

Laws and Norms in Games Humans Play
Avinash Dixit, Princeton University¹

Humans get together and interact to obtain several kinds of benefits, economic and non-economic. My focus in this paper is mostly on the former. Even that has many dimensions – economies of scale, specialization according to comparative advantage, provision of public goods, promoting actions with positive externalities and discouraging those with negative externalities, risk pooling, reciprocal assistance, and so on. All these interactions have strategic or game-theoretic aspects, with some key characteristics:

[1] The players in any one of these games come from different subsets of the population. Each person is a player in several games, and the games have overlapping sets of players. The games have different forms of partnerships (teams) and conflicts (contests), and occur among different groups (family, workplace, business, politics, ...). Players who are rivals in one game may be partners in another.

[2] Most of these games are non-zero-sum (involving a mixture of conflict and cooperation), most are repeated (with same or changing sets of players), most have some links with other games through payoffs or information transmission (record-keeping and reputation).

[3] In many of these games, large numbers of players are needed for feasibility of a good positive-sum outcome. In small family groups or villages, economies of scale in manufacturing cannot be adequately achieved; public goods cannot be provided in sufficiently large quantity; people are similar and face highly correlated risks so there isn't much scope to exploit comparative advantage and trade, or for risk sharing or risk pooling. In today's jargon, this makes for massively multi-player games that go beyond any one person's close network. To achieve the potential benefits, one must deal with strangers.²

[4] Nash equilibria of these games are often worse for all (or too many) of the players than outcomes at other terminal nodes reachable only through non-equilibrium strategies. In many such cases, humans have developed ways to change the game so as to achieve the better outcome; in other cases (climate change?), the search for such a game-changer continues. These game-changers require various collectively devised rules and procedures, such as monitoring, rewards or punishments, to change the players' motivations and incentives; this is the broad canvas of the concept of “governance”.

[5] As the games differ in their structure, so do the methods of governance. Those played by small stable groups of people can rely on trust in ongoing relationships, shared understanding of social norms, and internal sanctions. Other games with large and shifting sizes beyond the limits of trust networks need more formal structures of laws and their enforcement by some coercive power.³ And as the multiple games played by individuals in society link and interact,

¹ I thank participants in the Symposium, especially Roger Myerson, for valuable comments.

² Seabright (2010) develops this theme in its large historical and evolutionary context.

³ See Dunbar (2010) for evidence concerning the limits of friendship circles and trust networks. Dixit (2004, ch.3) models how the least-cost method of governance varies with the size of the group.

the devices that attempt to achieve good outcomes from each game overlap and interact, sometimes complementing each other but at other times working in conflict. These modes of governance and their interactions are the focus of my paper.

[6] When overlapping sets of players are simultaneously engaged in multiple games, the rules, norms, and governance that are needed in some games may conflict with those in others. Some overarching rules and institutions must then resolve such conflicts and make the whole complex of games operate to achieve the best feasible outcomes. This requires a hierarchy of governance institutions, for example successive levels of courts with the possibility of appeals from a lower-level to a higher-level court, or diamond industry tribunals in local communities of traders with a World Federation of Diamond Bourses above them, or coexisting mafia families (see Dixit, 2004 b, for an analysis). At the highest level we have the national constitution or even some international treaties, protocols, and court-like institutions. Usually, the higher up this ladder, the more formal the institution and its enforcement mechanisms; more on this later.

[7] Are the players in these games rational? Yes and no. In my view, the dichotomy proclaimed over the past two or three decades between rational-choice-based economic theory and behavioral economics is overblown and misleading. Kahneman's two systems are useful conceptual categories, but they are better seen as complements than as alternatives. Some of the fast and instinctive System 1 gets built-in from experience of actions and outcomes in similar previous games, so System 2 calculations and deliberations don't have to be performed afresh each and every time. In turn, those deliberations and calculations can take place in advance, looking ahead to the instinctive reactions and impulses that are likely to take over when the need for action arises in the future.⁴ And, whatever the basis of individual players' choices, are outcomes of games in reality the equilibria that theory would predict? Again, yes and no. A non-equilibrium outcome is less likely to persist in frequent play, but there can be long and variable lags in players' perception and revision of non-equilibrium strategies. In short, our analysis of these games should take into account the actual modes of behavior and outcome generation processes, and institutions and organizations of governance should do likewise.⁵

Research literature on all these matters is huge, and I do not pretend to be comprehensive or offer any new theories or insights. Given the purpose of this symposium, I will overview some literature through a lens that highlights its game-theoretic aspects. These are implicit in the many institutionally or historically oriented papers that do not even mention game theory, let alone use any of its terminology or results. But in my view the subject gets better organized and our understanding of it is greatly improved by making the connections to game theory explicit.

I will organize my analysis by dividing the large body of issues into smaller categories along three dimensions. As usual the categories are for conceptual clarity; in reality there are overlaps and gaps among them.

⁴ A well-known everyday example of this: when preparing for sleep in the evening you keep your alarm clock on the other side of the room, so the next morning you cannot give in to the temptation to push the snooze button and be late for that day's commitments. Schelling (1984, also to some extent 1978, and a 1996 article with the perfect title) analyzed such games and gave many striking examples of them. In my opinion he was a brilliant pioneer of this eclectic approach to game theory, integrating traditional economic theories of rational behavior and insights from psychology, sociology etc. In those pre-behavioral-economics times, he was already a post-behavioral economist.

⁵ The rationality or otherwise of individual players' beliefs, preferences, and strategies is also influenced by the society and culture around them; Henrich's (2021) paper at this conference discusses the dynamics of evolution of these, and implications for the emergence of social norms of cooperation and peer punishment. In this paper I will largely take individual behaviors, rational or otherwise, as given, but make a few relevant remarks at the end.

Types of games

When social interactions involve collective action, the game is often a prisoners' dilemma. But other types of games also arise, and different games need different devices of governance to achieve good outcomes. In the stylized analysis of these games, each player chooses between two actions.⁶ The socially optimal pattern of actions across individuals may not arise from their independently made choices; that calls for devices to achieve and sustain better outcomes. I consider three prominent types of games.

Going with the crowd

The simplest such games are of pure coordination. It does not matter which of the two actions each player chooses so long as they all choose the same one; mismatches are costly. Driving on the left versus right is the best-known example. It is in each player's own interest to drive on the left if everyone else is driving on the left; likewise on the right. Therefore the game has two Nash equilibria, one where everyone drives on the left and the other where everyone drives on the right, and the two are equally good from the social perspective. But any one individual may not know what the others are choosing. An equilibrium may not be attained; there may be costly crashes. To avoid this, we need a convention and its common knowledge. The convention, in the form of a rule of the road, can be publicly announced, but ensuring that it is common knowledge – everyone knows that everyone knows that ... – may not be easy. Chwe (2001) discusses and illustrates how societies create common knowledge.

In a slightly more complex variant of coordination games, one of the two equilibria, say the one where everyone takes action A, may be better for every player than the other where everyone does B,⁷ but the game may yield the B outcome because each player expects the other(s) to do B. Cooperation for hunting versus fishing when everyone prefers game to fish is a primitive example. Participation of all (or almost all) is needed for success in each venture, so it is important to avoid the situation where some go hunting and others fishing. Of the two Nash equilibria, suppose the one with hunting is unanimously preferred. But the group may get stuck in the other: everyone goes fishing because each expects the others to go fishing because of history or expectations, or the cost of mismatches is such that fishing is the risk-dominant equilibrium even though hunting is Pareto dominant.⁸ If that happens, coordinating a shift to the better equilibrium and sustaining it requires a major effort to promulgate a convention and to ensure that it becomes common knowledge. Sadly, collapse from a Pareto dominant equilibrium

⁶ More generally, the choice may be among multiple discrete actions, or an action with a continuously variable magnitude. Most of the conceptual game-theoretic issues of governance are captured by the binary analysis in this paper, so I will not delve into the more general formulations.

⁷ Such asymmetry exists even in the driving example. When cars on highways whizz past each other at a combined speed of more than 300 km per hour, the airflows around them meet to form tiny tornados that can grow and inflict damage. These are worse in one direction of spin than in the other because of the Coriolis effects of earth's rotation. But I have not found any solid evidence to support this, and do not know whether it would be better to drive on the left in the Northern hemisphere and on the right in the Southern hemisphere, or the other way round!

⁸ If you go fishing while others go big-game hunting, you will catch few fish; if you go big-game hunting while others go fishing, you risk becoming the victim rather than the hunter. Of course, a small number of people going after a big fish may "need a bigger boat".

to a dominated one seems easier to occur than the other way around; think of the bank run in the movie *Mary Poppins*. As Vergil (*Aeneid* 6:126) says: *facilis descensus averno*.

Going against the crowd

In games of this kind, if too many people in the group are taking one action (call it A), it is in the interest of the rest to take the other action (B). Unlike a prisoner's dilemma, however, neither A nor B is a dominant strategy; which is better for you depends on how many of the others are doing one or the other. These games then have an equilibrium in with a mixture in the population, some taking action A and others B.⁹ Typically, the players in one of these two subsets (say those playing A) get higher payoffs than those in the other (those playing B), but if all choose A, the result is very bad for all. These are games of the Hawk-Dove (or Chicken) type: it is best for one player to be the Hawk (drive straight) when others are Doves (swerve), but if everyone tries to be the Hawk (drive straight), all suffer serious damage in the fight (car crash).

Then the question arises who gets to be in which group. That decision and its enforcement needs some form of collective action. In harmonious well-functioning societies, some redistribution – either at each time the game is played, or by alternating the assignment of better outcomes to different groups or people over time – can ensure that all share in the aggregate gains. But in many societies the elite – whether an aristocracy, oligarchs, political leaders, religious authorities, or some other small subset of society – seize the gains, leaving the poor masses to take the lower payoff.¹⁰

Prisoners' dilemma

This is the most frequent type of game that arises in situations of collective action, both to achieve good “positive-sum” outcomes (provide public goods by contributing money or effort, take actions that convey positive externalities on others) and to avoid or mitigate bad “negative-sum” outcomes (reduce depletion of common resource pools, restrain from inflicting negative externalities on others). Governance in such games is difficult because taking the socially desirable action is a dominated strategy, going against the selfish interest of every player. But many mechanisms of governance exist and succeed. They have been studied in theoretical models, in case studies, and in laboratory and field experiments – indeed so many that recapitulating them in this paper would make it far too long and tedious for people who have delved into the subject even cursorily.

At a very general level, mechanisms of governance to resolve prisoners' dilemmas need two features: (1) a rule – variously a law, norm, or code of behavior – that tells individuals what action they should take, and (2) a set of incentives, typically a sanction for violating the rule but sometimes a reward for conforming to it, that change the dominance of the rule-violating action. These mechanisms in effect change the game, so it is no longer a prisoners' dilemma. Depending on the nature and size of the incentives, the changed game can take one of two forms. If the sanction applies for violating the rule only when sufficiently many others are conforming to it, the game becomes one where the individual incentive is now to go with the crowd. This has the two equilibria mentioned above, and the better one can be achieved by suitable creation of

⁹ With just two or few players, the corresponding equilibria have mixed strategies for each player.

¹⁰ Acemoglu (2021) emphasizes such “within-society conflict,” and its implications for the evolution of institutions to achieve cooperation while managing the conflict, in his paper for this symposium.

common knowledge. If a sufficiently strong sanction applies regardless of what others are doing, then the socially desired action can become the dominant strategy for each individual, and the good outcome achieved.

In the following two sections I discuss in somewhat greater detail the nature of these sanctions and their enforcement.

Types of sanctions

The form of sanction most studied is that within the game, where the victim or victims of a violation of the rule or norm of behavior pursue a strategy that holds the violator down to a punitively low payoff. This happens usually in repeated play of the same stage game; the theory of this, especially when the same two players interact repeatedly, is too well known to need repetition here; a good overview is Kandori (2008). I will confine my remarks to a few relatively less-well-known matters.

Sanctions within the game are also feasible if multiple games are being played “almost” simultaneously, and a pre-play stage allows communication of a threat to punish in one game for misbehavior in another. Schelling gives good examples of this (1960, pp. 50-51, 140). If two or more stage games are being played repeatedly, then their dynamic incentive constraints can be pooled to achieve greater power to punish. The threat of such punishment sustains greater adherence to the prescribed equilibrium strategies that yield better payoffs to all; see Bernheim and Whinston (1990).

Asymmetric information adds an interesting twist. Suppose information about some random event that affects strategies allowed within the game is available to one player but not others. A prominent example is a mutual insurance scheme where the adverse event that triggers a claim is observed only by the affected party. Then this party can make false claims. This can be deterred by reducing that player’s right to make future claims just sufficiently to offset the gain from a current false claim. See Atkeson and Lucas (1992) for a specific model, and Jackson and Sonnenschein (2007) for the general theory.

Sanctions can come from outside the game of immediate interest. For example, suppose a feasible strategy in this game is to renege on a contractual commitment or to perpetrate a commercial fraud. The formal legal system can use its power to impose fines or imprisonment, and this threat can deter the players in the game from such behavior. In principle one should regard the whole process as one large game that combines this game and that of enforcement, with the state as an additional player in the latter, but in practice it is often simpler to maintain the distinction between behavior within the game and the threat of external punishment. Such simplification can be justifiable in cases where the possibility of corruption or failure of the state is not a concern; then we can regard the state as an exogenous external monitor and enforcer. If bias or corruption is a problem, and if the state’s agents with their natural human motives can conspire with one side in a dispute, then it is important to endogenize this in the analysis, and also examine how the state’s agents can be induced to act more reliably in the overall social interest.

Types of enforcement

Perhaps the most direct method to get players to take the socially desirable actions is to internalize the social benefits and costs into their own payoffs. This is conceptually simple, but not so easy to implement in practice. The most basic reason for prosociality is genetic. All members even in large groups of ants, bees, bats etc. are very closely related, so their selfish genes will accept much self-sacrifice for sake of the whole. For example, sick vampire bats self-isolate and distance from others in their cave; see Ripperger et al. (2021). Among humans sufficient genetic uniformity may exist in extended family groups,¹¹ but that effect decays rapidly in groups of size needed to realize most scale economies or public good benefits. When there is not enough genetic kinship, human societies can and do change individual preferences to instill prosociality through upbringing in the family, education and friendship formation in school, etc.¹² All these processes of socialization create a personal code of behavior, and instill feelings of guilt or shame for violating it.¹³ This may not work perfectly, but it works better than what the old-school dogmatic followers of the fully rational and selfish “homo economicus” would have us believe. Beyond family and social groups, the state’s legal system meets out punishments for certain violations. In addition to the direct cost of the fine or prison time, the convict may suffer an internalized cost of shame.¹⁴

Avoiding any violation of the rules or norms of socially desirable actions by modifying the player’s payoff functions can be thought of as “first-party enforcement.” Second-party enforcement is imposition of sanctions by others involved in the game (who would be harmed by a violation); in third-party enforcement the enforcer is not a direct participant in the game. Let us consider these in turn.

Resolution of two-person prisoners’ dilemmas (and some other games where Nash equilibrium without any intervention would be suboptimal) has been studied in detail, both in theory and in reality. Strategies such as tit-for-tat in repeated games are well known even to non-game-theorists. The general result of these models is that good behavior can be sustained if the players are sufficiently patient. Numerous results, called Folk Theorems, say that any efficient outcome can be sustained as an equilibrium in the limit of infinite patient or zero discounting of the future. Of more practical interest are results that tell us how much cooperation can be sustained for given positive discount rates; the general theory of this follows Abreu, Pearce and Stacchetti (1990). I will take all this for granted and make just one brief remark.

Theoretical models often involve some variant of grim trigger strategies – any cheating leads to a complete collapse of cooperation in all future plays. In fact, there is a general presumption in theory that the harshest sustainable (subgame-perfect) punishment achieves the most cooperation. This is in stark contrast to numerous findings that successful cooperative or collective action in reality uses graduated punishments – e.g. start by cautioning the violator, asking for restitution for the harm suffered, then perhaps a short cutoff from participation with an

¹¹ Remember J.B.S. Haldane’s willingness to sacrifice his life to save the lives of two brothers or eight cousins.

¹² See Dixit and Levin (2017) for a model of this. See also Henrich (2021) for discussion of social and cultural dynamics more generally.

¹³ The difference between guilt and shame is that you feel the former even if no one else finds out about your misbehavior, whereas you feel the latter as the result of being found out.

¹⁴ When some countries started to impose mandatory prison sentences, even short ones, for driving while drunk, many people punished for these offenses were ashamed to admit that to their social circles, and tried to get away with telling their friends that they were going on a three-week vacation to an unspecified resort.

open door if remorse is shown and a promise of better behavior is made.¹⁵ Total ostracism is only the last resort for persistent violations. I have not seen a really good theoretical treatment of this, though I have participated in an effort (Abreu, Bernheim and Dixit, 2005).

Third-party enforcement is where the active players in the game have, or appoint, or hire, an outsider to enforce, and sometimes to adjudicate, any violations. The state's legal system of regulation, courts, police etc. is the standard mechanism and institution here. In much of economics or game theory, this was long assumed to work perfectly and costlessly. If any player violated the law or the contractual stipulation, the remedy was to "take it to the judge." All that was needed was verifiable information about the violation – proof meeting the legal standard. Unfortunately, in many countries and times such a judge is absent, lacks understanding of the context needed to interpret evidence, or is too slow, too error-prone, or corrupt. In such cases, players in the game devise their own mechanisms and institutions.¹⁶ These include the private judges at the medieval Champagne fairs (Milgrom, North and Weingast 1990), Gambetta's (1993) mafioso enforcer Don Peppe, or "Godfather's justice" in the famous movie. Dixit (2004 a, chapter 4) reviews and extends many of these analyses.

Between the second-party and third-party mechanisms outlined above, we find a rich and varied territory. Here we have a large and stable group of players, from which two (or a small subset of) members will play a stage game each time, but different ones play at different times. No bilateral meetings are sufficiently frequent to sustain cooperative behavior at the rates of discounting likely to prevail in reality.¹⁷ What the group needs is for other members to punish a violator "on behalf of the victim" in their own future meetings with the violator.¹⁸ To do so, they must forgo their own potentially mutually beneficial dealings with the violator. A human instinct to punish social wrongdoers even when one is not the direct victim and even at a personal cost often serves the purpose (Fehr and Gächter 2002, and many others).¹⁹ The problem can also be circumvented when the punishment is ostracism from all future trade with members of the group. If someone is tempted to deviate from the group's sanction regime when everyone else is conforming to it, the violator, already under ostracism by others, fears no extra punishment by cheating the deviator in the "sanction-busting" deal. To keep the violator honest, the prospective deviator must pay him a sufficiently larger share of the total surplus. It would be cheaper for him to deal with someone without history of past cheating. Adhering to the sanctions regime is therefore a Nash equilibrium; that makes not cheating in the first place is a subgame perfect equilibrium (Greif, 2006, pp. 76-7).

¹⁵ See for example Ostrom (1990, pp. 97–99) and Ellickson (1991, pp. 53–64). The other authors in this session, Acemoglu (2021) and Henrich (2021) also emphasize this, and offer many examples from history and anthropology of the variety of devices that are used to deter and punish selfish free-riding in collective action situations.

¹⁶ Private governance may occur for good reasons – insiders have genuine information or interpretation advantages – or for bad reasons – they want to conceal some illegal or criminal activity from outside oversight. In assessing social consequences of private governance in any specific instance, we must weigh this balance.

¹⁷ Sometimes pairs of players may be able endogenously to choose to meet more frequently, to establish an ongoing relationship in which bilateral or second-party enforcement can be sustained.

¹⁸ A memorable instance where direct or bilateral punishment by the victim is infeasible in the very nature of the situation is Yogi Berra's saying: "Always go to other people's funerals. Otherwise they won't come to yours."

¹⁹ If the initial proportion of altruistic enforcers in the population is above a threshold, then an equilibrium with good behavior all round can be stable in evolutionary dynamics; see Sethi and Somanathan (1996).

Interactions

These types of sanctions and enforcement have ambiguities and overlaps. Most importantly, they interact, sometimes in a reinforcing or synergistic way, but at other times conflicting and interfering with one another. Many examples of such interactions have been observed, but to my knowledge there is little conceptual analysis of the circumstances and forces that determine whether they are likely to be mutually reinforcing or rivalrous. Here I offer a somewhat systematically organized account in the hope of spurring such theoretical research.

At its best, amicable synergistic interaction exploits comparative advantage to allocate governance of the multiple games people play, and different components of any one game – detection, adjudication, and enforcement – to the most efficient first, second, or third parties for each purpose. Here are a few examples.

The parties to many private contracts must agree to resolve any disputes by arbitration in an industry-based forum, giving up their rights to sue in formal courts. These forums have many advantages: they are familiar with industry practices and can interpret information more easily and accurately; they can render verdicts faster; in many contexts they can impose better sanctions through their members' actions than what the courts could levy in the general legal framework. Bernstein (1992, 2001) and others have studied these institutions in detail.²⁰ Courts respect these arrangements and verdicts; they will not hear appeals save in very exceptional circumstances. In international trade and investment, there are forums named after the various cities in which they are based and using the legal system of that country – either common law or Civil law or some mixture – and the contract stipulates where a dispute is to be taken. These forums lack many of the benefits of the industry-based forums mentioned above: specialized knowledge of the industry's customs and practices, speed, accuracy etc. Their sole advantage may be that they are not biased or corrupt in favor of one country's citizens. When they have issued their verdict, each member country's legal system is committed to enforcing it under the New York Convention. See Dezalay and Garth (1996) for history and details of this.

Conversely, in some situations the formal legal system can adjudicate a dispute, but a private mechanism may have comparative advantage in its enforcement. For example, repossession of automobiles for non-payment of the loan is authorized by courts but enforced by private specialists who seem to be able to find them more easily than the police. Similarly, banks found it difficult to track down borrowers who defaulted on their loans in footloose industries with little or no sunk investments. Garment-making was a prime example. The mafia could do this tracking better than banks, and could inflict more severe punishments than the formal legal system. That was how they became major lenders to this industry; see Repetto (2004).

Feedback interactions between formal and informal systems and institutions also occur over time. A change in law can lead to change in customs and norms over time; Aldashev et al (2012) provide examples in the context of inheritance, marriage and divorce in sub-Saharan Africa and India. But rooted customs may prevail over changes in formal law; British and post-colonial property rights law in east Africa did not lead to its acceptance by local chiefs or extended family obligations, so banks would not accept formal land titles as collateral for loans to business startups. See Shipton (1988), Ensminger (1997) and Musembi (2007).

²⁰ This advantage of expertise and information may be offset by a bias in favor of one side; many contracts in business and finance involving consumers or clients on one side and industry insiders on the other insist on arbitration to resolve disputes, and there is suspicion of bias in favor of insiders in such situations.

Hierarchies

The multiple institutions of governance that handle the multiple and interacting games among overlapping sets of players also interact, and some overarching institutions are needed to balance interests and resolve conflicts. Therefore we have a hierarchy of institutions and governance mechanisms, and the rules, norms, and enforcement at a higher level in the hierarchy take precedence over those at lower levels. At the topmost level we have constitutions and supreme courts, then various legislatures and high courts, then local governments and local community associations, and so on.²¹

In this hierarchy, the institutions at the highest level are usually the most “formal,” in the sense of being part of the state’s system of constitution, laws, law-enforcement, and regulations to which all citizens are subject, rather than the rules, norms or conventions, and sanctions within a business or community association whose membership is to some extent voluntary. As is usual with dichotomies, this distinction is ambiguous, and leaves gaps and overlaps, but it is useful for focusing thought and analysis.²²

What ensures that an enforcement measure announced by a formal higher-level authority will actually get implemented? It is often said that the ultimate source of the power to enforce its verdicts is the state’s monopoly of coercion or violence. But that is an inadequate explanation at best. The state’s agents who are supposed to exercise this coercion or violence are themselves players in the whole game, and their obedience cannot be assumed or taken for granted. Ultimately it has to be based on some broadly accepted sense of the authority’s legitimacy and respect for its decision processes. As US Supreme Court Justice Elena Kagan said in a speech at Princeton University: “I think all of us need ... to realize how precious the court’s legitimacy is. The court doesn’t have an army to enforce its rulings. The only way we get people to do what we say that they should do is because people respect us and respect out fairness.”²³

It is harder to earn such acceptance and respect for a formal institution than an informal one. The latter is closer to the daily lives and activities of the people and the community where the it operates; they see and monitor its functioning more easily. The formal institution is more distant, and partakes of the citizenry’s general suspicion of “big government.” Therefore it has to make special effort, employ clear and transparent procedures, and hold itself accountable for its decisions, if it is to establish and maintain confidence, trust, and acceptance. These features are easier to achieve, or even automatic, for an informal system that operates at a smaller scale of local communities or associations whose members are in regular ongoing relationships, and share some common understanding of the issues which they must decide and conflicts they must resolve.

²¹ The problem of devising the optimal division or allocation of functions and authority in such a hierarchy has some formal parallels with that of fiscal federalism. To my knowledge this has not been exploited in research.

²² Merriam-Webster (<https://www.merriam-webster.com/dictionary/formal>) gives two relevant definitions of the word “formal”: “2a : following or according with established form, custom, or rule; b : done in due or lawful form.” This is itself not without ambiguity: the b concept is closer to what I have chosen; the a concept is closer to what I would call informal, but in neither case is the correspondence exact. Such ambiguities plague most attempts to dichotomize, but dichotomies remain useful as conceptual categories even when they are not clearly true or clearly false; see Gould (1987, pp. 8-9, 199-200).

²³ Reported in <https://www.npr.org/2022/01/18/1073428376/supreme-court-justices-arent-scorpions-but-not-happy-campers-either>

Coexistence or no existence?

What determines whether the interaction between formal and informal institutions, and between laws and norms, will prove mutually complementary or rivalrous? Are there any general principles, or is it all too context-specific? Here I indulge in a little speculative thinking. In my view a plausible necessary condition for good interactions is broad acceptance of a rule-based system, recognition of socio-legal-political legitimacy of the constitution and its components, and recognition of the concept of a “loyal opposition” – namely, that people and groups can oppose specific policies without their loyalty to the larger society or nation being called into question – by all participants in political and social activities. This makes the game at its topmost level cooperative – think of it as establishing the overall constitution – even though various subgames that are played under its umbrella may be non-cooperative.

This can be restated in the terminology and using the classification of societies and states in Acemoglu and Robinson (2019). The condition stated above is like being in their Narrow Corridor, where the powers and interests of the state (formal law) and society (norms and customs) are reasonably well balanced. If the formal state is too powerful and oppressive (their Despot Leviathan), it has no interest in seeking to benefit the masses of society. If the state is too weak and leaves society to devise a pure norm-based system with its cage of customs and restrictions (their Absent Leviathan), there is no larger cooperative game. And in my review of the book (Dixit, 2021), I suggested a fourth type, a Shambolic Leviathan, which has oppressive aims but has very weak state capacity. It has no top cooperative game; only active interference with society’s attempts to sustain a system of norms. None of these three types will permit a complementary or synergistic interaction between formal institutions and informal customs.

We can also link my discussion to the concept of the society’s culture and its evolution, as discussed by Henrich (2021). He defines culture broadly, comprising the individuals’ “ideas, beliefs, strategies, values, preferences ..., motivations (e.g., fairness with strangers), decision-heuristics, [and] judgment biases.” These evolve in a process of social learning and imitation. Henrich offers an overview of issues, detailed discussion of research on each, and many examples.

In such a dynamic process, small differences in initial conditions can amplify into polarization of society; see for example Schelling’s (1978, chapter 4) model of tipping and segregation. I fear that the natural dynamics of societies seems to conform to what might be called The Second Law of Sociodynamics:²⁴ a tendency of entropy (disorder) to increase. Special and concerted efforts are required to counter this, and to keep a society and its culture within boundaries of tolerance and acceptance that will allow governance of the multiple ongoing games with overlapping players to proceed in a harmonious and synergistic manner. Research on how this can be accomplished should be a matter of the highest urgency in these times of increasing polarization within and across nations.

²⁴ This labeling is by a purely formal analogy with thermodynamics; I have no “first law” to offer.

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