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SMART WORLD, SMART RULES? ON THE LEGITIMACY OF DIGITAL SYSTEMS OF SOCIAL RULES

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Abstract

The rapid realization of the “Internet of Everything” requires and causes that systems of social rules for interactions are implemented, administered and enforced by digital means. Although this phenomenon has been discussed since works on “lex informatica” and “code is law” the issues of legitimacy are rather selectively addressed and public discourse lacks differentiation in this regard. We argue that different social rule systems have, in principle, various requirements for legitimacy and, thus, their evaluation needs differentiation. The contribution has the aims (1) to introduce a more nuanced view on the rather under-researched issue of legitimacy of digital systems of social rules.

Therefore, we discuss case studies of recent Internet developments and evaluate them with insights from theory of democracy. (2) The contribution suggests options for action and approaches to generate or ensure legitimacy for the considered case studies.

Keywords: Rules, Legitimacy, Politics, Governance

The rapid realization of the “Internet of Everything”, e.g. connected smart homes, smart cities, smart cars and infrastructures, smart grids, etc., requires and causes that systems of social rules for human and machine interactions are implemented, administered and enforced by digital means to an unprecedented level. Besides automatic processing of large amount of interactions, social rules are technically implemented in order to ensure their enforcement, to establish fine-grained, flexible and personalized rules, as well as to make them self-adapting and learning. Automated

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processing of interaction rules appear as automated decisions and are therefore less transparent and comprehensible for outsiders. Moreover, they often generate a large quantum of partly personalized data utilizable for many different purposes and contexts. Thus, the legitimacy of such social rules and decisions in the context of digital systems becomes a crucial question.

The embedding and enforcing of social rules by digital systems, especially by ‘code’, Internet architecture, algorithms, or software has been discussed under terms such as “lex informatica” (Reidenberg, 1998) or “code is law” (Lessig, 1999, 2006). Research is now conducted on “governing algorithms”, “technological regulation”, or “electronic institutions”. There, issues of the legitimacy of such digital systems of social rules are rather selectively addressed. Furthermore, especially the public discourse lacks differentiation in this regard.

We argue that different social rule systems have, in principle, different requirements for legitimacy and, thus, their evaluation needs differentiation. For instance, many digital systems of social rules on the Internet can be conceived as private contracts (e.g., Bygrave, 2015). Principles of contractual freedom substantiate their legitimacy as well as legal frameworks to protect contract parties, fairness and competition. However, this approach may fall short. Ensuring legitimacy by improving responsibilities of end-users in market decisions—as practiced with the legal provision of “informed consent” in privacy protection—can be insufficient when constitutional rights are not adequately protected. In such cases other requirements for legitimacy become relevant.

For example, massive amounts of interaction data are generated by tracking of online behavior and interactions and through the “Internet of Everything”. The rules implemented in the tools and methods necessary for data management and analytics increasingly become social rules in a wide range of contexts. Due to their growing importance in more or less all aspects of life, such digital rule-setting methods itself require further regulation as well as procedure and instruments of legitimization that are, for instance, comparable to those of legislation.

Furthermore, increasingly “subnets” of the Internet emerge (such as more or less closed traffic management networks, connected value chains, smart home and entertainment networks, commercial platforms) with rules defining access and usages options. Here, also the standards and designs of interfaces (e.g., APIs) turn into social rules. They determine conditions of choices for end-users and options of economic activity and innovation in form of access to the “quasi” infrastructures, which reach issues of legitimacy that go beyond contractual freedom.

This contribution addresses issues of the legitimacy of such systems of social rules enabled, structured and enforced by digital means.¹ (1) We differentiate types of digital systems of rules on the basis of case studies and evaluate them with insights from theory of democracy (e.g., Scharpf, 2009; Werle & Iversen, 2006). The complexity of such rule systems has to be deconstructed with regard to different requirements for

¹ It does not focus directly on issues of the legitimacy of “classic” forms of Internet Governance.

legitimacy. Which type of social rule system do we find and which legitimacy does it possess?

Furthermore, (2) the contribution suggests options for action and approaches to generate or ensure legitimacy. Which actors, procedures and instruments of legitimization operate in the cases or are necessary in addition? These options range from stakeholder participation to involvement of third parties for oversight or control (audits), to institutional frameworks and direct governmental intervention. For those options, how can issues of representation, delegation of responsibilities, chains of legitimization, prerequisites and possibilities of inclusion, effectiveness and side effects of procedures and instruments of legitimization be assessed?

From this perspective, we seek to introduce a more nuanced and differentiated view on the rather under-researched issue of legitimacy of digital systems of social rules.

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