Magnus Eriksson

Research proposal

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1 State of the Art

1.1 Internet Reseach

Internet has during its 40 year development come to influence almost all aspects of society and have become a key driver in developments of globalization and transformation of society in its wake. It has come from an isolated system to becoming a part of business, politics, law as well as everyday interactions. There has also been a wide range of research on the impact of the internet from a sociological point of view, especially the last ten years with Castells marking a beginning of that period. Some researchers focus on new possibilities enabled by the internet, for example peer-to-peer production of commons (Benkler), democratization of innovation (Hippel) and increased participation in democracy (?). Others have focused on the negative aspects of contemporary internet and the internet as a new form of social control (Zittrain, Lessig).

1.2 Post-digital

The impact of internet and computational devices in general is no longer restricted to what happens with users sitting in front of computers. Contrary to early internet visionaries who imagined that everything would move to ”cyberspace” (Barlow), the last years have seen developments instead having digital technology move *out* into and become embedded in society. From a technical point of view, this has been driven by the so called ”Internet of Things”, which states that computational and networking capacities will become increasingly embedded in everyday objects and situations. One example of this is contemporary urban surveillence and digital control systems used for example to monitoring public and private spaces and manage traffic and public transportation. Another important example is the mobile internet-capable smart phone which has allowed social media to become a real-time phenomena and has notably been used for citizen journalism and real-time political organization.

1.3 Luhmann

Of central importance to this research proposal is Luhmanns theory of social systems and especially his theory of law as a social system.

Luhmann had notoriously little to say about the emergence of new information technology, always stating that it did not have an impact on his theory of communication. This led among other things to Luhmann being criticized by Kittler

The exception is one passage that has been quoted by several commentators:

> Already today computers are in use whose operations are not accessible to the mind or to communication [. . .] Although manufactured and programmed machines, such computers work in ways that remain intransparent to consciousness and communication–but which by way of structural coupling nevertheless influence consciousness and communication. They are, strictly speaking, invisible machines. To ask whether computers are machines that operate in ways analogous to the mind or

> whether they can replace or even surpass it, is to pose the wrong question [...]. Rather, one will have to drop all these analogies and instead ask what the consequences will be when computers can create a fully independent structural coupling between a reality they can construct and psychic or communicative systems.

Ultimately though, Luhmann was not interested in making his systems theory dependent on technological media.

> In an interview with Rudolf Maresch–in which the latter reiterated all the critiques raised by Kittler–Luhmann conceded that the technologizing of a communication system is a "special case" that would have to be studied on its own, but maintained that to technologize systems theory as a whole by resorting to input/output descriptions would amount to a "mistake."

Luhmann understands law as an autopoietic, that is self-referential, system that interprets the world in terms of legal/illegal. That law is an autonomous system should not be confused with the anglo-american ideal of the autonomy of law. An autonomous system is open to influence and in turn influences other social systems, but it does so by understanding its environment only on its own terms. Luhmann did briefly speculate on the possible transformation of law in a globalized world saying that it might amount to no more than a "European anomaly, which might well level off with the evolution of global society"

1.4 Code is law

Lawrence Lessig has speculated that computer code and computer architecture might be one of those successors of (or at least complementary systems to) law in the present era. His view, that "code is law", shares some similarities with Luhmanns theory of systems in the sense that he sees code as an autonomous self-referencing system that views the world only on its own terms. It should be said though that Lessig does not refer explicitly to Luhmann nor uses systems terms himself.

For Lessig, every act in a computer system is the result of a computation that works in binary ways. The code regulates all behavior in a computer system, without exception. This leads to code acquiring law-like regulatory capacities and runs the risk, as Lessig warns about, to over-regulate and over-enforce regulation, compared to law. Lessigs most used example is the diminishing of "fair use" of copyrighted material.

The idea from Lessig has received critique. Wu and Goldsmith has shown how the state does not lose power to code but are able to influence the architecture and the operation of the internet. Wu also shows that code is not only able to regulate but is also used to escape law, for example with file-sharing networks. According to Wu, individuals who does not want to comply with the law face the two option of either changing the law or avoiding the law. For individuals who does not trust law making institution or does not perceive that they have the ability to influence the law in their favor, the code act as a kind of poor man's law.

This research proposal also connects to other aspects of sociology of law that researches the internet. In particular to the Cybernormer group at Lund University that has made a name of investigating changing social norms on the internet. Reidenbergs ”Lex Informatica” is also relevant due to its emphasis on the difference between code and the sovereign, of interpretation and automation and of law-makings democratic process and the technological development of code. Also Cornelia Vismann & Markus Krajewskis ”Computer Juridisms” writes about a competition between law and code to define reality.

1.5 Other sociology of law

The tradition of sociology of law is actualized in several ways in this proposal. Webers understanding of law as enforcement opens up an understanding of law as defined more broadly that just legislation of which code is a potential candidate. Similarly, Erlich concept of ”living law” challenges the centrality of state law in understanding social order and opens up for a plurality of investigations into of how it is achieved. The emphasis on code also underscores the distinction of ”law in action” and ”law in books” that the legal realism tradition has long emphasized. David Nelken states that, while this might be old news, how this gap is handled should be the departure for sociology of law. Here too, code is one way that this gap is being bridged (or for that matter extended). Finally, Teubner puts on emphasis on the positive, or generative, aspect of social order as opposed to the regulatory and limiting when he says:

> [We should replace the study of] .. rule, sanction and social control with speech acts, coding transformation of differences and paradox. It is not rules but communicative events that should be our focus and it is the self-organising process of rules that is important in understanding the symbolic reality of legal validity, not the possibility of imposing sanctions.

This reflects my emphasis that code is not only limiting but also generative of new social norms and behaviors. Since he is a sociologist of law that by large is following Luhmanns theory, Teubners theory can potentially be reconziled with a broadened understanding of ”Code is Law”.

1.6 Other theories

While it is too early to say for sure, my suspicion is that the merger of Luhmanns theory with that of Lessigs, as well as its application on inter-system relations, would require the assistance of other theoretical fields.

One such field is Science and Technology Studies (STS) where several theorists have developed an understanding of information systems as always being ”sociotechnical” systems that in practice always contain a human component as well. To paraphrase legal realism one could say that they have emphasized the difference between code in action and code in the books. Since I am interested in looking at what

happens when the code interacts with other social systems, this more sophisticated understanding of situated information systems would be helpful.

In order to bridge Luhmanns social theory with Lessigs theory of information systems, I would also enlist the help of Friedrich Kittler who had a different view of communication systems than Luhmann and one much more grounded in the technical realities of those systems. This distinction between Luhmann and Kittler could be helpful to revisit since my investigation would require a close look at the operations of particular systems. In the same tradition as Kittler there are other theorists that can be useful. Particularly worth mentioning is Florian Cramer's "Words Made Flesh" about code as executable discourse.

2 Research Proposal

My research proposal is a theoretically driven investigation that would see if it is possible to integrate Lessigs concept of "Code is Law" into the sociology of law proposed by Luhmann. The purpose of such a merger would be to nuance the understanding of law in Lessigs concept as well as to make it applicable to a broader range of phenomena. The investigation would proceed in several steps.

2.1 1) Merging Code is Law and Luhmann

The first step would be to attempt to express Lessigs code of law in the terms used by Luhmann. Can Lessigs concept of "code is law" be expressed in terms of code being an autopoietic system similar to how Luhmann perceives law? This would also include the critiques of Lessigs concept as put forward for example by Tim Wu. A sub-question of this research question is what the introduction of internet and code means for Luhmanns theory of law. Does the introduction of code as law pose a challenge to Luhmanns sociology of law?

2.2 2) Expanding Code is Law to contain generative and regulative

With the help of Luhmanns theory and other sociology of law, is it possible to broaden and nuance the understading of law that Lessig applies? Lessigs concept of "Code is Law" understands law as a one-sided regulatory capacity. He emphasizes codes ability to regulate behavior and limit expression. Even when Tim Wu extends the concept to also account for when code is used to *avoid* law, the code also remains a negative concept. It can prevent law from being enforced, but does not generate something on its own. With Luhmanns social theory and also with the help of Teubner, it is possible to understand self-regulation not just as a limiting force but also a generative force that generates self-regulation by communicative acts. Rather than a passive and limiting force, code can be understood as positive and generative. This could be a potential addition to the concept of "code is law" that would use the discipline of sociology of law to come to a new understanding of it.

2.3 3) Using merger to illuminate inter-systems relations

When Lessigs theory of ”code is law” has been supplemented by Luhmanns sociology of law it becomes possible to use the concepts to view ”code is action” rather than ”code in the books”. Expressed in Luhmanns terms, it becomes possible to use ”Code is Law” to look at how it operates in *inter-system relations* rather than just *intra-system relations*. This would enable his concept to cover other aspects of the digitalization of society than only phenomena that solely takes place within information systems.

2.4 Method

The research proposal is mostly theoretically driven. It concern the possibility of merging two theories and therefor requires close readings and literature comparisons between theories. A large part of the research would therefor consist of theoretical work and literature studies. Each advancement in the theoretical work however, should be applied in order to illuminate empirical phenomena in original ways. This regards the expanded concept of ”code is law” that needs to be able to account for situations where code is generating novel forms of self-regulation rather than limiting behavior. Mostly however, it comes into concern in the final stage where the revised theory is to be applied to phenomena of ”code in action” where inter-system relations is concerned. For this section I have chosen to look at two empirical fields.

2.5 Empirical fields

After the theoretical investigations, empirical phenomena can be sorted into four fields:

- Intra-system/negative
- Intra-system/positive
- Inter-system/negative
- Inter-system/positive

What concerns Lessig is phenomena in the first square — ways in which code regulates information systems. The second square consist of phenomena where code creates new social norms and behaviors in information systems. An example here is investigation into social norms on copyright conducted by the Cybernormer group.

The third square concerns situations where code is being used to regulate phenomena outside of the information system. The example I have chosen to consider more closely here is urban surveillance and automatic pattern recognition in video surveillance in particular. Expressed in Luhmanns terms, this concerns how code and information systems integrate social systems on their own terms — how code views the social life of humans.

The forth square concerns situation where code is used to generate social norms, behaviors and self-regulation by the communicative acts it spawns in its execution.

Here I have chosen to take a closer look at the use of code and information technology — both directly as a tool and indirectly as a model — within political participation. This is a work I have already started with my report on the ”Edgeryders” project. Here we are dealing with how humans in social life integrate code on their own terms — how humans view code.

3 Expected Results

That Luhmanns sociology of law, in conserved or revised state, becomes a contribution to internet science and research into the regulation of information technology.

A revised version of the concept of ”Code is Law” informed by the lessons of Luhmann. This would amount to both nuancing its understanding of law with the help of Luhmanns sociology of law as well as making it possible to apply to new empirical phenomena with the help of Luhmanns theory of social systems.

Finally the sketch of a theory for how code can be understood to generate self-regulation in social systems.