The Role of Law as Protector of Liberty

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• Ascertaining universal principles in social sciences is a dangerous endeavor.

• The majority of what we think we know comes with caveats such as “usually,” “most of the times,” “more often than not,” and similar.

• But, if I were forced to state a few of those principles, perhaps the clearest would be:

<table>
<thead>
<tr>
<th>An if and only if proposition about the rule of law</th>
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<tbody>
<tr>
<td>“Every society that has achieved sustained freedom and prosperity has adopted a strong form of the rule of law. Conversely, every society that has adopted a strong form of the rule of law has achieved sustained freedom and prosperity.”</td>
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A deceivingly simple proposition

- The previous proposition encodes many more nuances that it appears at first sight.

- Most of us would agree on what prosperity means (note, however, the adjective “sustained” in the proposition).

- However, the definitions of freedom and the rule of law are contested.

- I do not have much to add to the discussion of what freedom is. I would, therefore, adopt a somewhat loose reading of the word, which is likely to agree with what most of us in this room roughly agree on.

- But I have a few remarks about what the strong form of the rule of law is and how it is related to freedom and prosperity.
So, what is law anyway? I

- We live in a hyper-positivist zeitgeist, where most people equate law with acts from a legislator (or, perhaps, a judge).

- But this was not (and it should not be) the right interpretation of what law is in our legal tradition.

- In fact, I find this confusion at the core of many of our current problems.

Erich Kaufmann (1880-1972), Die Gleichheit vor dem Gesetz im Sinne des Art. 109 der Reichsverfassung

“The government does not create law, the government creates legislation, and the government and legislation are subject to law”

- Similar ideas can be traced back to Cicero, Ulpian, Aquinas, Coke, and many others.
So, what is law anyway? II

- Bruno Leoni and F.A. Hayek remind us, however, that law consists of rules of conduct of general applicability.

- In comparison, legislation is promulgated norms, traditionally limited to the organizational structure of government. Perhaps, also, to clarify points of law.

- Latin, by distinguishing between *ius* (*ius* est norma agendi) and *lex* (from the Proto-Indo-European *leǵ*, to gather), made this point clearer.

- Historical examples of the development (discovery?) of law:
  1. Roman law.
  2. Ius commune in Middle Ages Europe and common law in England.
  3. Lex mercatoria.
  4. Arbitrage.

- Law as applied mechanism design developed by experimentation.
Formal and substantive commitments of the rule of law

- The rule of law, more sharply, bring us formal commitments, a point increasingly forgotten by recent developments.

Rudolf von Jhering (1818-1892), Der Geist des römischen Rechts auf den verschiedenen Stufen seiner Entwicklung

“A sworn enemy of arbitrariness, due process is the twin sister of freedom”

- Furthermore, the strong form of the rule of law implies a number of substantive commitments.

Coke’s seriatin opinion on Thomas Bonham v. College of Physicians, 1610

“And it appeareth in our Books, that in many Cases, the Common Law doth controll Acts of Parliament, and somtimes shall adjudge them to be void: for when an Act of Parliament is against Common right and reason, or repugnant, or impossible to be performed, the Common Law will controll it, and adjudge such Act to be void.”
Rule of law and freedom

- Thus, the rule of law is the supremacy of law, not legislation, as an organizational principle.

- That is why the rule of law brings freedom.

- Rule of law is not the same than rule by norm (in the French tradition, Carré de Malberg's distinction between État de droit and État légal).

- All laws are norms, but not all norms are law.

- Rule by norm is an imperative of any large modern government, including dictatorships (i.e., Spain after 1957).

- Clear counterexample: Germany 1933-1945 and the idea of “Working Towards the Führer.”
Economists have postulated many mechanisms to link the rule of law and sustained prosperity.

Examples: security of property rights, certainty for investment, etc.

But, the more I think about it, the more convinced I am that, by setting up a level playing field of general norms of conduct, the rule of law allows for experimentations, both of the law itself and actions within the system.

A very compelling example comes from reinforcement learning (a branch of artificial intelligence).
select randomly from among all the actions with equal probability, independently of the action-value estimates. We call methods using this near-greedy action selection rule "\( \epsilon \)-greedy" methods. An advantage of these methods is that, in the limit as the number of steps increases, every action will be sampled an infinite number of times, thus ensuring that all the \( Q_t(a) \) converge to \( q^*(a) \). This of course implies that the probability of selecting the optimal action converges to greater than 1, that is, to near certainty. These are just asymptotic guarantees, however, and say little about the practical effectiveness of the methods.

Exercise 2.1 In "\( \epsilon \)-greedy action selection, for the case of two actions and \( \epsilon = 0.5 \), what is the probability that the greedy action is selected?

2.3 The 10-armed Testbed
To roughly assess the relative effectiveness of the greedy and "\( \epsilon \)-greedy action-value methods, we compared them numerically on a suite of test problems. This was a set of 2000 randomly generated \( k \)-armed bandit problems with \( k = 10 \). For each bandit problem, such as the one shown in Figure 2.1, the action values, \( q^*(a) \), \( a = 1, \ldots, 10 \), were selected according to a normal distribution with mean zero and unit variance, and then the actual rewards were selected according to a mean \( q^*(a) \) unit variance normal distribution, as suggested by these gray distributions.
2.3. The 10-armed Testbed

were selected according to a normal (Gaussian) distribution with mean 0 and variance 1. Then, when a learning method applied to that problem selected action $A_t$ at time step $t$, the actual reward, $R_t$, was selected from a normal distribution with mean $q_\pi(A_t)$ and variance 1. These distributions are shown in gray in Figure 2.1. We call this suite of test tasks the 10-armed testbed. For any learning method, we can measure its performance and behavior as it improves with experience over 1000 time steps when applied to one of the bandit problems. This makes up one run. Repeating this for 2000 independent runs, each with a different bandit problem, we obtained measures of the learning algorithm's average behavior.

Figure 2.2 compares a greedy method with two $\varepsilon$-greedy methods ($\varepsilon = 0.01$ and $\varepsilon = 0.1$), as described above, on the 10-armed testbed. All the methods formed their action-value estimates using the sample-average technique. The upper graph shows the increase in expected reward with experience. The greedy method improved slightly faster than the other methods at the very beginning, but then leveled off at a lower level. It achieved a reward-per-step of only about 1, compared with the best possible of about 1.55 on this testbed. The greedy method performed significantly worse in the long run because it (greedy)

$\varepsilon = 0.1$

$\varepsilon = 0.01$

$\varepsilon = 0$ (greedy)

Figure 2.2: Average performance of $\varepsilon$-greedy action-value methods on the 10-armed testbed. These data are averages over 2000 runs with different bandit problems. All methods used sample averages as their action-value estimates.
Concluding remarks

- The rule of law, through its substantive and formal commitments, protects freedom.
- The rule of law, by allowing experimentation, creates prosperity.
- Ensuring liberty and prosperity passes through a rebuilding of our original understanding of the rule of law.
- Law is, in a good sense, discovered, not created.