Formal Institutions and the IAD Framework: Bringing the Law Back In

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Abstract

Elinor Ostrom's IAD framework has been described as "one of the most developed and sophisticated attempts to use institutional and stakeholder assessment in order to link theory and practice, analysis and policy." But not all elements in the framework are yet sufficiently well-developed. This paper focuses on one such element: the "rules-in-use" (a.k.a., "working rules"). Specifically, the paper begins a long overdue conversation about relations between formal legal rules and "working rules" by offering a tentative typology of relations. Type 1: Some formal legal rules equal or approximate the working rules; Type 2: Some legal rules plus widely-held social norms equal or approximate the working rules; and Type 3: Some legal rules bear no evident relation to the working rules. Several examples, including some previously used by Lin Ostrom, are provided to illustrate each of the three types, which can be conceived of as nodes or ranges along a continuum. The paper concludes with a call for empirical research into which of these types of relations is more common than the others in various circumstances.

Key Words: IAD framework, institutions, law, working rules, social norms, monitoring, enforcement

Introduction

The Institutional Analysis and Development (IAD) framework has been described as "one of the most developed and sophisticated attempts to use institutional and stakeholder assessment in order to link theory and practice, analysis and policy" (Aligica, 2006, p. 89). According to Nowlin (2011, p. 44), it remains "the only major policy theory or framework to be based on institutions." Imperial and Yandle (2005, pp. 501–503) observe that the framework has proven "useful in understanding a wide variety of institutional arrangements in both developed and developing countries." It avoids many of the "pitfalls" encountered by other approaches to institutional analysis by emphasizing "the careful consideration of contextual factors" as well as "the full range of transaction costs." Consequently, "it contains no normative biases and does not presume a priori that one type of institutional arrangement is preferred to another. It also uses a variety of criteria to assess institutional performance."

But the IAD framework is not perfect. It suffers from notable weaknesses, including for example, the underdevelopment of "Evaluative Criteria" and, of direct relevance to this paper, its failure to explore the complex relations between formal legal rules and "rules-in-use" (or "working rules"). Sometimes, those two categories of rules seem to overlap completely. At other times, they seem to differ significantly. And at least occasionally, they seem to bear little or no relation to one another. The purpose of this paper is to begin a process of exploring the variable relations between legal rules and "working rules."

The first section of this paper introduces the IAD framework and explains a bit of its historical development. The second section focuses on the role of formal and informal rules in the IAD framework. The third section, then, offers a tentative typology of relations between formal legal rules and the "working rules" of the game. The paper concludes with a call for

further (qualitative as well as quantitative) empirical research concerning the relations between formal legal rules and "working rules," including the social and legal *processes* that influence or determine those relations.

The IAD Framework: Its Function and Evolution

Originally developed in the 1980s by Elinor Ostrom and colleagues at the Workshop in Political Theory and Policy Analysis at Indiana University, the IAD framework as it stands today is the product of several important influences. Foremost among them are the political theories of Ostrom's husband and partner, Vincent. Virtually all of the elements of the IAD framework can be located somewhere in Vincent Ostrom's writings, often before Elinor Ostrom systematized them within the framework. This includes the conception of multiple levels—constitutional, collective, and operational—of social interaction (see, e.g., V. Ostrom, 2009). Vincent Ostrom even used the phrase "Institutional Analysis and Development" (V. Ostrom, 2012, p. 181) in the title of one of his papers before Elinor Ostrom adopted it as the label of her analytical framework.

The first iteration of the, as yet, untitled IAD framework is found in Kiser and Ostrom (1982). Seven years before that, Vincent Ostrom already had highlighted the importance of "boundary conditions" for local collective action (V. Ostrom, 1975a, p. 781) and sought to identify "patterns of interaction" (V. Ostrom, 1975b, p. 846). In a 1977 article, he referred to "evaluative criteria" (V. Ostrom, 1977, p. 1515). In an unpublished 1983 paper, Vincent Ostrom referred to "action situations" (p. 43). I do not mean to suggest that Vincent Ostrom deserves as much or more credit than Elinor Ostrom for the design of the IAD framework—she's the one who put it all together—but his conceptual contributions to the apparatus were substantial and too often overlooked.

A second important influence on the development of IAD over time was Elinor Ostrom's increasing engagement with game theory, especially after her semester studying with Reinhard Selten in Bielefeld in 1981. It is easy to see this influence in the very structure of the IAD (below), with actors in positions, entering into social interactions with their own strategies (as well as ethics and ideas), and operating under sets of rules that structure "the game." The "action situation" might as well be, and sometimes is in fact, a "decision node" in an iterated game. And in the IAD framework, just as in the theory of games, jointly produced outcomes from social interactions affect the material welfare of the actors.

The Structure of the IAD Framework

The IAD framework evolved significantly over time. Figure 1 might be called the "standard version," because Ostrom used it in her most complete explication of the framework (E. Ostrom, 2005, p. 15) and regularly thereafter (e.g., E. Ostrom, 2010, p. 646). As in most versions of the IAD framework, the centerpiece is the action situation, where individuals meet in social fora, establishing patterns of interaction that generate outcomes for those individuals, as well as social and ecological effects. An actor enters an action situation with her or his own position (citizen, seller, buyer, litigant, judge, etc.), information, strategy (conditional cooperator, rent-seeker, free-rider, etc.), and behavior, all of which are to some extent shaped by existing biophysical conditions, the attributes of the community in which they live, and the "rules-in-use."

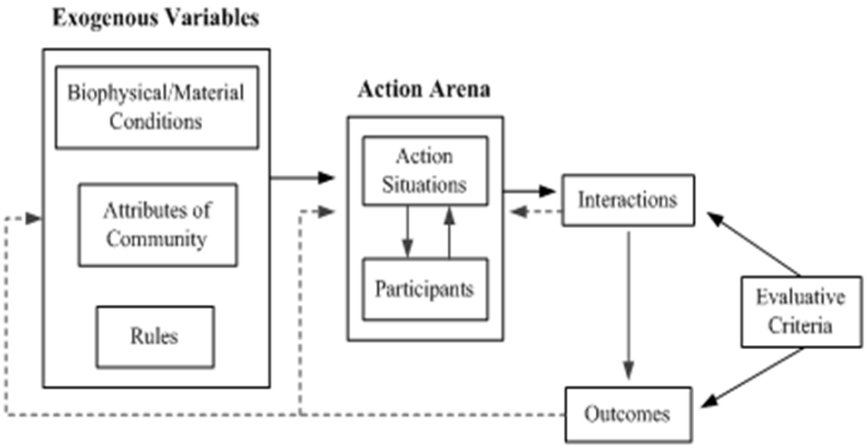

Figure 1. Basic Components of the IAD Framework
Source: Ostrom (2005, p. 15, Fig. 1.2)

In this standard version of the IAD framework, Ostrom unfortunately refers to the variables preceding the action situation as "exogenous." In fact, those variables are endogenized to the framework by virtue of the feedback loops from the Outcomes box, in recognition that patterns of interaction can and do effect biophysical conditions, community attributes, and "rules-in-use." It would be more appropriate to think of those variables as the "Social and Ecological Context" or "Conditions Precedent" to a focal action situation.[1]

Constitutional, Policy, and Operational Levels under the IAD Framework

One of the unique features of the IAD framework is its utility across a wide range of social settings, including markets, courtrooms, corporate boardrooms, clubs, faculty meetings, and family dinner table, and at different levels of social choice, including: constitutional-level choice, with constitutional rules as outputs establishing the meta-rules of the game; policy making,[2] with laws and regulations (enacted in compliance with the constitutional rules) as outputs establishing rules; and patterns of interaction among individuals in their ordinary

(operational-level) dealings in society in accordance (or not) with various constitutional and legal rules. Choices made at each level have outcomes (in addition to outputs) that can affect the biophysical conditions, community attributes, and "rules-in-use" at other levels. Figure 2 illustrates the relations between levels of choice, rules, and outcomes.

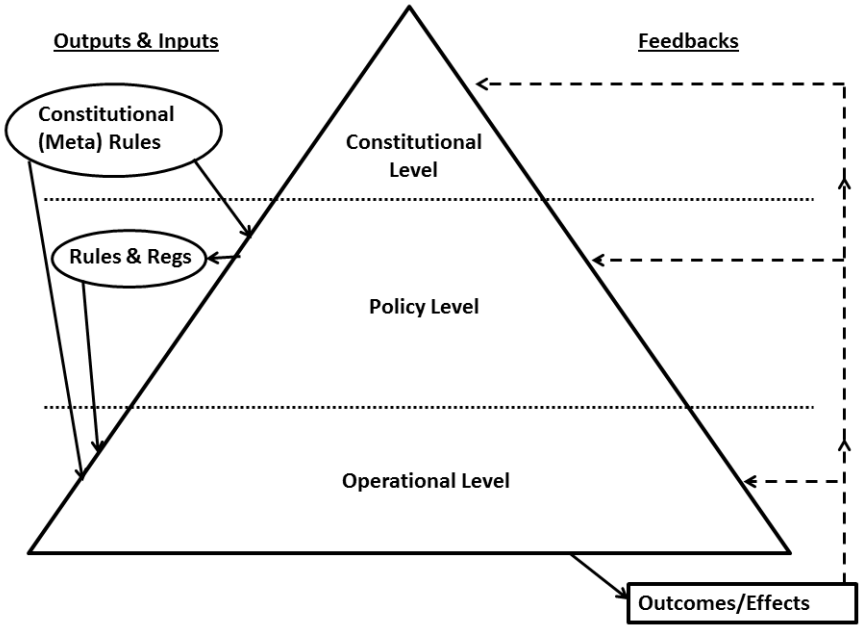

Figure 2. Levels of Social Interaction.
Source: Adapted from E. Ostrom (2005, p. 59, fig. 2.3).

To illustrate the crosscurrents across action situations at various levels, consider the case of "Prohibition," a massive but failed effort at social engineering undertaken in the United States between 1920 and 1933. The Eighteenth Amendment to the U.S. Constitution, which took effect on January 16, 1919 (subsequently amended as of January 17, 1920), prohibited the production, transport, and sale (but not the private possession or consumption) of alcohol throughout the country. It was the outcome of a "constitutional action situation" driven by a coalition of

"Baptists and Bootleggers," as they are known among Public Choice scholars (see, e.g., Yandle, 1983).

The U.S. Constitution provides two separate sets of procedural meta-rules (i.e., rules for establishing rules) for its own amendment: Under Article V, the Constitution is amended when three-fourths of the states ratify a proposed amendment enacted by two-thirds super-majorities in both houses of Congress. Alternatively, the states can amend the Constitution without congressional action, on their own initiative. Two-thirds of the states can call a constitutional convention at which amendments can be adopted by simple majority vote, subject to ratification by three-fourths of all the states.

The Eighteenth Amendment was adopted pursuant to the first of these processes. It provided a constitutional meta-rule establishing Prohibition, which Congress subsequently supplemented by enacting, in a "policy action situation," the Volstead Act (Pub. L. 66–s66). That statute, which survived a veto by President Woodrow Wilson (in accordance with other procedural meta-rules of the game empowering Congress to override a presidential veto upon two-thirds super-majority votes in each chamber), created more precise "rules of the game" (including some exceptions and exemptions) governing alcohol, in general accordance with the "meta-rule" established in the Eighteenth Amendment.

Initially, compliance with Prohibition was quite high (Miron & Zwiebel, 1991), as we might expect among a generally law-abiding population (reflective of a predominant social norm). But over time, compliance with Prohibition at the "operational level" dropped off steeply as it led to the creation of "black markets" in alcohol, enriching and empowering organized crime "families," which competed with one another through the use of violence and corruption of law enforcement. These developments soon "led to widespread public disenchantment with

Prohibition" (Miron & Zwiebel, 1991, p. 2). Alcohol consumption returned nearly to pre-Prohibition levels, and Congress ultimately proposed a new constitutional amendment to re-legalize alcohol production and sales. What became the Twenty-First Amendment originated in a "policy action situation"—Congress's passage in February 1933 of the Blaine Act, which proposed to amend the Constitution to repeal the Eighteenth Amendment. Before the year was out, three-quarters of the states had ratified the Twenty-First Amendment (in a series of constitutional action situations), thereby ending America's greatest ever experiment in social engineering.

This was a case—really, a series of related action situations at constitutional, policy, and operational levels—in which higher-level rules (or meta-rules) affected action situations at lower levels, while feedback mechanisms, in turn, led to further changes in the constitutional meta-rules of the game. Simply put, one constitutional-level action situation designed to reform individual behavior was ultimately negated by patterns of interaction at the operational level, reflective of powerful social norms, by another constitutional-level action situation in which the meta-rules of the game were changed to make them conform more closely to social behavior.[3]

It is easy to see how constitutional-level, policy-level, and operational-level decisions interact in a formal legal setting with an actual written "constitution," formal legislative processes, and elaborate mechanisms for implementation and enforcement. But those same levels of social choice are also evident in local common-pool resource management, which Elinor Ostrom spent much of her career studying. So, in an irrigation scheme, the "constitutional level" might specify meta-rules for establishing emergency reductions in irrigation water during droughts, such as a rule of proportionate reductions for all irrigators; the "policy level" might, then, specify as a rule the level of necessary cuts in water use, for example, 25 percent; and the

operational level might involve trades among individual irrigators (so long as such trades are not prohibited by a policy- or constitutional-level rule). One irrigator might agree to cut back on water use by more than 25 percent in exchange for cash payments from another irrigator who prefers not to cut her water use by the full 25 percent.

Even in private business enterprises, with their bylaws, corporate travel policies, employee handbooks, and regularized patterns of interactions, the constitutional, policy, and operational levels of decision making are replicated (see, e.g., Bushouse, 2011, p. 114, fig. 3, applying the IAD framework to child care centers).

The IAD Framework as a "Metatheoretical Conceptual Map"

In Ostrom's terminology, the IAD is neither a theory nor a model but a *framework*—a sort of conceptual umbrella under which various theories and models might be deployed and tested as mechanisms for understanding or explaining "social dilemmas" or interactions (see, e.g., E. Ostrom, 2005, pp. 27–29). Notwithstanding her desire to definitively distinguish frameworks from theories and models, the IAD framework cannot be completely atheoretical. A purely conceptual, atheoretical framework might have all of the IAD's boxes with their descriptions (akin to a simple list of variables),[4] but it could not possibly have the lines and arrows connecting them. Linking concepts in a relational system necessarily requires a theory of relations.[5] More generally, it is undeniable that the IAD framework incorporates what Vincent Ostrom referred to as "epistemic choices" (V. Ostrom, 1993), which are rarely (if ever) universal; therefore, the analytical framework itself cannot be considered universal (as Elinor Ostrom hoped it could be). Elinor Ostrom herself suggested the IAD framework might be better understood as a "metatheoretical conceptual map" (E. Ostrom & Cox, 2010, p. 455). However we might define it, its *function* is to help *organize our thinking* about social interactions (both

formal and informal) as well as their outcomes prior to assessing particular cases or diagnosing specific problems. For that practical purpose it is eminently useful.

Further Development of the IAD Framework

Many of the IAD framework's elements have been well developed over the years (see, most importantly, E. Ostrom, 2005; McGinnis, 2011a). However, Elinor Ostrom considered her delineations of concepts, elements, and the overall framework itself to be conjectural, provisional and subject to contestation, further development, refinement, and even refutation. She was almost continually revising and refining the framework and its elements. Eventually, she attempted (with only limited success) to subsume the IAD framework within a new social-ecological system (SES) framework, which she developed following discussions with ecologists who convinced her that the IAD framework's treatment of biophysical conditions was insufficient (see, e.g., E. Ostrom, 2007, 2009). The decomposable social and ecological variables of the SES framework can be seen as elaborations on the "Biophysical Conditions," "Community Attributes," and "Rules-in-Use" boxes of the IAD framework (see Cole, Epstein, & McGinnis, work-in-progress). Scholars continue to revise and refine those decomposable SES variables (see, e.g., Cox, 2011; Epstein et al., 2013).

By contrast, very little work has been done to explicate the "Evaluative Criteria" box of the IAD framework, which is the framework's only explicitly normative component. Given the crucial role "Evaluative Criteria" play in the feedback mechanisms associated with potential institutional (and ecological) change over time, their further elaboration is not only desirable but arguably necessary to fulfill the IAD framework's purpose.

The focus of this paper, however, is on a different component of the IAD framework, the "Rules-in-Use." Ostrom took pains to delineate the different *types* of "rules-in-use" that

condition social interactions. But she and other users of the IAD framework have written relatively little about the *sources* of various types of rules-in-use or, more importantly for present purposes, *relations* between different types of rules/institutions, including the *processes* by which formal legal rules influence, and are influenced by, "rules-in-use" or "working rules."[6] Black (1973, p. 127) refers to these processes generically as "legal mobilization," but his analysis focuses on legal mechanisms, such as courts, and he does not employ the IAD framework. The purpose of this paper is to begin a more concerted effort to understand and delineate the roles (plural) that formal legal rules play in determining "working rules" in the IAD framework.

Formal Laws, Rule Types, and the IAD Framework

Everyone understands and appreciates the sensible distinction between "rules-in-form" and "rules-in-use," which the legal scholar Roscoe Pound (1910) originally distinguished as "law-in-books" versus "law-in-action." Unfortunately, among at least some social scientists, the term "rules-in-use" has come to imply that "rules-on-paper" are irrelevant. For that reason, I prefer the label "Working Rules" (following Commons, 1959, p. 531; V. Ostrom, 1976, p. 842; E. Ostrom, 2005, p. 19), which seems a broader term, not necessarily in conflict with either informal norms or formal legal rules. Among the "Working Rules," the role of formal legal institutions has been, relatively speaking, neglected in IAD elaborations and applications.

What a "Rule" Is

But just what is a "rule" (legal or otherwise)? Schlager and Ostrom (1992, p. 250) define "rules" as "generally agreed-upon and enforced prescriptions that require, forbid, or permit specific actions for more than a single individual." This sentence can usefully be decomposed into two elements that together comprise a rule: (1) deontic specification, that is, the rule must

specify actions that specified actors may, must, or must not perform; and (2) levels of compliance/enforcement, that is, the rule must be obeyed and/or enforced to some minimal (but inevitably uncertain) level below which it would no longer be considered a rule (see, e.g., Elmes, 1966, p. 51[7]) but a standard, guideline, recommendation, ethic, signal, expression, or simply an empty gesture. For the sake of conceptual clarity, the examples of rules provided in this paper intentionally steer clear of the admittedly fuzzy boundaries of both deontic specification and obeisance/enforcement.

A spectrum exists between complete nonenforcement and 100 percent enforcement. Presumably, no one would require perfect enforcement as a defining condition for a rule; for the overwhelming majority of rules, the socially optimal level of enforcement is substantially below 100 percent (see, e.g., Cole & Grossman, 2010, pp. 346–47). Alexander and Sherwin (1994) go so far as to argue that general rules always "lie" in purporting to establish rules that always should be followed, regardless of circumstance. But the problem of under-enforcement is tricky. At some point along the enforcement continuum, between perfect nonenforcement and perfect enforcement, the actual enforcement rate could become so low that it no longer makes sense to call the rule a "rule." Just where that point lies seems objectively indeterminate (i.e., inherently subjective).

Rule Enforceability and Enforcement

It is also important to distinguish between rules that are unenforceable and those that are enforceable but not actually enforced. A law may be unenforceable (1) by virtue of its subject matter, for example, thought-crime legislation; (2) because it is unconstitutional; or (3) because it contains a provision negating otherwise possible enforcement, as is the case, for example, with rules that require federal agencies in the United States to "consider" certain effects of

regulations, but deny any cause of action should those agencies fail to comply (see, e.g., Executive Order 12898 [on environmental justice], 3 U.S.C. 859 (1995)). In all three cases, the legal rules are unenforceable, but for different reasons.[8]

A rule may, of course, be perfectly enforceable but not actually enforced for a variety of reasons, ranging from lack of enforcement capacity—not enough funds, insufficient training, or unavailable technology[9]—to active resistance or simple neglect. Articles have been written about "dead laws," that is, laws still on the books that are no longer enforced at all (see, e.g., Kartozian, 1966–1967). In 2012, a joint report by the Law Commission for England and Wales and the Scottish Law Commission recommended that Parliament repeal more than 800 such "dead laws" (Independent, April 4, 2012[10]). In the United States, the state of New Hampshire has criminalized adultery since 1701. The current version of the rule classifies adultery as a Class B misdemeanor; but according to a recent editorial in the *Concord Monitor* (February 17, 2014[11]), that law is never enforced. The paper's editors believe that such unenforced laws must be repealed because "keeping unenforced statutes on the books chips away at the seriousness of state law more broadly." Whether or not that concern is legitimate, legislative repeal of such unused laws may be unnecessary under the common-law doctrine of "desuetude," which empowers courts to abrogate legislative enactments "following a long period of nonenforcement" (see, e.g., Note, 2005–2006, p. 2209).[12]

More problematic, perhaps, are cases where litigants in civil actions try to renew and repurpose long-disused state penal laws (see, e.g., Greene, 1997). Even more troubling, some laws remain on the books after having been declared unconstitutional (i.e., unlawful under a constitutional meta-rule). Article VI, Section 8 of the North Carolina state constitution, for example, still appears to disqualify from holding public office "any person who shall deny the

being of Almighty God,"[13] more than 50 years after the U.S. Supreme Court ruled that neither the states nor the federal government could require any kind of religious test for public office (*Torcaso v. Watkins*, 367 U.S. 488 (1961)). What looks like a constitutional-level meta-rule in North Carolina's state constitution turns out not to be a rule at all because it runs afoul of a high-level constitutional meta-rule (pursuant to the Supremacy Clause of Article VI of the U.S. Constitution).

Formal Legal Rules Are Important in the IAD Framework

Virtually all legal scholars today appreciate that formal legal rules and processes—including court rulings, duly enacted statutes, and subsidiary regulations—are not the only institutions that structure social relations. They have written about the important, sometimes dominant, roles of custom (see, e.g., Ehrlich [1936] 2009, chap. 19; Smith, 2009), social norms (see, e.g., Ellickson, 1991) and, more generally, "legal pluralism" (see Griffiths, 1986).[14] By contrast, some social scientists dismiss formal legal rules out of hand as "dead letters" (see Kingston & Caballero, 2009). Others suggest that law serves a merely auxiliary function, shoring-up or "re-institutionalizing" existing customary rules that arose from social organizations, including churches, families, communities, and cultures (Bohannan, 1965, pp. 34–37). The legal scholar Barry Friedman (2006, p. 262) has observed among empirically oriented political scientists "an almost pathological skepticism that the law matters"; they "simply fail to take law and legal institutions seriously."

Elinor Ostrom was not among them. She might not have been as interested in formal legal systems as was her husband, who was by inclination (if not by training) a constitutional law scholar (see, e.g., V. Ostrom, 2006, p. 16[15]). Elinor Ostrom did, however, write about formal legal rules in explicating various types of rules (as exemplified below). The law also featured

prominently in her works on water allocation in Southern California, beginning with her 1965 PhD dissertation, which concerned the role of public entrepreneurs in devising groundwater management systems in California. Formal proceedings in state courts facilitated negotiations among stakeholders resulting in complex interagency agreements that were designed to ensure replenishment of groundwater supplies and prevent saltwater intrusion (see E. Ostrom, 1965; also see V. Ostrom & E. Ostrom, 1972, p. 8[16]).

Most tellingly, the very structure of the IAD framework, which is designed to work at different levels of social choice, suggests that formal legal rules often (if not always) are expected to play a significant role. The framework's differentiation of constitutional- and collective-level choices presupposes that the outputs of those processes—constitutional and legal rules and regulations—must somehow or other affect operational-level choices (see E. Ostrom, 2005, pp. 214–15). Thus, the law is imbricated within the structure of the IAD framework.

But just how, and to what extent, does formal law relate to the "working rules" (a.k.a., rules-in-use)? Neither Ostrom nor any other users of the IAD framework spent much time on this important question. She wrote a great deal about various *types* of rules that condition activity in action arenas, as an outgrowth of the "institutional grammar" she developed with Sue Crawford (see Crawford and E. Ostrom 1995; E. Ostrom, 2005, chaps. 5 & 7). Table 1 describes the various types of rules; Figure 3 shows how those rules are supposed to come into play in action situations.[17]

Table 1. Types of Rules Affecting Action Situations

Type of Rule	Function of Rule
Position rules	Create positions (e.g., member, judge, voter, representative) that actors may hold.
Boundary rules	Define (1) who is eligible to hold a certain position, (2) the process by which positions are assigned to actors (including rules of succession), and (3) how positions may be exited.
Choice rules	Prescribe actions actors in positions must, must not, or may take in various circumstances.
Aggregation rules	Determine how many, and which, players must participate in a given collective- or operational-choice decision.
Information rules	Authorize channels of information flows available to participants, including assignation of obligations, permissions, or prohibitions on communication.
Payoff rules	Assign rewards or sanctions to particular actions that have been taken or based on outcomes.
Scope rules	Delimit the range of possible outcomes. In the absence of a scope rule, actors can affect any physically possible outcomes.

Source: Adapted from Ostrom (2005, chap. 7).

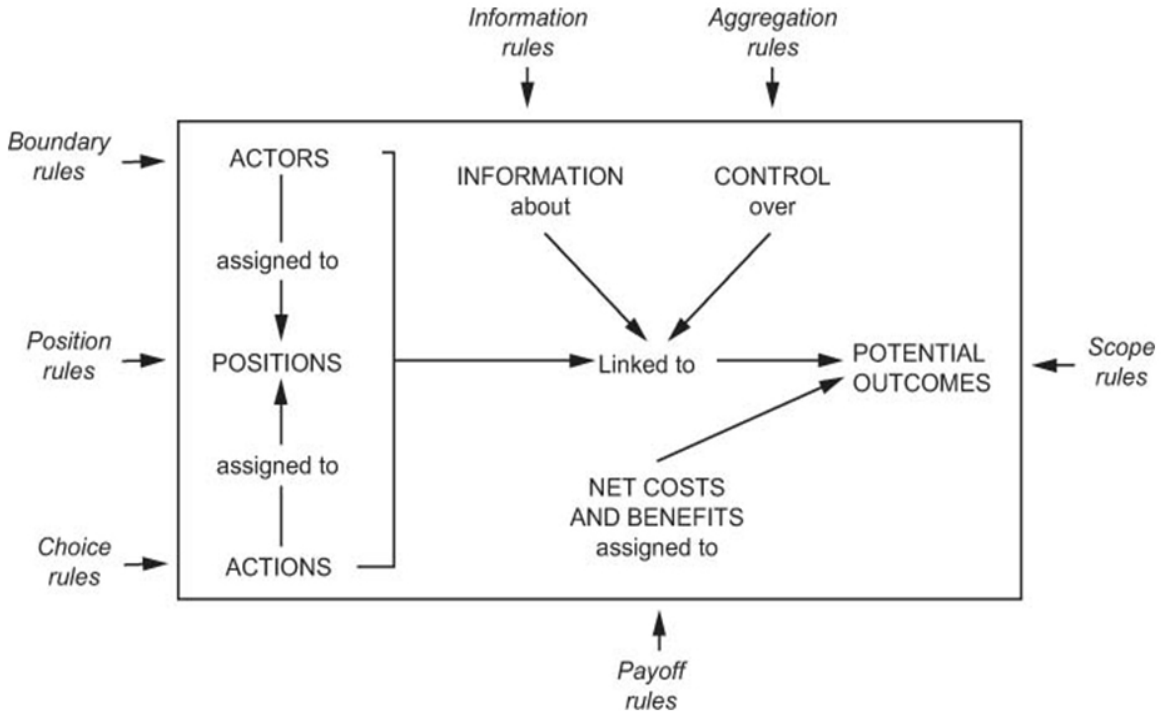

Figure 3. Where Different Types of Rules Enter Action Situations.
Source: E. Ostrom (2005, p. 189, fig. 7.1).

Interestingly, in *Understanding Institutional Diversity* (E. Ostrom, 2005, chap. 7), Ostrom relies almost exclusively on *formal* legal rules and processes to explicate the rule types in Table 1 and Figure 3 (above). For example, in describing "position rules," she refers to the U.S. Constitution's age and citizenship conditions for membership in Congress, rules of criminal procedure requiring arrested actors to participate in court proceedings against them, and the general requirement to pay taxes consistent with the tax code (E. Ostrom, 2005, pp. 195–96). She illustrates "exit rules" with legal requirements of term limits for some elective officeholders (as well as prisoners), and by reference to litigants in civil justice settings who choose to settle out of court (E. Ostrom, 2005, pp. 198–200). "Aggregation rules" are exemplified by formal amendment processes for legislation, a task requiring the cooperation of multiple legislators (E. Ostrom, 2005, p. 202). Ostrom explains "payoff rules" by reference to labor contracts. And "scope rules" are illustrated by government regulations that specify the goal to be achieved, but allow regulated entities discretion in how best to achieve that goal (E. Ostrom, 2005, p. 209). This extensive reliance on formal legal rules to exemplify rule types suggests that, for Ostrom, legal rules were more than just words on paper.

Ostrom (2005, p. 62, fig. 2.4) also directly related formal legal rules (as well as informal social norms) to "Operational rules in use," but she did so only with arrows. She did not explain or offer examples of process by which those relations arise or persist (see Figure 4).

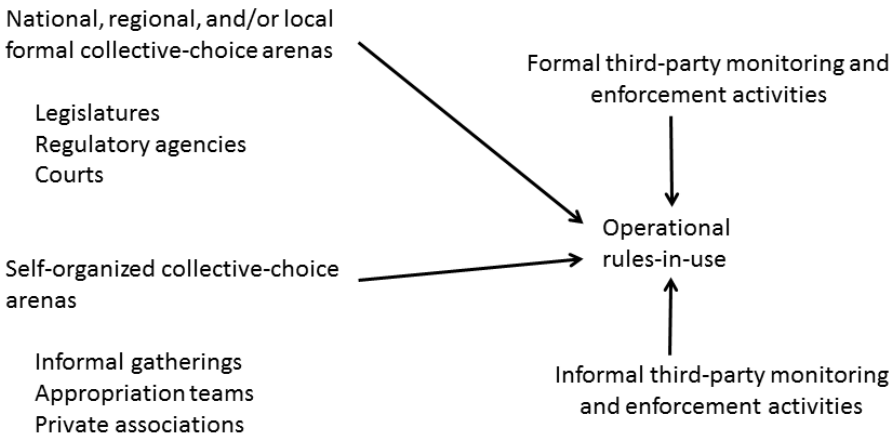

Figure 4. Relationships of formal and informal collective-choice arenas.
(Source: Ostrom 2005, p. 62, Fig. 2.4)

Meanwhile, within the IAD framework legal rules and processes appear only in the generalized and modified form of "rules-in-use," a phrase that, as already noted, implicitly devalues formal legal rules. So, the question remains, by what process(es) and to what extent are formal legal rules translated or converted into "rules-in-use" (or "working rules")? It is important to bear in mind that this is not a question about formal institutions (laws) *versus* informal institutions (social norms) (see North, 1990, p. 3). This is a question about how rules of any kind are understood, given effect, or operationalized within a given community. That process of translation or "mobilization" itself undoubtedly involves "patterns of interaction" observed across potentially numerous and diverse action situations.

A Tentative Typology of Relations between Formal Laws and "Working Rules"

Relations between formal legal rules and "working rules," as well as between formal legal rules and informal social norms (on which see, e.g., Hart, 1961; Posner, 2000; Brennan et

al., 2013), are far more complex and multidirectional than often is supposed. All "institutionalists," both "old" and "new," appreciate that monitoring, enforcement, and sanctions are critical components for successful collective action, including for common-property management of common-pool resources, as evidenced by Ostrom's "design principles" (E. Ostrom, 1990, p. 90, table 3.1). Less well appreciated is that monitoring, enforcement, and sanctioning regimes are themselves complex adaptive systems, so that relations between formal laws and rules-in-use cannot be explained simply by a casual reference to monitoring, enforcement, and sanctioning.. Rather, analysts must dig into the actual monitoring, enforcement, and sanctioning institutions and organizations in specific cases to learn whether, and to what extent, legal rules influence or determine the "working rules."

This section provides a simple three-part typology of relations between formal legal rules and "working rules": (1) the formal legal rule *is* the "working rule," (2) the formal legal rule significantly influences the "working rule" (and sometimes vice versa), and (3) the formal legal rule bears no apparent relation to the "working rule." To illustrate each of these categories, I adapt several of the examples Ostrom (2005, chap. 7) used to illustrate the different types of rules affecting action situations.

Type 1. Some Legal Rules $\approx^{18}$ *Working Rules*

Some legal rules are so clear and controlling (within the relevant epistemic community) that they require virtually no interpretation or conversion (*via* implementation) into working rules. Ostrom's (2005, p. 195) examples of "boundary rules" regarding age requirements or term limits for certain political officeholders are of this nature. It is difficult to imagine a plausible theory of constitutional interpretation under which the rule that an individual must be at least thirty-five years old to serve as president of the United States might be interpreted to allow a

thirty year old individual to serve in that position. Technically, the constitutional rule is not self-enforcing—it is possible to imagine a case where judicial enforcement of the rule is required—but it is virtually self-enforcing in practice (at least in a functional democracy aspiring to the rule of law[19]). It is not only the formal rule but the working rule.

Similarly, standard weights and measures, although they must be enforced from time to time against non-compliers, are themselves the working rules. No act of interpretation is necessary to understand rules ranging from the establishment of time zones, requiring drivers to use the left (or right) side of the road, designation of the length of a mile, setting the weight of one "ton" or the volume of a "liter." Individuals quickly learn to organize their activities around such rules and become habituated to them, almost as if they were part and parcel of their native tongues. These working rules are exactly the same as the formally institutionalized legal rules.

Many (but not all) rules in sports and games are also of this nature. In soccer (a.k.a., football), the entire ball must cross the entire goal line for a goal to be scored. There certainly are close calls in which it is difficult to determine whether a goal has in fact been scored (a problem that should be diminished by improved goal-line technology). But such factual issues do not alter the relation between the formal rule and the working rule, which is one of identity. The rule is enforced as written, even in cases where its enforcement is difficult and/or contestable.

It might be objected that all the examples cited are relative rarities among all of the working rules in the world. That, however, is an empirical question that has hardly been raised, let alone studied systematically. Moreover, some of the rules listed above—certainly rules of the road and standard weights and measures—are among the most important rules that commercial societies require. And even if only a relatively small percentage of formal rules *are* (or are

coextensive with) the working rules, even that small percentage should lead social scientists to be more attentive to legal rules generally.

Type 2. Some Legal Rules + Widely Held Social Norms ≈ Working Rules

Some legal rules that *could* be working rules if strictly enforced (like those in the preceding section) are not coextensive with the working rules because they are publicly known not to be strictly enforced and a prevalent social norm exists that, in effect, translates the formal legal rule into a different but related working rule. A prime example here, to which Ostrom sometimes referred (see, e.g., E. Ostrom, 2005, p. 18), is the speed limit for motor vehicles on public highways. State laws establish speed limits that are literally posted along the roads. Those posted speed limits represent the formal legal rules (a.k.a., rules-in-form), and some motorists follow them strictly. But most motorists understand that enforcement is costly (and therefore imperfect) and that law enforcers are unlikely to pull them over unless they exceed the posted speed limit by a substantial amount. So, they follow an almost universal (at least in the United States) social norm of driving approximately five miles per hour above the posted limit (in good driving conditions).

Notice that the norm itself tells us nothing about the actual speed anyone is likely to drive on a given road (the rule-in-use), unless we also know the posted speed limit (the rule-in-form). Moreover, motorists know that reliance on the working rule is not foolproof. Should a highway patrol officer choose to ticket a driver for exceeding the posted speed limit by only three miles per hour, a court of law will strictly enforce that decision, regardless of the prevailing social norm. The result would no doubt strike the unfortunate motorist as grossly unfair, but in case of conflict the rule-in-form would trump the rule-in-use.[20] The bottom line is that, even if the

working rule is not completely determined by the law-in-form (i.e., the posted speed limit), the formal legal rule plays an important role in determining the working rule.

To take another example from the sport of soccer, a rule-in-form provides that when a player from one team kicks the ball over the sideline, the other team takes possession of the ball for a "thrown in." In some circumstances, that formal rule simply *is* the working rule. But in certain well-understood circumstances, the formal rule is modified by a social norm (based on a notion of fairness or equity). Thus, if a player from Team A is injured on the field, and Team B kicks the ball out of play so that player can receive treatment, Team A obtains possession of the ball pursuant to the formal rule. However, in accordance with the social norm, Team A returns the ball to the possession of Team B as soon as play resumes. This situation might be viewed as an instantiation of Aristotle's injunction that general rules of law must be tempered by equity in order to do justice under the specific facts of individual cases (Aristotle, 1941, *NE*, Book V, chap. 10, §1137b12–27).

How many cases are of this type, in which the working rule combines a formal legal rule with some informal social norm(s)? Once again, that is an empirical question requiring further investigation. No basis exists for presuming that this category is small; it could well include a majority or plurality of working rules.

Type 3. Some Formal Legal Rules $\not\in^{21}$ *Working Rules*

For some social scientists, this last category is the most familiar because they simply presume that formal legal institutions do not play a significant role in the organization of social behavior. This is certainly true of some subset of the total universe of formal rules. It may even be categorically true in some totalitarian/authoritarian countries, where legal rules are thoroughly subordinated to personal or political considerations (see, e.g., Cole, 1998b, p. 26[22]). Even in so-

called "rule-of-law states,"[23] some types of laws simply do not affect social interactions; indeed, some of them are not even intended to do so, being in the nature of precatory or symbolic acts. An example would be a law establishing an official state bird or tree.

In other cases, laws that are intended to have an impact on social behavior simply fail, as we already have seen in the case of Prohibition in the United States. Robert Ellickson's (1991) famous book, *Order without Law*, presents another well-known case in point. California state law generally required cattle ranchers to "fence in" their cattle, in order to prevent them from damaging neighboring properties or wandering onto public highways. But Shasta County, by special exemption, was allowed to adopt a bifurcated rule. Cattle ranchers in some parts of the county were subject to the general state law of "fencing in." But in other sections of the county cattle ranchers could let their cattle roam free, and if a neighbor wanted to avoid property damage from wandering cattle, she had to "fence out" the cattle. Obviously, these alternative rules were about cost allocation between cattle ranchers and other residents. Under a legal rule of "fencing in," the cattle rancher bore the costs; under the rule of "fencing out," neighboring landowners bore the cost.

What Ellickson found when he went to Shasta County to conduct empirical research was that virtually no one abided by either of the alternative legal rules. In fact, they did not know the legal rules, and neither did local lawyers who were sometimes called upon to help resolve disputes. However, in most cases disputes did not arise because (with notable exceptions[24]) the local residents—including cattle ranchers, crop farmers, and others—operated under a strong social norm of neighborliness, according to which neighbors cooperated, sharing the costs of fencing cattle out or in.

In Ellickson's case, a strong and effective social norm obviated and displaced the formal legal rules adopted by the county (pursuant to state law). But how generalizable is Ellickson's case? In the absence of many similar studies, we lack even the basis of a meta-analysis for answering that question. What we require is a great deal more empirical research. In the absence of that research, we cannot reliably conclude that strong social norms generally are more important or influential than formal legal rules (let alone that they *should* be).

Just as importantly, the supposed dichotomy of social norms *versus* laws might generally be the wrong way to think about relations between those two categories of institutions.[25] It already has been established that formal laws often influence, and even determine, working rules. At the same time, it is clear that social norms often influence the substance of formal laws. So, for example, the unofficial norms regarding water use adopted by miners during the California gold rush (1850s) were subsequently recognized in courts of law (*Hicks v. Bell*, 3 Cal 219 (1853); *Irwin v. Phillips*, 5 Cal 140 (1855)), then codified into state law (Civil Code of the State of California 268–70 (1872)), and ultimately constitutionalized (see Debates and Proceedings of the Constitutional Convention of the State of California 482 (1880)).

In the somewhat similar context of irrigation rules, Insa Theesfeld (2004, p. 253) finds a dynamic relationship between formal rules and "rules-in-use" that, sometimes at least, can lead to an ever-increasing reduction in the relevance of the formal rules, followed eventually by their eventual replacement with new formal rules.

> First, rules-in-use pave the way for opportunistic strategies. The opportunistic strategies in turn change the rule-in-use, and the incongruity between formal and effective rules increases. Because of the higher incongruity, possibilities for opportunistic strategies increase once again. Second, opportunistic strategies

> appear and, in response, a certain rule-in-use develops. This effective rule is not congruent with the formal rule. The incongruity increases and the possibilities for opportunistic strategies increase once again. Finally, in the long run, growing incongruity enables a feedback that influences the development of the formal rules.

Theesfeld's account of how "opportunistic strategies" alter "rules-in-use" and, ultimately, formal rules is, once again, congruent with the history of Prohibition in the United States, discussed earlier. Moreover, the kind of strategic opportunism highlighted in her treatment of formal rules and "rules-in-use" is very much present in the IAD framework's "Community Attributes" box. Actors enter into action situations in various positions (citizen, corporate CEO, lobbyist, fund-raiser, legislator, law enforcer, etc.), possessing whatever powers and strategies they might possess. The implication, as I earlier suggested, is that the various processes by which formal rules are transformed into working rules are themselves action situations, including law enforcement and other action situations in which legal rules are evaluated and/or interpreted. It is the "pattern of interactions" resulting from those situations that ultimately determines (1) what the working rules are, (2) whether those rules deviate significantly from the formal rules, and (3) the extent of any such deviation. Importantly, Theesfeld (2004) does not presume a high level of "incongruity" between formal rules and "rules-in-use." That is, after all, an empirical question.

When a particular legal rule appears to have no bearing on a particular working rule, we should not assume that the working rule is superior or more desirable. Some social norms are inefficient, morally abhorrent, resistant to change,[26] or all of the above. After the U.S. Civil War, social norms of racism gave rise to state laws that perpetuated the oppression of former slaves, despite their supposedly superior constitutional rights under the newly enacted and ratified

Fourteenth and Fifteenth Amendments to the U.S. Constitution. Indeed, the Fourteenth Amendment's Equal Protection Clause went virtually unenforced before the turn of the twentieth century, and the last vestiges of (official[27]) "Jim Crow" were not extirpated in the Southern United States until passage of the Civil Rights Act in 1964 and the Voting Rights Act in 1965 (see generally Woodward, [1955] 2002; Ackerman, 2014).

In the case of civil rights for African Americans, the deplorable social norms were so powerful that they could not simply or easily be displaced even by a strong constitutional rule with inconsistent and ineffectual federal enforcement efforts. Eventually, over a long period of time, they have been eroded (but not yet eradicated) by a combination of: legal processes, including court decisions like *Brown v. Board of Education*, 347 U.S. 483 (1954); policy decisions, for instance the complete racial integration of the military in 1948 by Executive Order of the President[28]; and other legal, political, and social pressures. This goes to show that, in some cases at least, "opportunistic strategies" of opposition may prevail for some time but ultimately be subdued by consistent enforcement of countervailing formal legal rules.

Even in less politically divisive circumstances of incremental law reform, changes in formal rules often are "filtered" by those charged with implementing or carrying out the reforms. The result can be institutional changes that are "differentially interpreted, mediated and (in some cases) neutralized" (Lowndes & Leach, 2004, p. 559). Thus, in a series of case studies of implementation of the UK's Local Government Act of 2000, Lowndes and Leach (2004) found that local government authorities overwhelmingly implemented the reform law in ways that minimized the total amount of change.

Finally, the three types of relations between formal legal rules and "working rules" discussed in this section can be conceived as nodes on a continuum, with Type 1 at one end, Type 3 at the other end, and Type 2 ranging widely in the middle (see Figure 5).

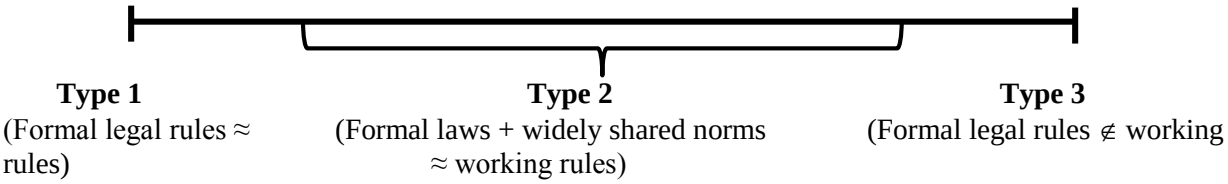

Figure 5. Continuum of Relations between Formal Laws and Working Rules.

The problem, of course, is that such a stylized continuum gives us no real clue as to the actual roles each of the three types of relations between formal rules and working rules play in real-world action situations. For that, we need many empirical studies and meta-analyses of cases involving each type of relation. It is simply not enough to extrapolate from a few discrete cases that formal legal rules are all that matter, are part of what matters, or do not matter at all.

Conclusion

Perhaps because Elinor Ostrom most often used the IAD framework to study small-scale communities that successfully established their own working rules to self-manage local common-pool resources, she did not spend a great deal of effort to understand the role of formal legal rules in determining or influencing the "rules-in-use."[29] But she intended the IAD as a generalized framework for diagnosing, and possibly predicting, collective action, including in dynamic settings. It was not just for the study of local common-pool resource issues, where formal legal rules might be expected to play a smaller role.

But even in local common-property regimes, rules are often codified and more or less formal mechanisms established for monitoring and enforcing compliance. When a group of

fishers establishes a common-property regime along with rules regulating who can fish where and when, those rules often are *formalized* in writing and supported by other institutions for monitoring, enforcement, and sanctioning (see, e.g., Berkes, 1986). Many local fisheries' management schemes are highly sophisticated—much more like formal legal rules or corporate bylaws than like informal social norms.

The clearest evidence that Ostrom expected formal (legal) rules to play a significant role in IAD settings comes from the framework itself, which she employed at constitutional and policy levels of collective choice, where formal rules (and meta-rules) come from. And, when she parsed different kinds of "rules-in-use" in her most in-depth treatment of the IAD framework in *Understanding Institutional Diversity*, she almost exclusively relied on formal legal rules to exemplify them.

Given all that, it seems that formal legal rules should play a more substantial role in studies employing the IAD framework than they have done so far. But much more empirical work needs to be done to assess how often, how many, and simply how various formal rules affect the working rules of the game. This is a job not only for legal scholars but also for legal sociologists (or sociologists of law) and anthropologists. Even before that empirical work is done, however, scholars using the IAD framework should play closer attention than they have done so far not only to the working rules that affect the action situations they are studying but also how the working rules themselves are formed through other action situations, including (but not exclusively) formal legal processes.

Notes

[1] One implication of this treatment is that those boxes might be replaced by the first-tier variables of Ostrom's subsequently developed SES framework (see E. Ostrom, 2007, 2009).

[2] I prefer the term "policy-level" to "collective choice-level," the term usually employed by Lin and others using the IAD framework, because it is more specific. Constitutional-level decisions are just as much collective-choice decisions as are lower-level policy decisions.

[3] Needless to say, the history of Prohibition presented here is simplified in order to elucidate the cross-level effects of action situations at constitutional, policy, and operational levels. For a less simplistic, but still concise, history of Prohibition, see Menell (1969).

[4] Even that concession is contestable. Arguably, conceptualization itself requires a "mental model" of how the world works (see Denzau & North, 1994). As the empirical legal scholar Richard Lempert (2010, p. 877) observes, "All empirical scholarship is theoretically informed, at least in the weak sense that problem selection, model construction, and even the information captured in qualitative research reflect expectations about what matters. These expectations are the products of theories." The Ostroms presumably would argue that those expectations are, rather, the products of "metatheoretical" frameworks, such as the IAD.

[5] "A theory of relations" is actually redundant according to one definition of "theory" as "a statement of relations among concepts within a set of boundary assumptions and constraints" (Bacharach, 1989, p. 496).

[6] In a 1986 book chapter, Elinor Ostrom attempted to explicitly connect legislative voting outcomes and bureaucratic procedures. More generally, McGinnis (2011b, pp. 53, 70–71) has observed that rules-in-use are themselves outputs of other action situations. In neither case was

the author concerned primarily with explicating the relations between formal laws and working rules.

[7] "The laws of the land share one great weakness with all other laws; they are not laws unless they are enforced."

[8] The fact that a formal law or legal rule may be unenforceable for some reason or other does not mean that the rule is entirely meaningless or immaterial. As Richard Brooks and Carol Rose (2013, pp. 1–2) have recently observed, former U.S. Chief Justice William Rehnquist was wrong to state that the racially restrictive covenants on real estate he owned were "meaningless" simply because they were unenforceable under the U.S. Constitution (as then interpreted) because those covenants "could still convey information and create inferences about owners and neighborhoods," inferences that could be (and were in fact) used by "[p]olitical opponents" to "demand an explanation."

[9] Cole and Grossman (2011) argue that Congress's reliance on technology-based regulation of air pollution in the 1970 Clean Air Act was not only rational but economically efficient given the absence of available and reliable monitoring technologies for point-source emissions.

[10] http://www.independent.co.uk/news/uk/crime/calls-for-dead-laws-to-be-repealed-7618201.html.

[11] http://www.concordmonitor.com/home/10745470-95/editorial-repeal-outdated-state-adultery-law.

[12] For more on the distinction between enforceability and actual enforcement see, e.g., Cole (1998a, chap. 3).

[13] http://www.independent.co.uk/news/uk/crime/calls-for-dead-laws-to-be-repealed-7618201.html.

[14] According to some legal pluralist theories, the legal academy is dominated by "legal centrists" who treat state-based legal norms as dominant. Any observer of the structure of professional legal education would have to concur, which is not to concede, however, that state-based legal rules do not predominate (at least in certain societies).

[15] "Constitutions, statutory enactments, regulations, contractual undertakings, and shared communities of understanding all bear upon processes included in the principle of the sovereignty of the people. The field of law, the study of jurisprudence, and the exercise of proceedings in equity jurisprudence are essential features of what might be called *entrepreneurship* in the creation and conduct of working public enterprises" (emphasis in original).

[16] "The structure of incentives inherent in the law of water rights is clearly not sufficient to constitute a variety of collective enterprises capable of increasing the supply of water services available to a community of water users. Such users must have access to courts, legislatures and other decision-making facilities capable of taking authoritative decisions in determining, enforcing and in altering decision-making arrangements."

[17] I am not here arguing that Lin's rule types constitute all possible rule types affecting action situations (there may be others) or, more importantly, that her rule types are always instituted as actual rules, under her strict definition of "rule" (discussed above). It is easy to imagine, for example, that a player's "position" in some focal action situation is determined by custom or tradition rather than "rule." Nevertheless, the various formal legal rules by which she exemplifies the rule types in *Understanding Institutional Diversity* are, in fact, rules on her definition.

[18] The mathematical symbol "≈" means "approximates" or "nearly equals."

[19] See *infra* note 22.

[20] There are of course special cases, such as where a motorist might bribe the police officer to avoid enforcement of the speed limit (whether the formal limit or the normal limit), but I am writing here about generalities, not special cases. Where bribery is not a special case but reflects, instead, a regular "pattern of interaction," that obviously implies that the rules-in-form are related only in a more attenuated way (if at all) to the working rules.

[21] The mathematical symbol "$\notin$" means "is not an element of (or in)."

[22] "[Poland's] 1952 Constitution was not a constitution in the liberal-democratic sense of 'the highest law of the land.' In fact, it was hardly a legal document at all. The various powers it created and the rights and liberties it purportedly guaranteed were not self-executing but had to be implemented by 'ordinary statutes and other normative acts.' Meanwhile, the Constitution did not require the enactment of implementing legislation. Therefore, it was entirely without legal force, except to the extent the Party/state chose to enforce it. That, of course, was a matter of policy rather than law. Consequently, in People's Poland there was no constitutional law, only constitutional policy. That policy was determined, and subject to change at any time, exclusively by the Polish United Workers' Party (PZPR) in consultation with its 'fraternal ally' in Moscow."

[23] I use the phrase "rule-of-law states" to refer to polities that *aspire* to meet basic conditions such as equal protection and due process, understanding that achievement can only ever be incomplete in an imperfect world with imperfect agents (see Cole, 1998a, pp. 242–43).

[24] Some outliers existed, but they were dealt with, usually to good effect, by social sanctions, including as a last resort ostracism.

[25] Brennan et al. (2013, p. 51), for example, distinguish formal and nonformal norms along dimensions, including (1) the mechanisms by which they are created, (2) the mechanisms by

which they are enforced, (3) *de re vs. de dicto* "normative attitudes," and (4) effects on actions vs. effects on actions, attitudes, and modes of deliberation.

[26] Leach and Lowndes (2007, p. 186) observe that "informal rules may prove especially tenacious and resistant to change, existing in parallel—or even direct contradiction—to formal rules."

[27] Unofficial vestiges of "Jim Crow" persist to the present day (see, e.g., Bodo, 2011).

[28] Executive Order 9981, 3 CFR 722 (1948).

[29] She did, however, observe cases where "formal rules" prevented effective management of local common-pool resources by delegating insufficient authority to local users (see, e.g., E. Ostrom, 1995, p. 39). Even then, it was not the existence of formal rules per se that was the problem.

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