

Law as a Natural Phenomenon: The Empirical Investigation of the Legal Universe between Complexity, Biology, and Computation

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Background

In the last two decades, a deep change has marked social sciences due to the development of complexity science, the use of new computation methods and tools, and new findings on the biological bases of human behavior from neurosciences and evolutionary biology. On the one hand, the biological and cognitive processes that determine social dynamics have been understood better, especially through research that is increasingly interdisciplinary, formalized and quantitative. On the other hand, thanks also to the spread of computer models and simulations, the experimental method is now applied even in the study of social phenomena. All these factors are paving the way to a new generation of social scientists: the integration of insights offered by different disciplines, together with tools and approaches provided by information and communication technologies are orienting social sciences towards empirical and quantitative methods that typically characterized only physical and natural sciences. An example of this is social simulation, a trans-disciplinary area that is suggesting new explanations of the bottom-up emergence of complex social dynamics that were impossible to look at through traditional social science methods.

As testified by recent studies in computational legal studies, empirical legal research, neuroscience and law, this trend is gradually involving law - viz. both legal theory and practice. These studies suggest to consider law as a natural social phenomenon and as such, something that must be analyzed similarly to other natural, physical and social phenomena. Certain innovative approaches and methodologies, which are now popular in the social sciences, can help us to change the way the legal phenomenon is interpreted in that the complexity of law is understood in its factual and "natural" (biological, cognitive, social) dimensions. This can help us to extend and complete the traditional attention to the formal expressions of law (written norms, case law, legal literature), which are typically investigated by legal scholars.

This situation poses interesting challenges. From an epistemic standpoint, it fosters a "complexity-inspired" comprehension of all the phenomena that populate the legal universe from individual behavior to social institutions in which law emerges and evolves. From an application standpoint, the development of more "scientifically grounded" legal practices from policy modeling to regulation can be achieved.

This Research Topic aims to include theoretical, methodological, and empirical contributions that look at law in a new complexity-friendly, trans-disciplinary perspective. It aims to provide recent advances in legal informatics, empirical legal studies, computational social sciences, neuroscience, cognitive science, computer science, social simulation, and evolutionary game theory. Attention will be paid to analyses that cross-fertilize these fields.

We believe that and interdisciplinary debate on this topic can produce new challenging research questions that will deserve attention by legal science in the near future. Understanding law as a natural and social phenomenon is not only expected to identify grand challenges in various research fields; it can also have serious policy implications as it can contribute to develop a new intellectual framework through which law is conceived and inform new applications in the law domain.