Law and Computational Social Science: Brief Notes of a Civil Procedure Law Scholar

ERNESTO FABIANI∗

Recently, relationships between law and science1 have witnessed the development of an area of great importance and interest represented by computational social science (hereinafter CSS), understood as “the integrated, interdisciplinary investigation of social systems as information-processing organizations and through the medium of advanced computational systems”2.

Research methodologies that characterize contemporary science (statistics, mathematics and computation) have already played an important role in all social sciences, including an area, like the law, where this may seem less obvious. Just think, as a mere example, about the contribution statistics have made, and continue to make, in this field3.

In this context, further research perspectives have been opened up by CSS. As pointed out by Cioffi-Revilla “computational social scientists are learning to exploit the advanced and increasingly powerful instruments of computation to see beyond the visible spectrum of more traditional disciplinary analyses”4, and it is interesting to look at (current or potential) applications for legal science of each of the five basic CSS research methods, namely automated information extraction, social network analysis, geospa-

∗ The Author is associate professor of Civil procedure law and associate dean of the Law School, University of Sannio, Benevento (Italy).


3 Examples might be different, but I think it is enough to remember that, as particularly significant, at least from a more strictly procedural point of view, the Italian Supreme Court has for a long time widely used statistics for extracting multiple data, concerning proceedings pending before it, that are of undoubted importance – in several respects – both in the civil and criminal matters.

4 See C. CIOFFI-REVILLA, op. cit., p. 260.
tial analysis (socio-GIS or social GIS), complexity modelling and social simulation models. A very recent contribution on the matter, drawing on research in which these methods are used as much to study the law as to deepen knowledge of social phenomena relevant to the law, underlined the fact that the application of CSS methodologies can lead to promising developments in at least four directions: (i) the analysis of structural and functional aspects of legal systems, (ii) the analysis of procedures regulated by law, (iii) the analysis of criminal phenomenon, and (iv) the analysis of the structure and dynamics of international relations and organizations.

In the light of these considerations, I believe it is advisable for lawyers to start looking, closely and with interest, at these research methods, trying to understand, from an interdisciplinary perspective, what are the areas of law where the use of CSS can (at least potentially) be more profitable.

It is what I would like to do here, in a tentative way, focusing on the area of law I have been working in for years: civil procedure law. From this viewpoint I would like to identify, based on personal intuition, some issues of civil procedure law which appear to demonstrate the greatest number of points of contact with CSS. The goal is to offer a contribution to interdisciplinary dialogue by identifying legal problems that can result in just as many research questions for the computational social scientist.

At first glance, civil procedure law seems able to benefit, in various ways, from CSS methods, which appear to offer, in general terms, new interpretations of civil proceedings. Looking at some of the best known among introductory writings published on the subject, one gets the feeling that CSS cannot only provide a better understanding of proceedings, but also suggest, based on this understanding, solutions for changing and improving existing rules and procedures.

In the light of this premise, the research objects could be even more varied: rules of civil procedure; actors who apply the rules (judges, judicial

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5 Ibidem.


7 See on this point, on the one hand, with more specific reference to the social simulation and, on the other, more generally concerning the law B. EDMONDS, What Social Simulation Might Tell Us About How Law Works, in this Issue.

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