



The Credibility Thesis, a decade onwards: A review of the theoretical field, findings and future

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ABSTRACT

Research on land use policy has been vexed by the pivotal question of which institutions achieve credibility. Scholars have been split as it has been difficult to assess credibility. To provide a solution, an alternative theory pushed forward a renewed understanding of the question why some property rights succeed while others fail. At its heart is the axiom that Form – be it private/public, secure/insecure or formal/informal – follows from Function. This position – aka the Credibility Thesis – has propelled a fundamental change on the study of land, housing, settlements and resources evidenced through a steady stream of publications. Building on this literature, this collection reports several findings: 1) theoretical – credibility revolves around maintaining *congruence* between the function of institutions; 2) methodological – credibility can be measured via conflict, perceptual divergences and shifts over time; 3) empirical – institutions tend to change when functional congruence is disregarded while enduring when it is safeguarded. The findings cover different geographies (ranging from India and Ethiopia to China and Colombia) demonstrating the theory's applicability. The collection ends with a double treatise; one pointing out like-minded bodies of thought with reference to Elinor Ostrom and another identifying quandaries that research must consider. To appreciate the collection's main thrust, this introduction leads it off by reviewing 10 years' research on the Credibility Thesis in terms of the field, findings and future.

1. Introduction: From form-performance to new theory?

How can a forest or pasture be sustainably managed as to gain support from its users? Can titling urban slums better protect its inhabitants against forced eviction? Is formal land lease better for rural livelihood than informal sharecropping? These tantalizing questions touch on a heavily debated theme of land use policy: the credibility of institutions. Differently worded, they deal with the aggregate, perceived support that the “rules of the game” (North, 1990: 3) governing land, settlements and resources garner amongst socio-economic and political actors.

From an orthodox economic perspective, it is assumed that credibility is a measure of a desired institutional Form. Seen from this perspective, *private*, *formal* and *secure* institutions are key to credible performance whereby, respectively:

- Private property is defined as individually owned and excludable;

- Formal property as codified in law or official rules;
- Secure property as long term and free from intervention.

Instances of this line of thought abound. Consider, for instance, the claim by Haas and Jones (2017: 5):

“There is a growing body of evidence which reveals how the formalisation [=Form] of property rights... can raise the level of investment [=Performance].”

Their claim distinctly reflects the Form-Performance assumption, asserting that certain desirable forms (here: formalisation) cause credible performance (raised investment). The Form-Performance assumption also surmises the contrapositive: *non-desirable* forms (i.e. informal, insecure and public institutions) cause *non-credible* performance (dampened growth, reduced investment or degraded ecology).¹ As an official-turned-scholar at the United States Environmental Protection

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¹ Notably, both variants of the Form-Performance assumption – the positive and the contrapositive – have been persistently mooted over decades (Demsetz, 1967; Micelli et al., 2000; Ellickson, 2012; Haas and Jones, 2017).

Agency described the relation between resource use and sustainability:

“Wherever we have public ownership [=Form] we find overuse, waste, and extinction [=Performance]; but private ownership [=Form] results in sustained-yield use and preservation [=Performance]” (Smith, 1981: 444).

Yet... there is an immediate problem with the assumption on Form-Performance: it is excruciatingly difficult to validate (Ghorbani et al., 2021; Cronkleton and Larson, 2015; Boone, 2012; Reerink and Van Gelder, 2010; Meinzen-Dick and Mwangi, 2009; Benjaminsen et al., 2008; Do and Iyer, 2008; Jansen and Roquas, 1998). It is important to recognize that this difficulty at validation features in different dimensions: formal *and* informal property; land, housing *and* resources; the Global South *and* the Global North. Let us examine each of these.

For starters, studies have shown that there is no straightforward relation between formal property and performance irrespective of whether it is measured through access to credit, home improvement or the alleviation of poverty (Ward et al., 2011; Gonzalez, 2009; King, 2003). Studies have also demonstrated that informal property can be equally credible as formal property as expressed through higher prices (Monkkonen, 2012), lower transaction costs (Lanjouw and Levy, 1998) or elevated investments (Pinckney and Kimuyu, 1994). Furthermore, these findings have been consistently ascertained for *different* resources and assets, that is, land (Boone, 2012; Atwood, 1990), housing (Zhang, 2018; Payne et al., 2009) and natural resources (Fan et al., 2019; Molinga, 2016).² Lastly, irrespective of whether one considers the Global North vs the Global South (Easthope et al., 2020), the United States vs India (Ward et al., 2011; Lahiri-Dutt and Adhikari, 2016); Israel vs Bangladesh (Tzfadia et al., 2020; Gomes and Hermans, 2018); or Great Britain vs Ethiopia (Sheppard and McClymont, 2020; Kassie and Holden, 2007), validating the Form-Performance assumption is strenuous, if not, a sheer impossibility to accomplish.

An immediate question breaks to the surface: Why? What frustrates verifying a straightforward relation between institutional Form and Performance? Research has suggested that the answer may lie in a faulty paradigm on which the assumption has been built. As Oxford-based economist Aron (2000: 128) noted, analyses that “merely describe the characteristics or attributes” of institutions (i.e., Form variables) fall short because, instead, it is the “performance or quality measures” (i.e., Function variables) that are plausibly more important. It is vital to pause, and let sink in what Aron and with her, many others imply (e.g. Agrawal et al., 2014; Chang, 2007): the assumption between Form and Performance cannot be validated, because the way how we understand institutions may not be what they are.

In aiming to solve the paradox, an alternative axiom was put forward, which mooted that the difficulty in verifying the Form-Performance assumption stems from the fact that institutional performance is driven by something entirely else: Function. This position has become known as the Credibility Thesis posited in this journal a decade ago:

“...what 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” (Ho, 2014: 13–4).

Shortly after the Credibility Thesis was mooted, its potential for analyzing land use policy was signaled in the *Yale Environment Review*, assessing that:

“Credibility is a powerful metric” and “has much to offer both the academic and practitioner perspective on... tenure analysis and policy” (Griswold, 2015).

Today, following a decade of research unpacking the paradox of informal, common and allegedly “insecure” yet, surprisingly credible institutions is perhaps an appropriate moment to assess and further its impact. This is the rationale that brings together the articles in this collection, with each of these addressing a vital dimension of credibility, ranging from the persistence of allegedly “inefficient” tenure in India and Ethiopia to the befuddling complexity of land conflicts in Mexico and China.

The articles – each in their own right – examine the conditions under which institutions are either credible or fail to rally credibility. In so doing, they touch on questions of theory (e.g. why do institutions persist? Or, how do non-credible institutions change?); methodology (e.g. can credibility be measured via distributional conflict, differences in perceptions or even satellite data?); and empirics (e.g. why do market-based approaches, such as Payment for Ecosystem Services and Land Value Capture, fail on their stated objectives of social inclusion, equity and sustainability?).

To have a better sense of the articles’ relation, positioning and contribution to the theory, they will be discussed along a triple theme:

- 1) The Field, which reviews the origins and evolution of the Credibility Thesis;
- 2) The Findings, which discuss the main results from the studies on the thesis;
- 3) The Future, which outlines a research agenda in terms of empirical themes, methods and theory.

2. The Field

2.1. Origins and evolution of the thesis

To better understand the central theorem of this collection, it might be helpful to delve into the history of the notion of credibility. Its beginnings as a determinant in understanding institutional interventions can be traced back to the 1970s when the concept of credibility was used to explain the success and failure of monetary policies in the West. The widely flaunted idea was that the credibility of macro-economic policy hinges on the state’s commitment to free markets, privatization and formal property (Kyddland and Prescott, 1977).³

However, a major unexplained paradox in this argument is why institutions fail *despite* the state’s commitment. Even when states commit all their resources, power and leverage to establish private, formal and secure institutions, there are numerous known instances in which these do not lead to greater development, increased wealth, or ecological sustainability. Recent, poignant examples are the exogenously engineered institutional interventions in countries like Afghanistan, Iraq and Syria, which have accomplished little to nothing in altering these countries’ institutional trajectories (Fawcett, 2013; Hale, 2013). Closer to the field of land use policy are the failed attempts at the formalization, privatization and titling of land, settlements and natural resources (Boone, 2012; Payne et al., 2009; Do and Iyer, 2008; Jansen and Roquas, 1998).

This paradox has led scholars to question the extent to which states are able to *exogenously* design and enforce institutions. In other words, can the state as one actor in a complex “game” with others implement the institutions it envisaged? Some would vehemently disagree, as Grabel (2000: 1) observed:

² From a slightly different, yet, comparable angle Zhou et al. (2022) ascertain how “flexible” property rights can well function within a “rigid” state planning system.

³ Keen observers might have recognized the Form-Performance assumption here.

“[C]redibility is always secured endogenously (...) rather than exogenously by virtue of the epistemological status of the theory that promotes it”.

What Grabel apparently suggests is that the state cannot implement institutions as an exogenous, or *external* actor as it were, because once it starts implementing these, it will be drawn into an endless game of negotiation, interaction and conflict with other actors (e.g. political opponents, businesses, activists or civilians). It is an inevitable, never-ending process that, notwithstanding power differences between actors, unfolds in an *autonomous* fashion. That is, even though power divergences influence the process of institutional change (North, 1994: 360–61), they do not determine its ultimate outcome. For instance, while a powerful state may overthrow another as to impose new institutions (let's say a democracy or market economy), no amount of power – militarily, economically or culturally – will suffice to uphold the new institutions when these go against the endogenous flow that had engendered the original ones.

The contention over endogeneity vs exogeneity is the cause of much confusion over credibility, leading scholars to note that “the concept of credibility is not well defined (...) and has received different interpretations by different authors” (Blackburn and Christensen, 1989: 2). For orthodox economists, credibility is a matter of state commitment towards protecting private, formal and secure institutions (Fellner, 1979). Others, however, have argued that commitment by the state is one thing, yet, that how that commitment is received is quite another (Diermeyer et al., 1997). In this context, Pero and Smith (2008: 17) described “credibility” as referring to “peoples’ acceptance of an institution based on their perceptions of that institution’s accountability, representation, legitimacy, transparency, fairness and justice.” As comprehensive as this definition might be, it is perhaps also too long to be workable, let alone, to avoid further convolution. To this end, this introduction suggests something straightforward:

Credibility is the perceived support for institutions at a given time and space.

There are several aspects to this definition. First and foremost, credibility is about *perception*, or more specifically, about the way how institutions are perceived and received by actors (including those who devised them). Differences in perceptions determine the extent to which institutions are accepted, altered or contested, propelling a process of unrelenting interaction and bargaining.⁴ In this sense, related research has also pointed to trustworthiness (Zevenbergen, 2004; 2006). For instance, Koroso et al. (2019: 556) noted that “credibility and trustworthiness signify the nature of the institutions (...) and they reflect the degree of societal support for the institutions.”

Second, credibility draws attention to the meaning of *institutions*. Thus, credibility is not about trust *between people* in the sense of “how social actors trust or distrust each other” (Farrell and Knight, 2003: 539), nor is it about “legitimacy” in terms of conforming to the law (Stillman, 1974) or, inherent to the term’s semantic origins from the Latin *legitimus*, being “lawfully begotten.”

Third, credibility is about *spatio-temporality*, meaning that what has emerged as credible at a given time or place, could be contested at another time or place (although being the very same institution). In this respect, credibility is not about achieving a stable equilibrium, but is in essence, changeable and at times, volatile, and subject to “disequilibrium” (Chen, 2022; Berger, 2009; Fisher, 1989). It is what Nobel prize laureate Gunnar Myrdal (1957: 12) described as a status that is “by itself not moving towards any sort of balance between forces, but is constantly on the move away from such a situation” (see also O’Hara, 2009). Furthermore, time and space refer to a preceding trajectory, an evolution that spawned a credible arrangement. Thus, credibility does

not materialize out of thin air but is the resultant of that what preceded it. It is important to recognize this as this is another source of much confusion over what credibility is or isn’t.

While it may now be clear to the reader that credibility is not about following some institutional recipe, in turn, leading to a predicted performance, it may be less clear that credibility is also not about the impossibility of agency. Some would argue that Grabel’s stance on the endogeneity of credibility implies that human action is futile because states – or any actor – will inevitably see intentions watered down into something else. However, this is a misunderstanding: endogeneity does not exclude agency.

The reason why institutional interventions fall through is because those who pushed them failed to understand what the institutions they sought to replace were doing in the first place. In result, they end up overturning and going against a time and space-dependent fabric that has emerged from a long process of past interactions, bargaining and conflict. Contrarily, ensuring credible institutions entails working with their endogenous flow; it means knowing context while acting accordingly; it implies adapting interventions to conditions which may include action or, equally, letting institutions be, as they already are – in and by themselves – credible...

2.2. The thesis’ underpinnings

Having discussed the origins and evolution of credibility as a concept, it is time to say something about the thesis that has been postulated around it. As the preceding section shows, there is ample research casting doubt on the Form-Performance assumption. Yet, what is missing is a cerebration of the ramifications of that research, a theoretical condensation or conceptual translation of its findings that could guide research in testing whether that what shines through in empirical studies, is also verifiable.

This consideration propelled the formulation of the Credibility Thesis introduced earlier. Whereas the Form-Performance assumption is concerned with the question how different institutional forms perform – be they formal vs informal, private vs public, or secure vs insecure – the Credibility Thesis maintains that this question is not what we should be asking ourselves. Instead, it calls to examine Function, that is, institutions’ spatio-temporally defined role because enquiries into the past, existing, or desired form of institutions have little meaning if not preceded by analysis of what that institution signifies for its users.

The Credibility Thesis propounds a change in the way we look at institutions or a theoretical and methodological shift, if you like, driven by what Agrawal et al. (2014: 277) described as the “difficulty of meaningfully interpreting interventions or their effects from their form alone” towards “focusing on how interventions function”. The thesis takes one of the many alleged empirical “anomalies” as a starting point: the socially supported albeit *insecure* tenure of China’s rural land lease (aka the Household Contract Responsibility System). Despite theoretical predictions that tenure insecurity would frustrate rural development, studies have consistently ascertained sustained support (Kong et al., 2014; Feng et al., 2013; Tao et al., 2009; Yang et al., 2008; Kung, 2000; Quanguo Nongcun Guding Guanchadian Bangongshi, 1998; Kung and Liu, 1997).

This paradox has been framed as an issue of credibility (in Chinese translated as *kexindu*, Li and Zhong, 2020; Yu et al., 2019; Lu and Feng, 2015). In effect, it deals with the question why China’s land tenure with its frequent readjustments can rally credibility. To solve this paradox – and with it, its pendant on the failure of secure, formal and private institutions – it has been suggested to reverse the argument. Rather than positing that privatization (or formalization, for that matter) is a *conditio sine quo non* for development, it is mooted that the structure of property rights is the result of societal evolution. Thus, privatization cannot be simply brought about but can only be incrementally supported when the socio-economic conditions permit (Ho, 2001: 398).

For a theory to hold it is essential that it can be validated. Put

⁴ Wang and Tan (2020) have also shown how bargaining is a key determinant in the way how land property rights are being shaped.

differently, a theory's ultimate test is to observe its predictions in reality; without that, a theory remains a "dead" assembly of assumptions. In this context, the Credibility Thesis put forward concrete predictions for validation:

- One, supplanting an institution lowers credibility, if the function of the (supplanting) institution is *incongruous* with that of the (supplanted) institution.
- Two, institutions endure or persist when their function is *congruous* with the function that actors accord to them.

Note: the thesis does *not* surmise that replacing an informal institution with a formal one invariably leads to lower credibility or vice versa. Some might erroneously believe that to be the theory's thrust: informal, common or insecure institutions rally higher credibility than (and are thus superior to) formal, private or secure ones. This, and it is emphasized, is *not* what the theory posits. Instead, it moots that the key to decreased credibility lies in what can be described as the "functional congruence" between new and existing, supplanting and supplanted institutions. Critically, functional congruence is defined as:

*The match between the performance of an institution's function and resource users' targeted performance of that institution's function.*⁵

In effect, the functional congruence of institutions refers to the quality or state in which their functions or roles coincide or conform to each other. An illustration: suppose an informal settlement functions as a point of access to urban facilities for resource-poor households. If that settlement is formalized without regard for the function it fulfils for urban facilities (employment, education, health care, etc.), its credibility will likely decrease. Precisely this was demonstrated by, for instance, Celhay and Gil (2020), Zhang (2018), and (Sun and Ho, 2018). Contrarily, would formal housing safeguard employment in the cities prior to and after an institutional intervention, credibility will remain unchanged (or could increase). Credibility thus revolves around maintaining *congruence* between the function of institutions, with their form following from that, as lucidly argued by, for instance, Goyal et al. (2022) and Wang and Liu (2022).

A problem of the orthodox Form-Performance assumption is not only that it supposes that form is related to performance, but also, that it is tied to a specific function. Specifically, the assumption believes that private (and by extension, formal and secure) property is tied to an *economic* function, i.e. land or housing intended as a marketable commodity. This is exemplified in numerous claims, such as "if a single person owns land [Private Form], he will attempt to maximize its present value" [Economic Function] (Demsetz, 1967: 355). Or, "the formal property system [Formal Form] is capital's hydroelectric plant" [Economic Function] (De Soto, 2000:47). The assumption never considered nor did it verify whether private property – or any other form of property – could assume alternative functions in other times or spaces.

In contrast, the Credibility Thesis' emphasis on the complexity of institutions as driven by endogeneity, and their function ensuing from that complexity, precludes reductionist, determinist approaches to their analysis. There is no way that function can be established by assuming that it exists "out there" as an *a priori* truth. In contrast, an institution's function needs to be verified through meticulous study using multiple data sources coupled to hermeneutic, interpretative and flexible methods. Speaking with the words of an Original Institutionalist *avant-la-lettre*, the understanding of institutions needs an alternative perspective "by becoming more inductive, or by much verification of results, or by taking over the accredited results of specialists in other fields, notably psychology, anthropology, jurisprudence and history" (Clark, 1927: 221).

⁵ For more explanation on the actual and targeted dimensions of institutional performance refer to Section 3.2.1 on the Formal, Actual and Targeted Institutional Framework.

Let us recapitulate. This contribution began by ascertaining that the study on land use policy is vexed by the question of which institutions can achieve credibility. It subsequently demonstrated that the orthodox perspective (which suggests that institutional forms are tied to a certain performance), suffers from the inability to unequivocally validate its assumption in an empirical sense. In its place, it was suggested – and in line with other scholars' observations, such as Agrawal et al., (2014), Chang (2007), Grabel (2000) and Aron (2000) – to apply an alternative lens by shifting from Form to the Function of institutions. A question emerges: what has this shift yielded in terms of findings and methods? This will be reviewed below.

3. The Findings

3.1. Empirical results

Studies on the Credibility Thesis have verified a range of functions of property going well beyond the catering for efficient, transparent and transaction costless markets. This relates to institutions' roles in sustainability (Fan et al., 2022; Arvanitidis and Papagiannitsis, 2020; Zhao and Rokpelnis, 2016),⁶ public services (Wang and Liu, 2022; Oranje et al., 2020), administrative efficiency and conflict resolution (Goyal et al., 2022; Pérez-Moreno, 2024), distribution of resources and social welfare (Chen, 2020; Sun and Ho, 2018; Zhang, 2018); and social acceptability and cohesion (You et al., 2022; Celhay and Gil, 2020).

Since it was put forward, a growing number of studies has validated the Credibility Thesis through qualitative and quantitative methods, leading to a rapidly growing body of literature, including but not limited to:

- Land (e.g. planning, customary law, lease, evictions, resettlement and tenure) (Fan et al., 2023; Chen and Zhu, 2022; Chen et al., 2022; Tzfadia et al., 2020; Koroso et al., 2019; Wu et al., 2018; Clarke, 2018; Pils, 2016);
- Settlements, built structures and housing (Zhou and Yau, 2023; Zeković and Petovar, 2023; Manara, 2022; Zhou and Yau, 2021; Celhay and Gil, 2020; Oranje et al., 2020; He et al., 2019; Zhang, 2018; McClymont and Sheppard, 2020);
- Commons and common property (Cormeño et al., 2022; Ghorbani et al., 2021; Arvanitidis and Papagiannitsis, 2020; Easthope et al., 2020; Nor-Hisham and Ho, 2016);
- Resources and environment, including forest, grassland, water, minerals, and climate (Fan et al., 2019; Fold et al., 2018; Gomes and Hermans, 2018; Rogge and Dütschke, 2018; Mollinga, 2016; Zhao and Rokpelnis, 2016).

Importantly – not in the least for an inter-disciplinary field as land use policy – research on the Credibility Thesis cuts across disciplines ranging from geography, planning, law, public administration and environmental studies to economics, political science, sociology, and anthropology. Its inter-disciplinary nature is reflected in the journals in which research has been published: apart from this journal, leading outlets such as *Cities*, *Environment and Planning*, *Habitat International*, *Journal of Urban Affairs*, *Environmental Science and Policy*, and *Geoforum*, but also *The Journal of Peasant Studies*, *Asia Pacific Business Review*, *Review of Political Economy*, *Journal of Economic Issues* and *Ecological Economics*.

Last but not least, the Credibility Thesis as an alternative lens for the study of land, settlements and resources has found even application in the Global South and the Global North. Research on the thesis has involved *developing* and *developed* regions across Asia (Bangladesh, China, India, Malaysia and Singapore); Africa (Ethiopia, Ghana and

⁶ The nexus between institutions and sustainability was also highlighted in a paper by Tan et al. (2021).

South-Africa), Europe (Germany, Greece, Israel, Serbia, Turkey and the United Kingdom); North America (Canada and the United States); Oceania (Australia); and South America (Chile, Colombia and Mexico).⁷

In this sense, the validation of the thesis repudiates beliefs that some institutions are characteristic for an “under-developed” Global South. As Portes and Sassen-Koob (1987: 30) described, a belief that “informal economic activities are primarily a feature of Third World economies, (...) presumably destined to disappear with the advance of modern, industry-led growth.” The authors were clear:

“These assumptions, including the identification of informality with conditions in the less developed countries, are wrong” (Portes and Sassen-Koob, 1987: 30)”

Similarly, validating the Credibility Thesis also repudiates the opposite: the assumption that some institutions are exclusive to a “modern” Global North. In this sense, Sheppard and McClymont (2020: 1) noted about Great Britain that “even within a context of extensive government control and relatively well funded state planning apparatus, informal development occurs”, while pointing to a contradiction:

“[I]n a highly regulated, highly developed context, issues of informality are rarely noticed, let alone discussed” (Sheppard and McClymont, 2020: 1).

As shown above, the Form-Performance assumption consists of different variants. By applying the Credibility Thesis, each of these has tested, and could, in fact, be rejected. For one, studies have demonstrated that formal, private and secure institutions often *fail* to deliver positive performance, regardless of whether that relates to urban land lease (Koroso, 2023), formal housing (Celhay and Gil, 2020), secure water rights (Mollinga, 2016), or private ownership (Nor-Hisham and Ho, 2016). In contrast, studies have also ascertained that informal, public, and insecure property rights *can* function and *can* be seen as credible by social and economic actors (Goyal et al., 2022; Oranje et al., 2020; Zhang, 2018; Clarke, 2018).

3.2. Methodological innovations

Examining credibility could not have been accomplished without a versatile set of methods guiding the collection and analysis of data. Institutions are as fluid and pliable as the realities they govern, and in result, the methods to study them, need to be equally fluid and pliable, regardless of whether these methods collect qualitative, quantitative or hybrid data. To meet such requirements, various approaches have been developed and field-tested: 1) the Formal, Actual and Targeted Institutional Framework; 2) the Conflict Analysis Model; 3) Institutional Archaeology; and 4) the Credibility Scales and Intervention Checklist. These methods will be reviewed below.

3.3. The Formal, Actual and Targeted (FAT) Framework

First, institutions can be analyzed through the Formal, Actual and Targeted Institutional Framework, or shortly FAT Framework (Ho, 2016: 1134), which uses perceptual divergences as a proxy for credibility (Wang and Liu, 2022; Pérez-Moreno, 2024; Arvanitidis and Papagiannitsis, 2020; Nor-Hisham and Ho, 2016). To measure credibility, this tool assesses the differences between perceptions of what institutions are *formally* declared to achieve (the Formal), what they *actually* achieve (the Actual), and what actors’ *target* they should achieve (the Targeted) (Fig. 1).

For instance, research on environmental policy in China found that the *greater* the perceptual divergences, the *lower* the credibility. As the study noted:

“...the larger the cognitive differences between the government and residents (...) the more difficult to implement the policy” leading to “uncertain policy outcomes” (Fan et al., 2020: 6).⁸

Note that the contrapositive has also been confirmed: higher credibility is coupled to lower perceptual divergence (Arvanitidis and Papagiannitsis, 2020; Sun and Ho, 2018).

The development of the FAT Framework spanned a period of several years, and started by building on the work by Van Gelder (2010); (2007). He argued that a “tripartite view” on institutions is helpful in understanding the way in which they function, and believed these should include the formal, actual and perceived dimensions. This insight spawned the development of the FAT Framework (Ho, 2016), which since its development has been tested and refined for different sectors, such as to establish the support for nature conservation (Wang and Liu, 2022), land value capture (Pérez-Moreno, 2024), natural resource management (Fan et al., 2019; 2020), urban commons (Arvanitidis and Papagiannitsis, 2020), non-state welfare and utilities (Oranje et al., 2020; Celhay and Gil McCawley, 2020), informal settlements (Zeković et al., 2020), and mega-projects (Nor-Hisham and Ho, 2016). Based on these studies, it can be ascertained that perceptual divergences are a reliable indicator for credibility and the policies that drive it.

3.4. The Conflict Analysis Model (CAM)

Second, credibility can be assessed through the Conflict Analysis Model (CAM) (Ho and Zhao, 2022), an analytical tool which arose out of the need to solve a paradox: how can it be that conflict-generating institutions are credible? The answer is straightforward: any institution, including credible ones, feature conflict. As Libecap (1989: 2) observed, conflict is “inherent in any property rights arrangement, even those with important efficiency implications.”⁹

Having said that, there is the problem of how to measure conflict. Much research focuses on conflict frequency, such as a number of conflicts per month or year. However, one needs to be sensitive to the shortcomings of a sole focus on frequency. An example may clarify. Compare a single dispute involving two people and resolved in a week, with a single dispute involving 1000 people and still ongoing after a year. Although both disputes would count as single conflicts – and are often as such included in official statistics – they can, and should not be equated because the number of actors (two vs 1000 people), the outcome (resolved vs ongoing), and the duration of conflict (1 week vs 1 year) are unaccounted for. Many more examples can be given, yet, this example in itself shows that a narrow conceptualization of conflict may distort the understanding of credibility, and thereby, the understanding of function.

Different from approaches in which conflict is primarily conceptualized in terms of frequency, does the Conflict Analysis Model (Ho and Zhao, 2022) aim for a holistic understanding of conflict, which – apart from frequency – includes additional parameters, such as duration, nature, timing, location, source, intensity, and actors (Fig. 2).

The model is a heuristic tool to which indicators can be added, adjusted, and operationalized according to the needs and specific context of the study. In effect, it is a flexible instrument that assists the researcher to assess variables at play rather than a rigid model in which each indicator must be present. The aim of the CAM is to approach conflict in a multi-dimensional, temporally and spatially sensitive manner by going through a reiterative process of hermeneutical data interpretation.

To date, the CAM has been applied by researchers in *qualitative*

⁸ Similar findings of a higher perceptual divergence in relation to decreased credibility were also reported in, for instance, (Nor-Hisham and Ho, 2016).

⁹ This notion also concurs with Coser’s (1956) argument on the functionality of conflict.

⁷ For references see the preceding review.

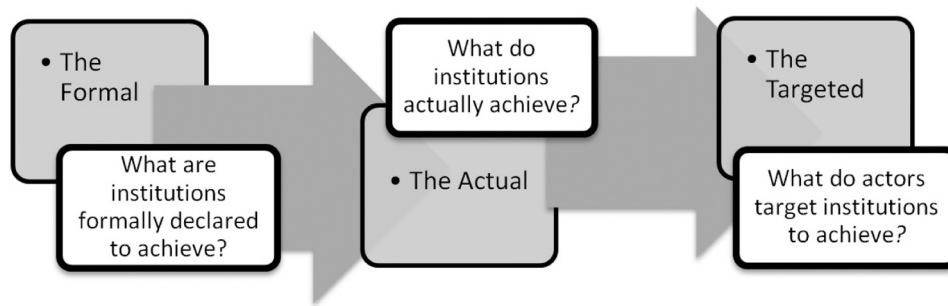


Fig. 1. FAT Institutional Framework (adapted version).

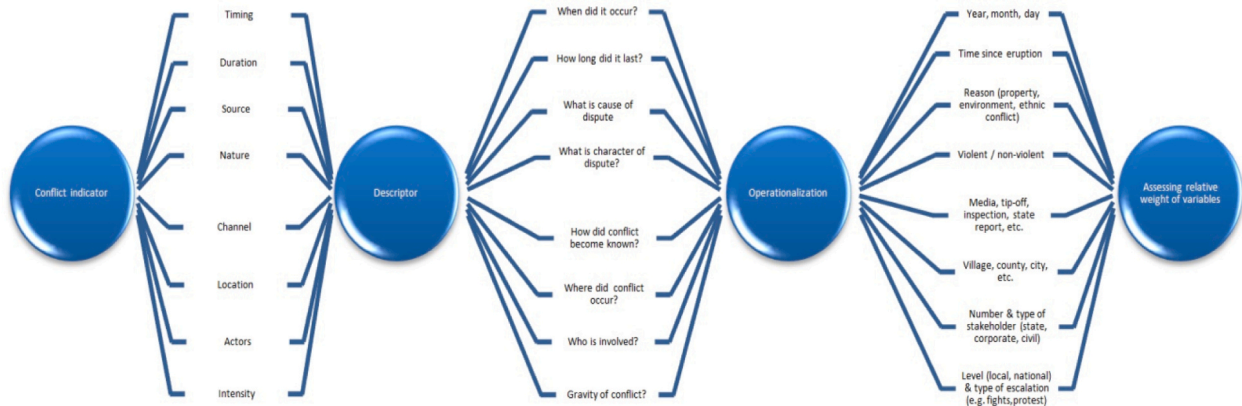


Fig. 2. Conflict Analysis Model (CAM).

Source: Adopted from (Ho and Zhao, 2022). See also (You et al., 2022; Pérez-Moreno, 2024).

studies (e.g. using interviews) as well as *quantitative* studies (e.g. using surveys), and on different issues, such as mining (Ho and Zhao, 2022), urban commons (Arvanitidis and Papagiannitsis, 2020), ecological conservation (Fan et al., 2019), and forest management (Krul et al., 2020). In this collection, powerful illustrations of its use are provided by You et al. (2022) and Pérez-Moreno (2024).

3.5. Institutional Archaeology

Third, credibility can be analyzed via “institutional archaeology” (Ho, 2016: 1126), a method which found its inspiration in Original Institutionalism (Clark, 1927). Picture an archaeologist: excavating artefacts while painstakingly preserving contextual information hidden in the soil to understand the meaning of a historical site. Similarly, does the institutional archaeologist minutely document and analyze data from multiple sources, while cautiously scraping away the layers that cover institutions to piece together their significance. Due to the complex variety with which institutions manifest, there can be no blueprint for conducting an institutional archaeology as it needs adaptation depending on contexts and needs. At the same time, this method does contain core elements that can help guiding towards meaningful investigation.

As Fig. 3 shows, institutional archaeology is based on unpacking the complexity of an institution (“Inst. 1”). It commences with multi-angulation (MA), the pooling of qualitative and/or quantitative data sources, which can be done in time ($T_1, 2, 3...n$; e.g. various years) or in space ($P_1, 2, 3...n$; e.g. at different locations). Simultaneously, the institution can be observed at various levels of analysis (micro to macro; e.g. international, national and local). If done at, for instance, a dual point in time, this will then yield an analysis of two institutions (Inst.₁ and Inst.₂), which subsequently, can be contrasted to show an evolutionary trajectory.

An insightful example of how multi-angulation works is the study by Pérez-Moreno (2024, see his Table 3). As he demonstrates, multi-angulation is not a single, one-time exercise but is essentially a process of alternating induction and deduction (see arrows). In this process, theoretical postulates are grounded through observations, subsequently put to the test, compared to additional observations, and after several rounds when new observations no longer yield new insights, validated, revised, or rejected.

In the context of the above, institutional archaeology has been described as a way to analyze institutions requiring:

“...the identification and mapping of institutional history, change and dynamics either over time or across space. It must be a careful exercise in distinguishing external influences from endogenous changes and identify the appropriate scale for analysis” (Goyal et al., 2022: 3).

To date, institutional archaeology has been applied in a series of studies, encompassing nature reserve management (Wang and Liu, 2022), rural land lease (Goyal et al., 2022), small-scale mining (Fold et al., 2018), wealth inequality and indigenous peoples (Levy, 2016), and rent-seeking within notarial institutions (Monkkonen, 2016). For example, Fold et al. (2018) demonstrated how the function of artisanal mines in West Africa rallied credibility due to a long, bottom-up and endogenous development.

3.6. The Credibility Scales and Intervention (CSI) Checklist

Research on the credibility thesis has repeatedly demonstrated that functionally incongruent interventions tend to fail (Wang and Liu, 2022; Zeković et al., 2020; Zhang, 2018; Pils, 2016). This raises immediate questions: What can be done to avoid such a situation? If it could not be avoided, what can be done to remedy it? The answer to these questions lies in choice or the course of action that confronts decision-makers.

For this purpose, the Credibility Scales and Intervention Checklist or

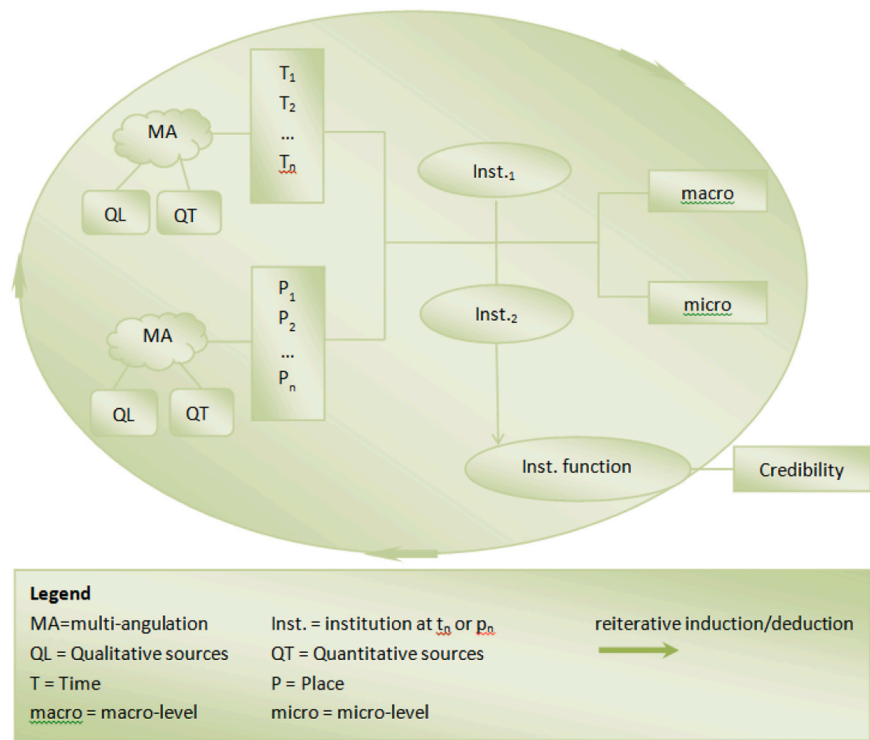


Fig. 3. Institutional archaeology (adapted version).

CSI Checklist was devised (Ho, 2016: 1140), which assesses or helps predicting the success (or failure) of interventions (Table 1). After the level of credibility has been assessed (e.g. via FAT or CAM analysis), the checklist relates credibility scales with policy options. While the former may differ (or shift) from high to low, the latter ranges from interventionist (ordaining/prohibiting) to non-interventionist (condoning, co-opting or facilitating).

The checklist highlights the effects of such measures, which vary from “formalizing what is done” by legalizing daily praxis to “commanding what must be done” through state decrees. Critically, the tool leaves open the option to refrain from intervention when credibility is (or changes into) a higher level. The CSI Checklist should not be understood in definitive terms; instead it aims to support policy analysis by sensitizing decision-makers towards the options at their disposal, which depending on conditions can be separately used or as a hybrid of measures.

Research applying the CSI Checklist described its constituting principles:

“[A]s credibility increases, intervention prescriptions lessen, indicating that for higher levels of institutional credibility the appropriate policy measures should range from co-opting (i.e. formalizing what is already practiced) to condoning (i.e. accepting daily praxis with a ‘hands-off’ approach) (Arvanitidis and Papagiannitsis, 2020: 4).

The study above is an example where the CSI Checklist was employed based on qualitative, ethnographic data. A similar qualitative approach was adopted in the analysis of urban slums in China (Liu and Zhang, 2020). In this collection the tool has been used in the analysis of market-based approaches. Pérez-Moreno (2024) used the CSI Checklist to assess whether Land Value Capture tools have a measurable impact on urban inequality in Latin America. Fan et al. (2022) applied this method in the analysis of Payment for Ecosystem Services in Inner Mongolia. Strikingly, Pérez-Moreno and Fan et al. reach similar conclusions: the

Table 1
Credibility Scales and Intervention (CSI) Checklist.

| Credibility level | Institutional intervention | Desired effect |
|-------------------|----------------------------|--------------------------------------|
| High | Condoning | Accepting praxis by non-intervention |
| Medium high | Co-opting | Formalizing what is done |
| Neutral | Facilitating | Supporting what needs to be done |
| Medium low | Prohibiting | Dictating what shall not be done |
| Low | Ordaining | Commanding what must be done |

success of market-based approaches does not hinge on prescriptions (or the Form) of what market-based approaches ought to be, but rather on whether these measures cater for the Targeted (or the Function) that actors believe institutions should have.

4. The Future

After having reviewed the field and the findings, we will discuss the last area in the research on the Credibility Thesis: the future. What are the vital issues for the upcoming research on credibility, and in what way could these be addressed? In this respect, the contributions of this collection set out (and test) possible future directions: 1) the manifestation of function; 2) methods and measurement; 3) theoretical quandaries.

4.1. Function and its manifestations

French jurist *Duguit's* (1912) formative idea of the “social function of property” provides a rebuke of the primacy of property as playing an economic role, and has been at the basis of the thinking on the Function vs the Form of institutions.¹⁰ At the same time, Duguit’s call for greater attention to the function of property, particularly, the social function of it, leaves questions unanswered: what are the manifestations of an institution’s social function? What causes changes in credibility, and thereby shifts in function? Lastly, can decision-makers enshrine the social function of property in law (or policy), and if so, how?

Goyal et al.’s (2022) contribution delves into the first of these questions, and unpacks the manifestation of institutional function. He and his co-workers demonstrate that India’s rural land tenancy, of which its informal, customary mode of leasing is often regarded as inhibiting development, is credible due to its functionality as manifested along several dimensions: less red tape, easy accessibility, swifter modes of payment and prompt conflict resolution. Importantly, the manifestation of this functionality is perceived by landlords and tenants alike. Their study not only exposes the paradox why “perverse” and “inefficient” institutions endure, it also raises the question whether formalization policies should “realign agrarian support and delivery systems around this embedded informality” (*Goyal et al., 2022: 1*).

The second question – what conditions lead to shifts in functions and credibility – is taken up by *Chen et al. (2022)*. He shows how the emergence of a new, credible institutional innovation in southern China – the Rural Land Shareholding or RLS – resulted from of an endogenous interaction between central institutional openings and local experiments. This interaction spawned the RLS, which led to a more equitable distribution of benefits than hitherto possible under the existing, formal tenure regime. The nation-wide spread of the RLS can thus be attributed to its effective response to credibility problems of the formal rights system, which had caused forced evictions, social contestation, and urban sprawl.

The third question – can the social function of property be included in law and policy – is addressed in the contribution by *Pérez-Moreno (2024)*. Interestingly, the concept of social function was codified in Colombian law, more specifically through a juridical reform that saw it included in the 1936 Revised Constitution. This contribution examines how that inclusion translated into reality, and does so through the lens of an important planning tool: Land Value Capture (LVC), which aims to enable communities to recover and reinvest the increases in land value ensuing from public/private investments and actions. Through a fine-grained analysis of the credibility of LVC the article demonstrates that an implementation that allows for greater endogenous interaction between actors tends to rally greater credibility.

¹⁰ For studies on the inclusion of the social function of property in the post-World War II and post-Apartheid constitutions of Germany and South Africa, see respectively (*Löhnig, 2019*) and (*Coggin, 2021*).

4.2. Methods and measurements

How to establish and measure credibility – irrespective of qualitative, quantitative or mixed methods – are core questions in the research on land use policy (*Fan et al., 2019: 214*). It is evident that a researcher cannot simply go into the field and ask an agricultural worker, artisanal miner or urban squatter: “do you believe the property rights to your land, quarry or settlement are credible?” Not only will the interviewee probably have no clue as to what is asked, but the researcher also runs the danger of returning home with few reliable data on how institutions perform.

What is needed instead is an *integrated* assessment through proxies that can be used to represent credibility. As explained in *Section 3*, several methods to measure such proxies have been developed, and the articles in this collection show how these can be applied. For instance, *You et al. (2022)* employs the Conflict Analysis Model or CAM to study rural land lease. Following the model’s principles on contextuality, the researchers use the CAM adapted to their study by using selected variables from the larger set in the original model. Subsequently, the analysis was applied to a nation-wide database of court cases over 2013–2020. CAM analysis found that conflicts engendered by the termination of the lease contract are related to expropriation, while 90 percent of such disputes occurred between farmers vis-à-vis authorities. The findings show that the CAM can be effectively used to analyze *qualitative* data (i.e. court cases) in a *quantitative* manner (frequencies distributed over different variables). In addition, the findings concur with other studies on credibility and expropriations (*Koroso, 2023; Zeuthen, 2018; Pils, 2016*).

The contribution by *Wang and Liu (2022)* approaches credibility in a radically different, yet, equally viable way as the previous paper. Wang and Liu’s objective is to assess the credibility of administrative changes to improve nature management. To this end, they combine institutional archaeology with the FAT Framework. The result is an evolutionary study over no less than (!) three timeframes *and* four administrative echelons. The combination of an analysis over time (t₁: 1982–1998; t₂: 1998–2000; t₃: 2000–present) with an analysis over space (municipal, county, township and village) has made their study a powerful demonstration of how institutional archaeology and FAT analysis can be pooled to pinpoint how, and why land policies failed.

Similar methodological innovations can be found in the contribution by *Fan et al. (2022)*. Fan et al. are interested in assessing the credibility of a widely used nature policy – Payment for Ecosystem Services or PES. Though often touted as an effective market-based tool, research has signaled numerous problems. Fan and co-researchers posit that a bottleneck of PES lies in its inability to differentiate the perceptions of the Targeted between resource users. To effectuate better differentiation, they used the CSI Checklist. This is important, as those who are targeted by policies often exhibit heterogeneity due to socio-political, financial-economic, or ethno-cultural differences. Better differentiated policies can thus avoid blueprint approaches (or the proverbial Chinese “a single knife cuts all” or *yidaoqie*). In this sense, Fan et al.’s study is a potent example of how the CSI Checklist can be used to achieve this aim.

The contribution by *Koroso (2023)* constitutes a major contribution to the field as a first-time application of Remote Sensing to understand credibility. His study sets out a new research path similar to other pioneering applications such as the use of Agent-Based Modeling (*Ghorbani et al., 2021*) and (endogenous) transaction cost analysis (*Fan et al., 2019*). By using satellite imagery, Koroso examines the effectiveness of the Ethiopian urban land lease under public ownership. His study concludes that the lease system is an “empty institution” that is disregarded by land users on the ground. The low policy credibility is reflected in rampant hoarding, illegal capture, and fragmentation of land. In result, a significant proportion of leased land is left vacant or underused in open contradiction with government policy.

4.3. Theoretical quandaries

A final area for the future research on the credibility thesis concerns the theoretical quandaries awaiting more definitive solution. Although future studies do not need to be limited to these, we have identified a dual area: one, the synergies between Elinor Ostrom's theory of the commons and the credibility thesis (Groenewegen, 2022); two, the controversy of endogeneity vs volition (Vatn, 2023). Let us commence with the former.

4.4. Ostrom, credibility and "who owns the resource?"

In a seminal study, (Elinor Ostrom and Hess, 2007: 32) referred to Ho (2001) noting that:

"[T]he ambiguity of certain property regimes leads a number of researchers to examine 'who owns' various resources."

Ostrom and Hess' observation is relevant, as the study on "who owns" the resource – be it land, forest, urban spaces, or the seas – forms a critical basis for much of the research engendered by the Credibility Thesis. Isn't it that by contrasting an "ideal-type ownership" with that what exists in actuality that the mindboggling variety of property rights is revealed?

In fact, the "who owns" studies irrefutably ascertain that a Western-oriented notion of ownership as an absolute, supreme right has never really existed, not in the "developing" South, and even less so in a developed North (Van den Bergh, 1996: 172). It is by debunking this myth that scholars have been set on a quest to uncover the factors underlying the befuddling complexity of property. It is also this endeavour that sparked the research on the function rather than the form of property.

From its beginnings, the research on credibility has been driven by Ostromian principles of common property, and did so by using the case of an archetypal commons: pasture (Ho, 2000). In this aspect, Arvanitidis and Papagianitsis (2020: 4) noted that "a discourse between the two research programs will enrich and benefit them both." In fact, research has already begun to explore the synergies between the two theories. For instance, Ghorbani et al. (2021) used Agent-Based Modelling to validate whether institutional form follows function in common property (Janssen and Ostrom, 2006). Likewise, by expanding Ostrom's (1990) notion of the commons, Easthope et al. (2020) validated that form follows function by showing that similar urban commons can result in different outcomes for owners, just as different urban commons can result in similar outcomes. By combining Socio-Ecological Systems (Ostrom, 2009) with the FAT Framework, Arvanitidis and Papagiannitsis (2020) demonstrated how common property can achieve credibility while catering for environmental, social and recreational functions. They also enumerated important characteristics why the two approaches can mutually reinforce and enrich:

- 1) "...both reject the mainstream (neoclassical, neoliberal) economics' tenet that private property rights and formal institutions are the right (if not the only) prescription for positive economic performance.
- 2) "...both embrace a dynamic-evolutionary view, focusing on the interactions between players and the actual outcomes produced over time; placing proper emphasis on issues of space and time and the overall conditions (macro level, social-economic-political context) determining the case under study.
- 3) "...both point to the need to unpack institutions (or 'governance structures') looking at informal, social, bottom-up and content-specific solutions to sustainable development.

To the features above, Groenewegen (2022) added another, insightful point: both Ostrom's thinking and the Credibility Thesis are located at the same side of a contentious divide in the study of institutions: that of "intentional design" (or the "blueprint approach")

versus "unintentional emergence" (or the "process approach"). Groenewegen argues that neo-classical economics can be typified as a blueprint approach, which he distinguishes into two variations: a static one represented by Williamson and a semi-dynamic approach suggested by Aoki (who still upholds the neo-classical principle of equilibrium). Groenewegen argues it is vital to recognize that both variations share an orthodox conviction in a theoretically "correct" form of institutions that should be imposed on society by the government.

In contrast to Williamson and Aoki, Groenewegen (2022: 6) ascertains that the Credibility Thesis and Ostrom organically connect on ideas of "self-governance, spontaneous evolution and the creation of credible institutions with a pluralistic and polycentric view of the world."¹¹; The notion of spontaneous evolution, however, poses a dilemma. If institutions arise spontaneously, what role is left for agency? Put differently, where does free will or volition come into the equation if institutions spontaneously emerge rather than being shaped through purposeful design? Earlier in this introduction, attention to this question was already called (Section 2.1), which brings us to the final contribution.

4.5. The controversy of endogeneity vs volition

In discussing the Credibility Thesis in relation to volition, Vatn (2023) adopts an Original Institutionalist perspective as opposed to a Neo-Institutionalist view. His perspective is insightful albeit not fully necessary as volition has not only divided those between schools, but remarkably, those *within* them as well. It might therefore be helpful to discuss volition as an axiom *independent* of any school, and not as an integral principle of a single, coherent body of thought (which in itself is often a mere social construction).

Neo-Keynesianist Duesenberry (1960: 233) once, in jest, stated: "Economics is all about how people make choices; sociology is all about how they don't have any choices to make." He was not correct, though, as the dilemma over volition has not only split economics vs sociology, but split entire disciplines, schools and scholars. The fact that volition pitted original vs neo-institutionalists is well documented.¹² Much less known is the fact that volition divided scholars within Original Institutionalism, and even, within Neo-Liberalism.¹³

Vatn (2023: 2) chooses a side in this divide and argues that actors have agency, and can decide on the form of institutions. In his words, "form is important. It is what we as actors can change (...) it is possible to ensure certain functions by defining specific forms of institutions". He fears that the Credibility Thesis might overreach by precluding volition thereby reducing actors to simple automatons. At this point, however, he takes a interpretation of the Credibility Thesis which it never intended. In fact, the theory does *not* exclude intentionality to replace it with non-autonomous agents.

In contrast, the thesis aims to *bridge* the two positions by positing an "unintentional intentionality" or process of interaction between intentional actors with unintended consequences. To see where and how this bridging takes place, we need to go back to the theory's original underpinnings, which state that "spontaneous order and endogeneity do

¹¹ In certain ways, it could be argued that the two theories also connect at different scales of analysis with common property and communal land being similar albeit at different scales than public land.

¹² In this respect, Groenewegen (2022: 3–4) described that on the one side we find those studying "the 'latitude of choice', his volition, her will, how and to what extent are institutions designed by intention", while on the other side it is a matter of "get the institutions right... and then the selection mechanism of markets will produce the best outcome possible."

¹³ See, for instance, Commons (1924:82), who stands more on the volitional side of the equation as opposed to Veblen (1899: 15), who advocates a marriage between spontaneous order and human intention. Within mainstream economics, the neo-liberalist Hayek (1978) might be cited as a poignant example of someone who used spontaneous order to defend the free market.

not preclude human intention; they are shaped by it inasmuch as human intention is shaped by spontaneous order and endogeneity” (Ho, 2017: 203). Or, emphatically:

“The dilemma between endogeneity and intention and between spontaneous order and human action appears irrevocable (...). However, it would be a misconception to assume that the two positions are mutually exclusive” (Ho, 2017: 244).

The notion of “unintended intentionality” is not meant to divide but to fuse opposing positions, as also described by Aligica and Boettke (2009: 25) and Hodgson (2004: 154–155). The Credibility Thesis, therefore, would not disagree but rather concur with Vatn’s position that one could ensure functions by defining forms of institutions. In effect, there is meaningful space for human action. Thus, advocating, for instance, for social rights, a better environment, or equitable wealth distribution is not only a matter of choice, such acts can also become a matter of consequence.

At the same time, however, by claiming that private, formal and secure institutions inevitably lead to credibility those propagating the Form-Performance assumption fail to grasp an important catch: one must act according to the *context* from which institutional function emerged. Working against that merely leads to contestation that restores the original trajectory on which institutions were positioned. Differently worded, the functional congruence of institutions as it evolves over the ages determines the success of policy interventions; no amount of power – economically, numerically or militarily – will be able to change that. On this crucial note, the research on the Credibility Thesis in general, and the articles of this collection in particular, converge. They share the thesis’ sense of the importance of geographical and temporal context to understand institutions, the need for a keen eye for detail in real times and real spaces, and a deeply ingrained commitment to understand before acting.

CRedit authorship contribution statement

Peter Ho: Writing – original draft. **Jaap Zevenbergen:** Writing – review & editing. **Rong Tan:** Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

No data was used for the research described in the article.

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