We have now arrived at a point where we may also be able to provide a definition of institutional function as:

The role of a set of rules as it has endogenously evolved in continuous adaption to the environment.

There are several implications to this definition:

- i) It is significant to recognize that function is adhered to a “set of rules” or, otherwise stated, a series of rules. Thus, for instance, a conventional rule that commuters in the subway should stand on the left side of the escalator and walk on the right side if they are in a hurry, therefore, is not perceived as an institution. Contrarily, this rule coupled to those that govern how to board and alight, ignore vagabonds on the trains, and buy tickets is an institution. Similarly, rural sharecropping or communal grazing can be considered as institutions in that they represent a *set* of rules on how peasants and pastoralists minimize environmental and socio-economic risks in collaborative agricultural and animal production. In addition, their operations are also guided through (written and unwritten) internal rules varying from membership, input, allocation, boundaries, and penalty (Ostrom, 1990).
- ii) Function is *endogenous* thus unintentional as institutions are unintentional, and it is emphasized here, as read in a Fergusonian (1782: 1) sense: *not* because actors lack intention but because institutions result from development that inevitably turns out different than intended¹⁴;
- iii) Function means *continuous change* because institutions, as regulatory adjustments to their environment, are in perpetual flux. It is the *pace* of change that varies, i.e., sometimes slow, sometimes sudden and rapid. Difference in speed also entails that what may be perceived as “persistent” or “stagnant” is, in fact, infinitesimal institutional change under a veneer of apparent stability;
- iv) From the above follows that institutions' functions are not predicated on stability or equilibrium of power, resources, or interaction but instead on imbalance subject to incessant bargaining, conflict, and cleavage: the notion of Dynamic Disequilibrium (see the next contribution in this special issue).

In summary, the study of institutional function by no means implies its existence as an absolute truth or economic reality. It is an *a posteriori*, hermeneutic interpretation of the effect of a “set of endogenously shaped social rules” on actors (Ho, 2015: 353). Function can only be interpreted meaningfully after it has been cautiously scrutinized and uncovered as an archaeologist or paleontologist would have done, in effect, an “institutional archaeology”.

Only by describing institutions at different time points—i.e., the proverbial $t_1, t_2, t_3 \dots t_x$ —can we see that institutions do not “persist” and “stagnate” but instead feature continuous change at different speeds. Only by delving into the way that property rights are perceived and

¹² Note also that vestigiality (referring to organs or biological structures that have apparently lost their original function) does not imply that vestigial organs have no function altogether. For instance, in the case of male nipples or the vermiform appendix, scientists have suggested new functions. Moreover, vestigial traits can still be seen as an adaptation as they have resulted from natural selection. In other words, adaptations need not be continuously adaptive, but they were at some point in evolution. See, e.g., (Muller, 2002).

¹³ In so doing, we return to what Williamson (1987: 42) termed a “full functionalism” to develop a theory of selection.

¹⁴ In a footnote, Ferguson—as a stringent scholar—accounts for the fact that his idea was derived from “De Retz Memoirs”. This footnote refers to Jean François Paul de Gondi, cardinal de Retz (1613–1679). In his memoirs, de Gondi, in turn, quotes Oliver Cromwell on the “Fixity of men's designs and uncertainty of their destiny” (Kennedy, 2012). Adam Smith (1776/1776) is said to have been inspired by Ferguson whose notion of the “invisible hand” has become the textbook example of this line of reasoning while Carl Menger (1871; 1883) can be denoted as the 19th Century representative of the concept of spontaneous order. Therefore, the concept of spontaneous order is not quite correctly attributed to Adam Ferguson.

how they differ from formal institutions will we be able to gauge the extent to which they are credible or contested. It is never sufficient to merely maintain that a cadaster's function exists in economic transactions; that informal housing plays a role in social welfare; or that CDOs or Collateralized Debt Obligations cater for speculation in sub-prime mortgages without ever having described the quintessence of the cadaster, informal housing, or CDOs.

3. Land, housing, and natural resources in development: the contributions

Having reviewed the theoretical concepts above that structure this special issue, we will now address the contributions. This collection of papers is divided into the following main sections:

- 1) Conceptual ramifications;
- 2) Functionality and credibility;
- 3) Natural resources and credible use;
- 4) Shifting credibility and conflict.

Each of these is respectively discussed in the sub-sections below.

3.1. Conceptual ramifications

This section includes two papers that address a dual conceptual question ensuing from the introduction:

1. If institutional function takes precedence over form, what does the form of property rights consist of?
2. If institutional change is driven by conflict rather than equilibrium, what is the nature of disequilibrium?

In the debates over institutional form, it is often forgotten what the form of institutions might consist of. If binary classifications of formal/informal, common/private, and titled/untitled land rights do not suffice, what might? In a thought-provoking essay, Davy addresses this question. His paper provides a fine-grained and insightful account of the forms of property rights that follow from function. In so doing, he underscores the pitfalls of trying to understand institutions in dichotomous terms rather than recognizing the bewildering, complex variations that institutions display in their functional adaption to the environment. In his wording:

“After having considered ‘forms’ that might follow the functions of property, we no longer can collapse land rights classifications into dichotomies (such as ‘formal’ and ‘informal’). After form, we must learn to deal with degrees of varying qualities...” (Davy, this volume)

The second theoretical ramification, on disequilibrium, is addressed in the following contribution by Ho. Within a mainstream economics universe, the notion of equilibrium describes a state in which institutions are the balanced outcome of the costs for information, enforcement, and contracting. However, when institutions are dissected in their bare, multi-dimensional, and “poly-rational” (Davy, 2014) essence, an immediate paradox arises: what we describe as solid is actually in flux.

We see the revolutions, rebellions, and wars that upturn the institutional fabric of entire nations and are often quick to analyze and judge them. Yet, we fail to perceive the minute changes in institutional arrangements that occur at any time as a result of actors' ever-continuing bargaining and conflict. What sets the two situations apart is not balance versus change but the *speed* of institutional change. It is this ever-moving nature of institutions that constitutes endogeneity and explains why institutional design evades human intention.

It is exactly these points that are corroborated through Ho's economic historical study that delves into the institutional structure of

China's urban real estate thereby covering almost half a century (1949–1998). Although the Maoist State intended to nationalize all land resources at the time of the Communist take-over, this intention was shaped into something *unintended* through local opposition and conflict *within* and *outside* the state. As a result, the grand nationalization project was protracted over more than three decades with periods of gradual change alternated with sudden shocks. Ultimately, it was only partially completed, leaving land in state hands in the cities and in collective ownership in the villages.

The neo-classical suggestion that efficient property rights can be designed and established by intention begs a tantalizing question. If property rights can be intentionally designed and enforced, why did intentional agents and actors (e.g., the state or government) go to such length in creating something that would appear to be so illogical, inconsistent, and inefficient? The papers in the next section are an illustration of this enigma which, in fact, is not an enigma at all when function is considered.

3.2. Functionality and credibility

In the following section of the special issue, the concepts of function and credibility will be applied to two areas: i) slums and housing and ii) urban land tenure.

Informal settlements and housing in developing countries are frequently captured in terms of economic inefficiency, tenure insecurity, and victimization. The mainstream narratives hold that, when social actors lack formal ownership, they are vulnerable to eviction while they would shirk away from investing. Moreover, slums and shanty towns are also considered as creating significant socio-economic problems.

Opposing this view, Mangin's classical article (1967: 66) describes a set of “standard myths” which include assertions that informal settlements are “chaotic and unorganized” and “festering sores of radical political activity” and, as he correctly observes, the government's general reaction consists of bans and ordinances aimed to “prevent the formation of new squatter settlements by law and ‘eradicate’ (a favorite word among architects and planners) the existing ones, replacing them with housing projects” (ibid.: 66). Today, a half century later, there appears to be little change in this situation.

The first paper in this section examines the institutional dynamics underlying the formation, proliferation, and redevelopment of slums in India. Zhang achieves this through an in-depth political, socio-anthropological case-study of India's most populous urban conglomerate (over 18 million inhabitants): Mumbai. Over the past decades, Mumbai has witnessed consecutive waves of slum redevelopment, the most recent of which seeks to benefit the private sector and increase local revenue. However, as Zhang convincingly demonstrates, this effort fails to account for the credibility of informal settlements, causing popular resistance and adverse impacts on the urban housing and economic systems over the long run.

According to Zhang, the Mumbai slums persist because they fulfill varied functions for different political and social actors. First, for the majority of urban dwellers who are deprived of adequate housing on the formal market, slums provide affordable housing options. Second, as home to a large number of micro-industries and marketplaces, slums play a vibrant role in the urban economy for both the local communities and the city at large. Third, due to the substantial number of slum dwellers in Mumbai and their demand for services, slums have become the “vote banks” for politicians and might possibly critically affect the outcomes of elections. As a result, a virtually symbiotic relationship has emerged between slum dwellers and the Mumbai municipal polity which upholds the informal settlements over the long run. The complicated amalgam of the slums' social, political, and economic functions is aptly described by Zhang as a “city within a city”.

The social welfare function as observed in the Indian case provides the same explanation of why informal housing is considered as being credible in China. Despite the lack of ownership, Chinese rural migrants

and low(er) income urban groups have purchased informal housing *en masse*. It is estimated that one third of Chinese urban housing stock is informal (Li, 2014). Based on a survey of 300 respondents in seven large and medium-sized cities, Sun and Ho's contribution unravels the credibility of informal housing in the economic, social and psychological dimensions.

In economic terms, the low price of informal housing constitutes a prime reason for purchase while buyers spend, on average, approximately thirty percent of a house's value on home improvements and renovations. Importantly, it is regarded as a primary home rather than a property for investment and future sale. In social terms, informal housing provides a first-time, hard-won access to urban facilities such as employment, education, and health care. In psychological terms, the majority of respondents feel they possess ownership while fear of eviction remains minimal. With an application of the CSI Checklist (Credibility Scales and Intervention Checklist), it is demonstrated that the titling of Chinese informal housing has little added value.

In arguing for the desired trajectory of China's land tenure reform, Ellickson (2012: 21) once remarked:

"The Chinese government's resistance to outright private ownership of land may be a vestige of a fantasy that Marx and Engels (...), famously championed in 1848."

In stark contrast to this quote, the paper by Clarke ascertains that the form of institutions is no precondition for economic performance.

Contrary to the presumed ascendancy of private and formal property, Clarke shows how state-owned land in China's cities can be as secure as private ownership and can provide sufficient credibility to the system. His analysis offers an important lesson that the institution of *private use rights* within a regime of *state ownership* can sit well with a real estate market in which land goes to its highest use value, investors have confidence in the market, and economic growth occurs. While others have termed China's urban property rights a "time bomb" of insecurity that needs to be addressed, Clarke duly notes:

"[I]t is difficult to take seriously complaints about imminent homelessness from a propertied class that has had seventy years' advance notice of the loss of possessory rights. Thus, the complaints can be seen not as reflections of any inherent lack of clarity in the law, but instead as a move in the ideological struggle of current land use rights holders to extend their claims" (Clarke, this volume).

Mengistu and Van Dijk lead us from urban China towards urban Ethiopia. Despite insecure tenure rights and government crackdowns on real estate developers, the macro-economic statistics of the Ethiopian economy have showed a sustained growth. According to the World Bank and the International Monetary Fund, Ethiopia registered over ten percent growth from 2004 through 2012, a substantial proportion of which was driven by real estate.

By critically examining the case of the Ethiopian capital, Addis Ababa, Mengistu, and Van Dijk demonstrate that, in spite of the insecurity of tenure and a state-dominated land market, real estate developers devised ingenious, cost-effective methods to access land. Rather than becoming involved in expensive public auctions and formal leases, property developers informally turned to other developers. It was found that over two thirds of them had employed informal transactions to gain access to land.

3.3. Natural resources and credible use

The third section of the special issue contains two articles that examine credibility with regard to the use of natural resources and, more specifically, in relationship to mining and land-enclosed water rights.¹⁵

¹⁵ Thus, we are not examining open seas and oceans but land-based water resources used for drinking, irrigation, and/or industrial purposes.

In the first paper, Fold et al. explore the institutions that govern the practices of actors involved in unregistered, artisanal mining in different quarry sites in Accra, Ghana. A complex mix of private individuals, traditional rulers, and public authorities owns the land where the quarry sites are located, and these sites expand or contract according to the shifting preferences of the owners. Fold and his co-authors document relative stability in the self-imposed regulatory rules and mechanisms for production and trade in all of the sites despite some variability in maturity of the quarry (i.e., the year of establishment) and the nature of the resource (accessibility and quality).

The authors contend that the endogenously consolidated practices over time and space represent a stable and adaptable institutional environment for the informal activities "outside" of the domain of private and public (formal) institutions. The institutional framework is highly functional as it simultaneously serves to provide income opportunities for the poor, stabilizes the supply of a product that is in high demand by private house builders in the metropolitan area, and ensures that quarrels among the artisanal miners are solved before they develop into actual conflicts. Hence, credible institutions have been developed as the participants involved—and society, in general—accept the regulatory framework although it is not legally formalized, egalitarian, or conflict free.

The following paper by Gomes and Hermans examines the institutional dynamics of access to drinking water in Khulna, the third-largest city of Bangladesh. In this setting, two case studies—Matumdanga and Phultala—are elaborated on. The case-studies support the concept that institutional function is spatially and temporally defined. In Matumdanga, formal institutions lack credibility as these have repeatedly failed to improve drinking water access while actors continue to rely on informal institutions to manage local water needs. Over time, urbanization gives way to new (formal) institutions but does not guarantee institutional credibility if communities continue to rely on informal institutions for accessing drinking water. In the second case, institutional function is demonstrated through the resolution of a peri-urban dilemma. In Phultala, urban water supply projects created competition over groundwater resources. Initially, peri-urban actors responded via informal platforms, however, access to water resources were eventually secured by escalating the issue to a formal arena and resolving it through legal channels. Although this did not result in (formal) institutional change, credible institutions were invoked to challenge the project's legal basis and safeguard Phultala's drinking water.

3.4. Shifting credibility and conflict

The final section of the special issue returns us to disequilibrium. Contrary to Walrasian equilibrium under which institutions can achieve a steady-state or balance, disequilibrium holds that institutional change is contentious and conflicting. That is *not* to say that disequilibrium is equal to instantaneous collapse. Yet, it is to say that conflict as a critical signifier of continuous institutional change is present in any property rights arrangement — whether it is credible or non-credible.

The contribution by Zeuthen studies a case in which the Chinese state's intentions to protect a set of institutions that was formerly functional actually leads to declining institutional credibility. When former rural areas become urban, the function of the land changes and the institutions regulating the access to land will usually change correspondingly. Through the study of a large urbanization scheme on the outskirts of the city of Chengdu, however, Zeuthen finds that the state's protection of peasants' access to land has resulted in a situation in which there is less room for incremental endogenous institutional change in the urbanization processes. These "frozen", state-protected rural institutions are thus not credible. The arisen situation entails that the opportunities provided by the access to arable land are maintained. At the same time, however, the exclusion of locals from the bargaining process over the institutional landscape implies that new opportunities

that were provided by incremental institutional change in earlier, less state controlled processes of urbanization failed to materialize.

The closing contribution by Pils examines an important and much debated source of distributional conflict in Chinese land and housing: evictions due to rent-seeking and urbanization. Over the years, China has witnessed frequent disputes due to expropriation, urban sprawl, and city redevelopment (Zhu and Ho, 2011; Hsing, 2010; Lin, 2009). Pils' paper begins with the premise that the neo-liberal argument for secure property rights not only erroneously predicts that private property is a necessary precondition for economic growth but that it is also inherently reductionist in its aim to limit the value of rights to their assumed (economic) utility.

She subsequently examines discourses by the state, evictees, and lawyers that are invoked in relationship to expropriation. It is shown how the latter employs, yet simultaneously transcends, the state discourse around *liyi* or interest and evolves into a broader paradigm around *weiquan* or rights' defense. In doing so, evictees and lawyers consciously and willingly challenge the spaces tolerated by the Party-state while taking self-protective measures of dissimulation reflecting this awareness. Analyzing social norms and values as encoded in the Chinese *weiquan* discourse is critical as it helps in gaining a better understanding of the overall functionality and credibility of institutions over time and space.

4. Three empirical inconsistencies: implications for theory

As ascertained at the beginning of this article, an enduring endeavor of mainstream economics revolves around the question of how institutional form is related to performance. The assumption that form is adhered to performance has spawned innumerable studies and intricate modeling to uncover the (cor)relation between the two. It has also led to an almost obsessive interest in the teleology of institutions—the notion that there is a predetermined sequence and ultimate stage in institutional change unfolding from inefficient, customary, and informal arrangements to efficient, private, and formal arrangements.

In this context, the mainstream economic assumption portrays institutional change as a process from which X follows from Y based on Z whereby X is defined as the rise of economies; Y as efficient organization, i.e., formal, private, and secure institutions; and Z as the commitment of the state to Y.¹⁶ When no development occurs it is caused by the fact that institutions do not change which is a consequential result of the lack of state commitment to formal, private, and secure property rights. Yet, when trying to validate this paradigm, major empirical inconsistencies arise. The various contributions on land, natural resources, and housing testify to this.

For one, it is shown that certain institutional forms that—out of theoretical prediction or orthodoxy—should *not* lead to economic growth, evidently *do*. The phenomenon is, for example, demonstrated by Clarke with regard to the allegedly “insecure” land lease in Chinese cities as well as by Mengistu and Van Dijk in relationship to the real estate market in Ethiopia. The signaled, first inconsistency thus casts serious doubt on the assumption that the rise of economies (=X) follows from formal, private, and secure property rights (=Y).

The second inconsistency in the mainstream assumption on institutional change concerns the nature of efficient organization. The special issue maintains that “Y” (or formal, private, and secure property rights) is not binary but demonstrates infinite variations and degrees of formality, security, and privatization. It is this Continuum of Form that Davy's paper reveals through his critical deconstruction of the widely accepted, yet problematic, interpretation of property along a quadruple dimension: i) a shell for ownership; ii) sources of law; iii) a formal right in a legal system; and iv) a standardized bundle of rights.

¹⁶ A typical example of this line of reasoning can be found in (Newman and Weimer, 1997: 252).

The final inconsistency concerns the commitment to efficient organization (=Z), or worded differently, the willingness and ability of the state to exogenously design and consequently enforce new “rules of the game”. In contrast, this special issue demonstrates that institutions are endowed with their own momentum in which the state—as only one of many other actors—is invariably drawn into. Institutions arise, thrive, wither, and vanish in a fashion that evades human intention albeit shaped by it. The endogenous nature of institutions entails that they are propelled forward by destabilization rather than stabilization and constitutes a dynamic, ever-moving disequilibrium. This dynamic is reflected and analyzed in the contributions by Ho, Zeuthen, and Pils.

When contemplating the triple inconsistency of the mainstream assumption, we have also found our answer to the extensively studied question on the relationship between form and performance: it is irrelevant. The crux in accounting for the three inconsistencies lies in understanding how institutions function, not in the manner in which they appear. In this context, we should note that economic growth is merely one and, in fact, a highly limited measure of the way that institutions work.

Function exists in many dimensions. So much is obvious from the complex organization of labor, production, and marketing in small-scale, artisanal mining in Ghana (paper by Fold et al.) to the same extent as it is evident in the way that informal property rights provide Chinese low(er) income groups with affordable housing and access to urban facilities (Sun and Ho). It can also be witnessed in the manner that peri-urban actors in Bangladesh sought institutional solutions to secure groundwater resources from urban service providers (Gomes and Hermans) or how slums in India's Mumbai serve as “voting banks” and hubs for industrial and commercial activities including recycling, pottery-making, leatherworking, and food trade (Zhang).

In the past, the focus on function in the social sciences has been criticized—virtually ridiculed—as being deterministic. Williamson (1987: 42) dubbed it as a form of sanctioning that “all is for the best in this best of all possible worlds”. Yet, when criticism is taking shape as ridicule there might be more at stake than a mere difference of scholarly opinions. What is at stake is, in fact, no less than a clash of paradigms, and it might be good to become aware of that as it is tied to the norms and values of how we believe our surrounding universe should appear; how we are trained to see it; and how we are supposed to study it.

For one, labeling highly diverse institutional forms as something that they are not—a binary matter categorized as formal/informal, private/common, or titled/untitled—and relating these to GDP, prices, or transaction costs is an exercise that will most likely fail. Econometric models can be effective when one aims to validate the effect of a clearly circumscribed independent variable on an equally circumscribed dependent variable. However, when variables are disorderly, undefined, and posited on a *continuum* rather than being dichotomous and binary and when they are endogenous rather than being causally bound as X and Y is when it becomes necessary to resort to a new type of research and modeling that is closer to empirical reality as was also argued in a recent, influential article (Farmer and Foley, 2009).¹⁷

Let us revert to nature once more. Some individuals have voiced objection to evolution and have stated that it is too unlikely that life, in all its complexity and apparent design, emerged by mere chance. It is ascertained that the odds are so low of life having arisen without an intentional agent guiding it that it would be illogical not to infer some “intelligent designer”. However, in the face of accumulating evidence over the decades—ranging from fossilized artefacts and mitochondrial DNA to co-evolving species over generations and bacterial adaptation in hours—it becomes increasingly difficult to deny the spontaneous essence

¹⁷ It is why, for instance, agent-based modeling, which allows for *endogeneity* and the *infinite variety in institutional forms*, would be a much more effective model than an econometric regression. This is what is meant by the statement above regarding dealing with a clash of paradigms.

of evolution.

Then why would positing the same principle for institutional change incite criticism of determinism? The answer is morality. Although describing the existence, persistence, and extinction of species may, analytically, be on par with the analysis of the existence, persistence, and extinction of institutions, things become complicated when examining apparently “disorderly slums”, “insecure lease”, and “extortive mining”. Things become even more complicated for those venturing to extend the analysis to the rules of the game that govern the Sicilian Mafia (Gambetta, 1993), corrupt Chinese party officials (Wedeman, 2012), or dictatorial Middle-Eastern regimes (Hale, 2013). In this context, Rosenbloom (2009: xv) rightfully spoke of a “mixed bag” from “functional and normative perspectives”.

However, we need to be clear at this point. The paradigm change propagated by the credibility theory is as deterministic, or as *little* deterministic, as positing evolution as a spontaneous process of natural selection and functional adaptation rather than of intelligent design by a metaphysical entity. What the credibility theory aims for is to explain and predict the formation and performance of institutions in ways that mainstream economic theory could and cannot. In this endeavor, it also poses to others the task to prove it wrong, not with ridicule but through scientific falsification. The thorough analysis and rich empirical findings of the papers assembled in this volume have clearly established the confines within which such a task should take place. The theory would fail, and solely then, if one can ascertain the existence of any complex institution—be it Chinese land lease, Ghanaese artisanal mining, or Indian informal settlements—that could not possibly have been formed by numerous, successive, and endogenous functional adaptations.

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