

From Hayek's Spontaneous Orders to Luhmann's Autopoietic Systems

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Abstract: In this paper I contrast Hayek's and Luhmann's treatment of law as a complex social system. Through a detailed examination of Hayek's account of law, I criticize the explanatory power of his central distinction between spontaneous order and organization. Furthermore, I conclude that its application to law leads to different results from the ones derived by Hayek. The central failure of Hayek's failure, however, lies in his identification of complex systems with systems of liberal content maximizing individual freedom. Indeed, in this way, he can only account for systems-individuals and not systems-systems interactions. I introduce Luhmann's theory of autopoietic systems, which I submit, can solve all the mentioned problems and seems a much more promising conceptual architecture to grasp social systems in the context of a complex society.

Keywords: Systems Theory, Luhmann, Hayek, Complexity, Spontaneous Order, Legal Theory

“Its main theme [general evolutionary theory] is not the unity of history as an evolution from a beginning up until the present day. It is concerned, far more specifically, with the conditions for possible unplanned changes of structure and with the explanation of diversification or the increase in complexity.” (Niklas Luhmann)

“Does the automobile goes where its steering wheel points at?”
(Gorbachev)

1. Place and Ends of the Article

This paper aims at contributing to the recent revival of spontaneous and emergent order thinking within social sciences. To this trend, the diffusion of evolutionary theory (Darwin 2003, Mayr 2002 and Guttman 2006),² systems theory and sociocybernetics has contributed greatly (Geyer & van der Zouwen 2001). And yet, the authors employing the Hayekian framework of spontaneous orders had paid little or no attention to the developments just identified.

For example, among others, diZerega (2008: 1) has recently contended that “Hayek’s approach lays a solid foundation for a unified science of complex order.” Accordingly, he identifies i) the interaction between spontaneous order and ii) the interaction between spontaneous orders and instrumental organizations as two fundamental research questions to develop in the future.

I first develop a critique on its own of Hayek’s account of law. Using it, I argue that both spontaneous order and organizations of law can be complex systems and therefore Hayek’s distinction loses sight of the largest part of the legal phenomena; of law as a complex system. I conclude that Hayek’s basic distinction between spontaneous orders and organizations has little explanatory power.

Moreover, I submit that the literature on emergent orders has failed to notice that these are *systems* related questions. They do not directly relate to systems/individuals but systems/systems interactions and therefore cannot be adequately captured by a methodological individualism type of account. This implies a paradigmatic change: moving from the *subject* to the *system* level of analysis.

I illustrate what was mentioned before by comparing Hayek’s conceptualization of law with the one offered by Luhmann. I suggest that his theory of autopoietic systems presents a much more promising conceptual architecture to address such questions in the context of a complex society.

The paper offers three distinct sets of contributions. Firstly, I bridge the gap between two literatures which so far have not communicated properly. Secondly, this links makes explicit the precise limitations of Hayekian doctrine that are preventing further progress on emergent orders literature. Finally, I extend the study of complex systems to law, a phenomenon that has not merited much attention by Hayek's followers so far more concerned with democracy and science (diZerega 1989: 1 with sources).

2. Hayek and Luhmann³

Despite the age of their writings, Hayek and Luhmann are at the forefront of research in complex systems and evolutionary theory. They both recognize that evolution has brought us a society characterized by complexity, gigantic levels of information flow that need to be processed everyday for society to keep running. More importantly, they were aware that this level of complexity could only have been reached *because of* the absence of a centralized body directing society.⁴

That is the first main input of this article. I submit that there is much to gain in pairing and comparing Hayek and Luhmann approaches since both conceptualize the social problem as the *use of information/communication*.⁵ The challenge of society is how to cope with increasing levels of complexity without breaking down.

There is, however, a crucial difference which will prove fundamental in the economy of my argument. Hayek (1945), faithful to his methodological individualism, claims that *individuals* are the ones who can make the most efficient use of information and therefore social systems such as the market and the legal one should be designed so as to allow the maximum freedom of individuals (Barry 1982: b4).

Luhmann, on the other hand, jumps one level in the unit of analysis. The use of information is not to be studied from the individual but from the *system* standpoint. Put differently, how social systems can reduce the information they need to process in order to be able to fulfill their specific function and survive. The former studies the use of information by individuals whereas the latter by systems. This difference will come with a price that we shall explore later in the article.

In addition, the two authors are also very close when defining the function of law. They both sustain that the function of law is the protection of expectations so that social life can be less complex.⁶ Still, there is a much revealing difference. Hayek prescribes that not all expectations can be protected within a dynamic order. The important thing is that individuals know

which expectations are protected so that individual expectations can converge and interactions emerge.

Luhmann makes no judgment on the number of expectations that should be protected. His thesis is a different one. We have to accept that law consists of its compliance and violation. The more expectations we protect through law the more violations will be part of law's *regular* working. Consequently, law's function is to guarantee that even if expectations are disappointed (e.g. A robs B) individuals still trust those normative expectations (Luhmann 2008: 142 ff.). This is important because it prevents individuals from the need to *learn* (reviewing their beliefs) every time normative expectations are disappointed; thereby reducing the complexity of social life.

Finally, both authors reject the idea that society obey to a sort of hierarchical principle (Hayek 1982: I 36); that society can be controlled by a single authority telling individuals and social systems what to do. Their belief in a de-centralized order is, however, not totally coincident. Whereas Hayek clearly prioritizes the content of the economic order (based on liberty) whose logic all the other ones (like the legal) should mirror (2008: 140-141); Luhmann is the theorist of the polycentric society *par excellence*, defending that each system has a logic of its own and follows it autonomously. The convergence of values among spontaneous orders that Hayek defends, is simply impossible to postulate *a priori* according to Luhmann's radical epistemology.

Still, they both agree on a fundamental conclusion stemming from last paragraph's description: they condemn and suspect *steering* attempts of society by central bodies. Hayek, because it would be, in essence, a way of dis-coordinating the use of information by individuals affecting the convergence of expectations necessary to fuel social life (they fall prey of the illusion that central bodies like the State can aggregate and make use of more information than individuals: what Hayek called the "constructivism error"). More radically Luhmann simply says that there is no reason to believe in the success of such interventions. From his systems theoretic perspective, every intervention of one system in a different one has to be re-worked/translated in the former's own logic making impossible to predict its final outcome.

3. Hayek's Conceptualization

In the last chapter, some of Hayek and Luhmann's similarities and differences were presented. The goal was to prepare the reader's sensibility to the exercise that will unfold throughout the whole paper. In this section, I document Hayek's understanding of law as a complex system and update it according to modern legal developments.

3.1. Spontaneous Order, Organization and Law

Hayek (1982: I 36) introduced evolutionary thinking when researching social order by stating very boldly that social order *is* not and *cannot* be the product of human design. Instead, he emphasized the role of tradition in the maintenance and evolution of social order. To such self-correcting, decentralized system he assigned the name of spontaneous order.⁷ According to him, money, language, the market and the legal system would constitute examples of such.

Hayek (*ibidem*: 38) authoritatively held that the most fundamental distinction to understand social institutions was the one between *spontaneous order* (cosmos) and *organization* (taxis). The first emerged without human design out of individual actions whereas the latter instrumentally pursued the goals of their makers. In the former, *individuals* determine and fulfill their plans (and through their actions they self-correct the global social order) whereas in the latter, individuals are *functionalized* to the organization's goals. How do these categories apply to law and why should we studying them in the context of law and not of any other social phenomena, like the economic order, accounted for by Hayek?

Law is the stepping stone of the entire analysis of social order by Hayek. In fact, he admits that the spontaneous order of market (and action in general) crucially depends on the existence of *specific* legal arrangements. In his own words, law is a "necessary condition for the formation of a spontaneous order of actions" (*ibidem*: 112).⁸ This raises important problems as we will see in detail. It suffices to say, for the time being, that such foundational role assigned to law forced Hayek to ascribe it a highly immutable and precise content over history. In this way, the explanatory power of Hayek's theses depends on a clear empirical assumption. Of course, his whole theory does not lose its value as a counterfactual but, as I submit in this paper, it contributes little to the understanding of present day social order.

Once we acknowledge this foundational role of law, I find it obvious that this ought to be our starting point in the study of Hayek's conceptualization of social order. The remaining of the paper should prove the benevolence of this choice.

When applied to law, spontaneous order and organization name two distinct types of order. Law as a spontaneous order can be defined as the set of rules of just conduct that in their vast majority *emerged/were discovered* within human interaction and survived the passage of time. These *abstract* rules of just conduct do not impose any purposes of their own over individuals. In different words, law would simply provide the framework for individuals to pursue their own goals and interests. Seeing law as a spontaneous order in the lines of

Hayek implies reducing it to contract, property and criminal law; those rules of conduct that tell individuals what they cannot do; not what they have to do (Hayek 1982: II 36 and 2008: 124).

Hayek identified, though, a second type of rules. He called them commands.⁹ Orders *issued/made* by an authority to advance its *own* interests and goals. In this conception law becomes legislation, the mere product of bodies with legislative powers. Law stopped being defined by the *content* of its rules (abstract vs. concrete) but by its *source* ultimately leading to the identification of legislation with law.

The basic difference at stake is that in the latter case of legislation, the individuals serve the purposes/goals of the legislator expressed in rules telling them what they should do. Here Hayek's critique is twofold. First, this is a short step to totalitarian regimes since we open up the idea according to which there are no limits to what law can regulate. Secondly, by restricting individual freedom we are foreclosing individuals' use of their private information which is far more efficient than the one achieved by any central body. We are in this way limiting the complexity that social order can achieve by transferring the power to define the goals to be pursued from the individual *to the community* (*ibidem*: 53 speaking of the move from individual to collective freedom).

3.2 Law/Common Law and Legislation/Civil Law

There is more to what was written above. The prominence of law or legislation was associated by Hayek to two different legal traditions.

As we saw, consistently with his epistemological position, Hayek claims that only a system restricted almost exclusively to rules of just conduct can constitute a spontaneous order. In case of conflict, courts adjudicate the issue by judging the particulars of *that* case. According to Hayek (1982: I 72, 119), judges would then *merely* discover the existing law, never creating it. That is why Hayek preferred the common law over the civil law tradition. When adjudicating disputes, judges do not start from a rule posited by the legislator but from experience and tradition searching to apply such general principles that survived time to potentially unlimited new situations.

Ultimately, to Hayek (*ibidem*: 94), the judge is “an institution of a spontaneous order”, precisely because when deciding he simply *restores* the order that nobody created but persists anyway. What is more, he does not aim at pursuing specific goals but is merely concerned with maintaining “what private persons have ‘legitimate’ reasons to expect” (*ibidem*: 98). In this respect he, the judge, distinguishes himself from the leader of an organization.

On the other hand, civil law countries where legislation prevails have to be classified as disposing of law as an organization. Effectively, law is used as a

tool to advance and further specific social goals (the mirage of social justice as Hayek called it). The reason behind the predominance of legislation and the weakening of law derived from the concentration of the power to create and administrate laws on the same body. On the contrary, in the common law tradition, the parliament could only enact abstract and general rules and the courts were not authorized to create law but rather to apply it to the particulars of the case *sub judice*.

Hayek held that the allocation of these two different powers to two different bodies is absolutely necessary to ensure the survival of the legal system as a spontaneous order. The issue is one of dynamics. If parliaments are allowed not only to create general rules but also concrete and specific ones tailored to the particulars of a class of agents; then because its members need to be re-elected, they will be forced to *sell* legislation to secure future votes. This process cannot be halted and more legislation will be enacted to the detriment of law and, consequently, individual freedom.¹⁰

The critique here is threefold i) *made* rules are always prone to serve particular purposes of those who made them to the detriment of those individual plans that cannot be anymore pursued ii) they replace the spontaneous rules that survived because they served better human interests by rules designed by a specific class of individuals and iii) statutes crystallize the evolution of law.

It is in this light that Hayek stresses how common law is far more abstract because *abstract* rules apply *equally* to everyone with little positive discrimination. The view of law as an organization to achieve specific collective goods is ultimately prey of the constructivist error, that we can guide society in the direction of progress through centrally *made* decisions and choices.

Summing up, we could say that for Hayek only law as rules of just conduct can be said to constitute a spontaneous order. Furthermore, *this* law should be interpreted as a higher law determining a space of individual freedom that had to be respected by legislation.

3.3 Updating Hayek's empirical picture

Hayek greatest fears have materialized. The trend for what he named "the law of legislation" has become unstoppable in civil and common law traditions.¹¹ In his own terminology, rules of just conduct are now superseded by an infinite number of commands imposing to each one of us the (supposed) goals of the community we belong to.

Most notably, public life has been conquered by the rights talk; every possible social issue can be framed in rights language.¹² In the section above, we pointed out Hayek's explanation of the phenomenon: bad institutional

design allowing the concentration of the power to create and to administer law in the same hands which favored the diffusion of the idea that a democratic legislator ought not to have any limits when legislating because it would always be expressing the majority's will. Crucially, legislation ceased to have to obey to higher principles of law; the Hayekian "rules of just conduct". No more concern was voiced in determining what should and what should not be the province of law. From all that was exposed above, I believe it is fair to conclude that according to Hayek's conceptualization, currently law is not anymore a spontaneous order but instead an organization.¹³ *In evolutionary terms, law evolved into an organization.* What are the consequences of having reached similar verdict for the *understanding* of contemporary law? Above all, what to say about Hayek's conceptualization of law?

4. Critique

Let us then take the full consequences of last section's thesis. Following Hayek's premises we would be forced to conclude that law evolved into an organization type of order composed of commands created/made by a given authority to foster the goals of the majority. Individual freedom and use of information is curbed because legislation tramples the "rules of just conduct" or higher law.

Hayek's account of the legal phenomena is open to many different criticisms. My goal here is to introduce its failures from a social theoretical point of view (I set aside a purely legal theoretical evaluation). By defining law as the spontaneous order that grounds the spontaneous order of the market; Hayek commits himself from the outset to study the place that law occupies in society and its relationship to other social systems. Still, one would ask: if law is an organization how can economy be a spontaneous order?

In the following sections I first criticize his evolutionary explanation of law as a spontaneous order. Secondly, I question his understanding of evolution. Finally, I focus on the inadequacy of his conceptual distinction between spontaneous order and organization at least when applied to the legal system. It is very interesting that this central distinction has merited so little and critical attention among the followers of Hayek. The fundamental thrust of my critique is the lack of explanatory power of the distinction.

4.1 Evolutionary Mechanism

The first limitation of Hayek's account of law can be grasped through the distinction between emergence and evolution/maintenance of spontaneous order (Barry 1982: b82 ff.).

Hayek's account of rules of just conduct as merely being the outcome of selective evolution among different behavioral regularities seems to me difficult to reject. Frequently, rules are obeyed by all of us without even being formalized or spoken out loud. So, let us take for granted that the spontaneous order of law consists of a set of rules of just conduct *acquired* unintentionally.

To Hayek, the complex self-regulating system could only be secured by courts. They had the task of protecting the spontaneous order. This is puzzling though. How can a set of rules/ideas, after their emergence, *survive* over time and constitute the higher law of a spontaneous order? In other words, what mechanism ensures the *selection* and *retention* of the appropriate rules among existing variation?

The evolutionary mechanism Hayek offers are judges; more precisely judges' behavior. These rules of just conduct can be preserved because Hayek assumes that judges when adjudicating merely *serve* the spontaneous order without ever *creating* one (Hayek 1982: I 118 ff. "The function of the judge is confined to a spontaneous order").

Unfortunately, judicial neutrality has been empirically and theoretically rejected by different disciplines.¹⁴ For example, critical legal studies have emphasized that judges decide according to their own ideological premises, preferences and values. Law and economics has also stressed how judges act in the pursuit of their own self-interest. Legal realists supported adjudication based on the expected outcomes of the decision. Recently, Garoupa and *al.* (2008) and Landes & Posner (2009) have found a correlation between the political affiliation of constitutional/supreme court judges and their voting behavior. Political scientists also wrote at length on judicial activism (Stone Sweet & Shapiro 2002). If something, this evidence shows that we cannot assume that judges merely respect and repair the existing spontaneous order. Paraphrasing Montesquieu and echoing classic legal positivists that would reduce judges to the mouth that pronounces the words of spontaneous order.

Bottom line, Hayek failed to provide a convincing evolutionary mechanism capable of ensuring the survival of the spontaneous order of law. In fact, as we have seen, legislation has triumphed over law in the course of history. Furthermore, if *empirically* judges actively pursue goals of their own (no matter which), then they cannot be considered an institution of the spontaneous order anymore. Instead, *they act as an organization of the legal system* according to Hayek's own conceptualization since they can act purposefully, including against the spontaneous order of society.¹⁵

Finally, even assuming the normative nature of Hayek's account of law the last conclusions put him in great difficulties. Facing society dominated by legislation, Hayek's goal is to *go back* to the golden age of rules of just conduct

as higher law. Yet, we have just concluded he offers *no* mechanism to do it debilitating his thesis on the evolution of law.

4.2 Macro Evolution and Conceptualization

Rejected the evolutionary mechanism proposed by Hayek to ground the *evolution* of spontaneous order it becomes clear that the *conception* of evolution that Hayek uses is also inadequate. In turn, the latter is crucially intertwined with his distinction between spontaneous orders and organizations severely affecting his treatment of complex systems. How?

Typically, when one describes biological evolution it is common wisdom to say that evolutionary outcomes are unplanned, unpredictable and not necessarily first best (Darwin 2003: 445). Evolution has no purpose, it simply happens.¹⁶ However, there is still much discussion on the nature of cultural and social evolution because, obviously, man can try to shape and direct, through his efforts, the evolution of society and institutions. Furthermore, man is capable of defining goals other than human survival and today, in vast areas of the globe, institutional evolution is deemed good or bad according to manmade benchmarks such as values, economic indicators, happiness indexes...¹⁷

Hayek uses an artifice in his evolutionary account of law.¹⁸ On one hand, he deems those rules of just conduct, behavior regularities that emerged spontaneously, the product of selective evolution because they fitted better human interests (concurring with my analysis see Dupuy 1988: 68, “In his evolutionary schema, the best abstract rules will sooner or later be selected. His neo-Darwinism [...] provides him with a standard, a fixed point [...]”). These rules as we have just seen favor an unpredictable social evolution because they give complete freedom to individuals to pursue their goals.

On the other hand, Hayek deems *undesirable* the evolution of law into legislation. *A contrario*, he basically declares that the *only* desirable evolution of law is toward a spontaneous order, toward liberty.¹⁹ Ultimately, this is a teleological conception of evolution as progressing to a clear goal (Hayek 1982: I 55). And yet, he protested *against* steering attempts to direct society as a whole to a given goal.²⁰ One could ask how we could get back to the spontaneous order of law without *forcing* individuals to be free thereby compromising their freedom. It is easy to see that like Habermas, Hayek wants to have both i) a purely *procedural* conception of justice and ii) a critical evaluation of its *outcomes*. This desire, however, is intrinsically contradictory.

Our case study, the legal system, is probably the most suitable example to reveal the implications of these twin ideas of evolution and spontaneous order to the study of complex systems. I say it because law offers an example of the *failure* of spontaneous order if we take Hayek’s normative account of

evolution. A failure that Hayek acknowledged since he conceded that legislation (an organization) would have to be used to *correct* undesirable evolutions taken by the spontaneous order.²¹ Consequently, the spontaneous order of law is not a *completely* satisfying self-correcting order. It needs to be corrected by legislation which Hayek assumes is only enacted to restore the ideals of the former. Yet, in the previous section we have concluded that courts were an organization. I confess I am lost. What is, after all, the analytical and explanatory import of his conceptualization of law as a spontaneous order and organization? Isn't law a complex system after all?

Two points were made so far. First and foremost, normative logics of evolution should be abandoned (Teubner 1988). As we just saw, it is *epistemologically* difficult to justify liberty as the ultimate normative goal vis-à-vis other values. Furthermore, empirics help to reveal the lack of analytical power of such accounts. Second and related, the lack of analytical power is intimately related to the lack of empirical realism of the mechanisms necessary to achieve the desirable value.

4.3 Normative and Institutional Dimension of Law

The fundamental option Hayek exercises is the reduction of the system of law exclusively to *rules*²² leaving outside of it its *institutional dimension*. The rules of just conduct (property, contract and criminal) constitute the spontaneous order. Public law expressed through commands would constitute the organization of law. Is this a plausible account of law as a social system?

4.3.1 Public/Private Divide

First of all, the private/public law divide presupposes that private and public law can be easily distinguished and separated. This is a clear point of his lack of complexity in the treatment of legal evolution. Law evolved not only in the direction of legislation but also in the direction of fundamental rights. Private law is now surrounded by buffers (fundamental rights) which can trigger almost unlimited courts' interventions. In this sense, the constitutionalization of rights coupled with the possibility of judicial review of legislation *has made all private law public law*. They are so to speak completely intertwined.

Still, to this *content* based distinction we have to add the fundamental *institutional* nature of law which stands next to (if not prevails over) the previous one just elaborated. Before advancing, notice that in contrast to social and political scientists, I do not see institutions as sets of rules but more like organizations or *agencies*.²³

Whether private or public, law is to be ultimately determined by courts. The legal system evolved in the direction of putting courts and not parliaments in its centre. Through the constitutionalization of legal orders, private and public law separation cannot anymore be maintained as Hayek believed since all legal rules risk becoming *concrete* and *specific* by action of courts. It is easy to understand Hayek's maneuver. By assuming two bodies deploying two types of rules from two different branches of law and assuming everything static, law as a self-correcting system could perfectly be based merely upon the content of rules since its nature would not be changed by *institutional* interventions. After all, Parliaments enacted legislation to organize the government and courts corrected the spontaneous order. From the moment in which Courts are allowed to correct Parliaments and Governments, the nature of the rules from spontaneous order and organizations cannot be assumed *statically* and *a priori*. These are to be defined by courts.²⁴ The nature of rules crucially mixes up with institutions.

By focusing just on the normative dimension of law, Hayek conceptualization cannot capture crucial *dynamics* of the legal system and its elements, ending up seeing corrective interventions by legislation as an anomaly whereas they are part of law's game so to speak. This is the reason why I am particularly unconvinced by definitions of institutions as merely sets of rules and evolutionary accounts which focus only on ideas as the unit of evolution. This might be partially true, but at least in the case of the legal and political systems, it simply ignores the fact that these are highly institutionalized discursive arenas and therefore in order for ideas to *survive* they have to follow and enter such *durable* institutional constraints and opportunities.

4.3.2 Normative Nature of the Spontaneous Order of Law

Rejected the division of the legal system in two separate types of rules, I now turn to the analysis of the spontaneous order of law. Given the fact that legislation now predates law it is obvious that his concept of spontaneous order is essentially a normative benchmark. Even though, this conclusion derives already from Hayek's belief that the spontaneous order of law consisted of a set of a-historical higher rules of law which despite its current disrespect still exist in ancient traditions: a type of spontaneously emerged natural law.

Defining a complex system based on an *ideal* leaves me many difficulties to understand what we are really talking about. For example, what does it mean to say that democracy is the spontaneous order of the political system? Why the insistence that democracy is not its institutional dimension as political parties, the government and so on? diZerega wrote (1989: 5, 7)

“Nevertheless there is a deficiency in Hayek's comments. The democracy to which he refers is a government organized democratically. In this sense it is an

organization, although a fairly loose and even “disorganized” one. However, democracy is more than this; it includes citizens and institutions which in no very meaningful sense constitute the government. Voters, especially those who support losing candidates and issues, and the news media are not part of the government, but are essential elements of a democracy.”

Isn't it merely an attempt to save Hayek's distinction when it cannot hold anymore like we saw in the context of law? DiZerega himself (*ibidem*, emphasis in the original) concludes that democracy is a spontaneous order as “*the entire ensemble of citizens and their interactions when they observe the basic rules of community.*” Why then not include organizations and their interaction in the complex system of democracy?

4.3.3 Conceptualization Problems and their Source

With the elements collected so far, we are finally equipped to sketch a decisive critique to Hayek's conceptualization of spontaneous orders and organizations.

So far we have seen that according to Hayekian postulates, contemporary legal systems are organizations and not spontaneous orders. We concluded that Hayek reduces the system of law to its normative dimension ignoring the institutional one. We have also seen that the concept of spontaneous order is of ideal nature, defining a sort of utopian (Hayek 1982: I 64, explicitly uses the word utopia) ideal against which we can measure the performance of organizations.

The decisive problem of Hayek's conceptualization stems from the fact that he *assigns* the nature of complex system to social systems according to their *ideological/value content* and not according to their *intrinsic* systemic features. Indeed, according to Hayek's conceptualization, only systems that put forward and respect his desired liberal ideology (his desired evolutionary outcome according to his teleological concept of evolution) deserve to be classified as complex social systems or self-correcting orders. All other social structures that pursue goals of their *own* have to be described and analyzed as organizations. The whole tension lurks behind the fact that he measures spontaneous order and organization against two different benchmarks. Whereas spontaneous order is evaluated as an *outcome*, organization is defined *a priori* irrespective of the outcomes that it produces. Hence, there is a clear methodological bias at play. Spontaneous orders are looked at dynamically, whereas organizations are conceived in purely static and immutable fashion. Artificially, Hayek denies looking empirically at the outcomes that are produced by organizations whereas he does so regarding spontaneous orders. In this way, his criterion for judging these two different phenomena is vitiated according to his normative preferences.

In my opinion, it is plain nonsense to claim that only *liberal* social structures can be complex systems as if complexity depended on the *material content* of the systems. And yet, this is the outcome of Hayek's conceptualization. Instead, the focus should fall on the features of the system that allow it to evolve independently. Otherwise, we have the odd conclusion that a system of law respecting individual freedom due to judges' respect for spontaneous order is a complex system whereas if judges behave purposefully it is not.

The source of Hayek's mistake is his deliberate insistence to associate complex social systems with a specific type of rules (abstract). It became very clear already that in the study of the legal system this does not make much sense. Still, I want to explore the point further. Hayek fails to perceive that complex systems *work* on two levels of abstraction. One is given by the interaction of complex systems with individuals. This is the dimension identified by Hayek. However, systems have also a *life* of their own including their survival and interaction with other systems. Because Hayek believes that de-centralized social order can only emerge out of individual action, he makes complex systems dependent on the effects they impose on individuals (liberty wise) ignoring the operation of systems at the system's level. It is now obvious how Hayek's teleological evolution crucially determines his conceptual distinction which in turn is vitiated to serve it. The consequences are tremendous. All social structures fostering a goal different than individual liberty are not complex systems but organizations. What can this mean?

From another point of view, Hayek's conceptualization is severely limited by his humanist premises or as Luhmann calls it by the XX century "semantics of subjectivity".²⁵ To Hayek and most authors society is composed by individuals, by subjects. Even his conceptualization of organizations implies a *subject* behind it: to pursue the purposes of the *maker*. So, we are forced to conclude that organizations cannot evolve independently of their leaders' wish.

However, once we escape this semantics, complex systems are to be defined as such because of their capacity to self-organize and self-reproduce themselves *per se*, autonomously from individuals. With this cut, the nature of rules of each system becomes irrelevant to their classification as complex systems. This opens up the door to consider organizations like courts also complex systems since it is not because judges pursue goals of their own through commands that courts as such are not complex systems. Organizations can have, while complex systems, an independent evolution irrespective of the goals established by their makers. Actually, this is in harmony with organizations' literature which emphasizes how difficult it is to reform them. The point is that even if the leaders of organizations make rules through rational design, there is no certainty about their degree of implementation and

effectiveness.²⁶ Human design cannot be evaluated *a priori* as Hayek naively does; otherwise you could easily predict our cultural evolution. The problem seems to be that Hayek admits of no alternative to human design and tradition (Hayek 1982: III 155). So, once we do away with the exclusivity of subjects and recognize the existence of systems,²⁷ it is just a small step to admit that after the creation of institutions they follow an evolution of their own. Not that future intervention cannot affect it, but never in a 1-1 scale like Hayek assumed.

4.4 Final Remarks on Hayek

Identifying the sources of the limitations of Hayek's conceptualization helps to devise more easily ways out. I want to start by stating that even though I identify some limitations in the Hayekian general account of social phenomena I cannot extend, with all confidence, the results of my analysis to his treatment of different social orders. Therefore, my argument mainly applies to law as a social system.

Secondly, I hope to have made clear that Hayek's basic distinction is unsuitable to study complex phenomena. Applied to law, it would mean denying the legal system the nature of a complex system and yet law is *empirically* a self-correcting and complex system. What is necessary is to build a conceptual architecture that is capable of describing law as a self-correcting system including courts and legislators as organizations within it while maintaining the classification of law as a complex system.

His conceptualization is also the reason why Hayek's theory cannot be used to explore questions such as the interaction of complex systems or the interaction between spontaneous orders and organizations. Indeed if all spontaneous orders *have to have the same content and the same structure of rules* what interactions are there to analyze? What is more, if Hayek modeled them after the economic order, why aren't all systems dominated by the former? Furthermore, if organizations (institutions) are conceptually diametrically opposed to the complex system as such, of course they have to be seen as harming spontaneous orders. Therefore, it is difficult to expand our knowledge of the interaction between spontaneous orders and interactions with such conceptual tools. Again, since the distinction is determined ideologically, conflict has to arise unless unrealistic assumptions are assumed as when Hayek admits the use of legislation to correct the spontaneous order of law.

In a sense, the failure is more structural. Hayek's distinction is not one of *degree* and it is here that it reveals its lack of complexity. It only allows a black/white analysis. Can the complex system of law be reduced to rules? What to do about professors of law, lawyers, clerks and many other institutions of law? If we reduce the analysis of law to rules advanced by courts and

parliaments aren't we leaving out of the analysis a tremendous part of the legal system?

It is my deep belief that the extremely *accurate* research questions introduced by diZerega (2008) implicitly assume the challenge I identified at length and are mostly directed toward a *system-system* level of analysis. Furthermore diZerega (1989: 11) ultimately asserts that democracy is a *network* where political *information* flows. This is clear evidence that the Hayekian framework is no solid ground for these analyzes.

I interpret him as very perceptively assuming that complex systems i) are networks of elements which are connected ii) because they communicate the same information and iii) each element/node can differentiate itself. The seeds of systems theory are therefore already present in the literature of emergent orders and diZerega's move is better able to capture the complexity of systems interaction in modern life. Although, after this visionary comments he does not give the next logical step which would take him to include for example political parties, governments, lobbying agencies as nodes of the political (complex) system. My contention so far, was that such step cannot be given due to the Hayekian conceptualization. Complex systems are complex and non-guidable even if composed by organizations precisely because they are an *ensemble* of ideas and institutions all of them communicating through the same type of information. It is precisely because democracy is not only an organization (the State) or 1 node only but a network that democracy is a complex system.

With the growth of importance of organizations in social life it becomes imperative to adopt a conceptual framework open to their classification as complex systems abstracting of the nature of rules which compose them. Setting aside the Hayekian conceptual distinction seems necessary.

These findings, however, do not leave us empty handed. In the remaining of the paper, I introduce systems theory as articulated by Niklas Luhmann with the purpose of showing that we already have robust intellectual resources i) to tackle the challenges herein identified and ii) to further the perceptive yet shy comments tried out by diZerega. The biggest import that Luhmann brings to debate is the capacity of his theory to apply to itself. We saw briefly in the socialist/liberal debate that Hayek refutes socialism but his theory fails to include an understanding of liberalism distinct problems. The same problem that we encounter with his basic distinction criticized here at length. It only admits one possible evolution. To be sure, this is not complexity or population thinking. What these two fields stress is the *inherent openness of possibilities*. Take democracy. Democratically we can prefer a welfare state against Hayek's wishes. If he describes spontaneous orders as *procedures* then it is a sheer contradiction to criticize their outcomes whenever they don't fit the *procedural* liberal ideal. Perhaps, though, the most important issue at stake here is

that, in such cases, his theory explains little of the working of the current system. That was our conclusion about his treatment of the legal system.

5. Way Out: Running with Luhmann

5.1 A Theory of Society

As just suggested I argue that those interested in overcoming the limitations identified above should turn to systems theory, particularly the version developed by Niklas Luhmann (1995, 2008).²⁸ Once overcome the initial reluctance of approaching such an *esoteric* author I am convinced that his theoretical architecture can provide crucial insights to develop the thinking of complex social systems.²⁹ I use it, in the line of Michael King (2006: 41) because of “the possibilities that it opens for seeing things differently”.

In this light it is fundamental to bear in mind that Luhmann's priority is to create a new conceptual architecture that is capable of speaking meaningfully of a *new* type of society. The second crucial proposition to remember is his rejection of any evaluation of social *statu quo*. Things, society, could have always turned out to be different and so our present moment is as contingent as any other alternative state of affairs.

Systems theory starts with systems; it claims that society cannot be understood anymore as a collection of individuals/actions. Society is a communication system,³⁰ distinct from human agents.³¹ This is neither good nor bad but an evolutionary outcome capable of coping with the increasing complexity of social life, that is, the tremendous volume of communication.

Luhmann's assumption is that we now live in a functionally differentiated society (1995: 460 ff.). Society does not have anymore center or unity but instead is composed of functional systems, like the legal or political, each one fulfilling a specific function (necessary for society's survival).³² Finally, ours is a differentiated society because social systems were able to differentiate, to distinguish themselves from society.

If we remember that society is communication, what we mean here, is that each system manages one, and only one, type of communication. Law deals with legal communication, economy with economic communication and so on. This evolutionary outcome allows for the management of present day complexity. Each system deals only with a part of it and can thus specialize in it.

5.2 Autopoietic Systems

Classical thinking on systems theory conceived them either as closed or open.³³ Closed systems could keep its unity/integrity but by closing themselves to the environment they failed to learn. Open systems had unlimited possibilities for learning and risking.

Luhmann conceptualized systems as autopoietic,³⁴ meaning that systems became capable of controlling their reproduction through their own operations; being capable of autonomously defining their boundaries. In this way, autopoietic systems are, so to speak, open and closed at the same time. More precisely, they are normatively closed but cognitively open (Dupuy 1988: 55).

They perform an *operational closure* (Luhmann 1992), which ensures that no external system can connect directly. On the other hand, this doesn't prevent communication with the outside (Luhmann 1995: 37); instead it tells us that it is the system itself which defines the way in which operations from outside the system impact it. This is critical because in order to survive systems have both to preserve their autonomy (their difference from the *environment* composed by all other systems) and to be able to *learn from* the environment increasing their responsiveness to social (other systems) developments.³⁵

Systems perform their autopoiesis and distinguish themselves from the environment through a code. Each system has an exclusive code and each code is binary.³⁶ They code communication and thereby reduce the complexity they have to deal inside their boundaries. For example, the legal system *codes* communication as legal (law) or illegal (not law).

On the one hand, it implies that the legal system cannot be directly affected by the operations of other *systems* and vice versa (because not dealing with legal communication).³⁷ Economic arguments concerning a monopoly for example, have to be reinterpreted in the light of legal provisions and weighted according to the importance assigned by legal procedure to experts' testimony.

On the other hand, it also implies that the legal system cannot be directly affected by *individuals* and vice versa. In the context of a dispute with my neighbour, if I want to use the legal system I have to file a lawsuit, probably hire a lawyer, and follow the legal procedure which determines which facts are legally relevant and so on. I cannot simply address directly the judge at his home and ask him for a legally binding verdict.³⁸

6. Lessons from Luhmann

6.1 Systems Interaction and Evolution

In a way we can say that Luhmann updates Hayekian evolutionary thoughts to the context of modern hyper complex societies. We just saw how

Luhmann interpreted the functionally differentiated society as the historical evolutionary response to the increase of complexity.

This functional differentiation, however, shatters the possibility of a united society evolving *together* to a similar goal. Instead, the picture is quite different. Every system fulfils its own function according to its own logic following its own path. Society is advanced through this de-centralized but parallel working of different systems. Actually, this is the condition to achieve more complexity. Consequently, evolution is necessarily contingent. While Hayek studies the spontaneous order at the individual level, Luhmann does so at the system level. In exactly the same way the market has no control over the development of society through individuals trying to fulfill their goals, society has no control of its development triggered by systems trying to fulfill their functions.

The above said creates a rupture with Hayekian postulates. We cannot anymore anchor spontaneous order to the prosecution of *specific* and *concrete* liberal values. Otherwise we would be denying it the nature of a *true* complex system. From a systems theory standpoint the legal/ political and economic system cannot be seen as stably pushing society in the same direction. This would imply *open* systems that could directly access each other and develop a common program. However, if we accept they are autopoietic their interaction is far more complex than the one assumed here (more in a minute).

At this point, I merely wanted to underline that systems theory enable us to understand outcomes of system's autopoiesis and system's interaction that go against specific goals. In this light, systems theory as elaborated by Luhmann does *not* perceive the Hayekian error of legislation enforcing the mirage of social justice in a negative way. First, this "error" enables new opportunities of evolution and triggers new changes in social systems. Secondly, legislative programs simply represent the working of the political system. They are the product of the political system. This says nothing regarding the impact of these programs in the legal, economic or any other system.

6.2 The Leading Question

Luhmann's conceptualization of systems as autopoietic seems to fit much better the purpose of better understanding law as a complex system. A complex social system does not need to be a spontaneous order as Hayek pictured it. We now understand better the source of the mistake. A self-correcting/organizing system does not depend on the liberty it gives to the *individuals* advancing it. Therefore, once removed such liberty, the complex system also does not cease to exist as a complex system. The *nature* of a complex system is not *individuals*-dependent but depends instead on the *systems'*

own features. Put differently, a complex system is not complex because of its *content* but because it *controls* the conditions for its autonomous reproduction *wherever the latter will lead it to*.

The Hayekian focus on subjects makes him trivialize organizations (institutions). This is exactly what Luhmann called the “semantics of subjectivity”. Once we focus on communication as the unit of our analysis it turns out that in addition to social systems also organizations can be autopoietic, complex systems. This possibility was hidden because of the subject taboo. In our age, “life” is not only biological but communicational. As we wrote, if decisions beg more decisions, then communication demands new communication. The structure ends up having a sort of functionalist reason.³⁹ In Luhmann’s chirurgic words (1995: 256, emphasis in the original) “If an observer attributes behavior to individuals and not to social systems that is the *observer’s* decision. It does not express an ontological primacy of human individuality [...]”

Of course it is the judge issuing the sentence, but there is more to it since he cannot guide individually the direction of the organization. In fact this was the departure point of this paper. Against Hayek, I started with the empirical claim that there are organizations in society that *are* self-referential systems. This produces a subtle but important change of basic question. When studying social phenomena we should not divide it among spontaneous order/complex systems and organizations as Hayek argued. *We should simply ask if the structure under scrutiny is capable or not of autopoiesis.*⁴⁰ This gives us much more leverage since we are not tied to a specific structure anymore. As long as they fulfill this functional evolution, any equivalent structure can be analyzed as a complex system.

6.3 Law as a Complex System: Operations not only Rules

The identity of law cannot be given by a single value as Hayek tried to do with his rules of just conduct. The system of law has become internally much more complex than a set of rules and legal texts or any differentiation among private/public law (*internal differentiation*). Nowadays, lawyers abound as well as professors producing legal research, experts providing professional opinions in courts, legal clerks, courts, alternative dispute resolution mechanisms and naturally pieces of legislation and rules.⁴¹

This enumeration includes elements of very different nature ranging from legal materials and rules to organizations. Yet, what is common in all these structures is their use of *legal communication*. It is also the use of the same type of communication which connects all these structures. Law as a social system cannot be understood merely as a set of rules but as the constant flow

of *operations* using legal communication which determine the legal system's boundaries (Luhmann 2008: 78). This is how we should understand the legal systems' (or every system) unity and not in hierarchical type/stable/fixed rules fashion as Hayek does.

I should pause to inform of the crucial change operated here: we move from law determined and defined by a *form* with given content and structure (abstract rules) to law as a set of operations which can carry *whatever* content and can be performed by *whatever* structures/institutions. The gain is huge since it allows re-capturing all elements that are left out of the analysis by the first formula (every operation other than abstract legal rules). Furthermore, it allows us to frame the future evolution of legal rules, institutions and doctrines: it is an open future. Certainly we cannot expect to believe that so many different structures and elements agree on a planning scheme to guide law unequivocally to a convergent point of arrival. If each judge or lawyer or professor can be seen to have a clear goal in the production a new rule or new opinion; at the macro level we cannot say that the gradual transformation of law is the result of purpose oriented activities (Luhmann 2008: 252).

This presupposes, as already mentioned, doing away with Hayek's hierarchical understanding of legal system. His view posited natural law/legislation and adjudication reduced to the mouth of the law. With this representation in mind, it was easy for him to recognize that law is a set of rules and legal institutions do not contribute to the legal system in any other way than by enforcing and creating *stable* rules.

The conception subjacent at my line of argument is way different since I prefer to see the legal system as a sort of orbit around which several organizations exist connected by their legal communication. So they all contribute to the creation of the legal boundaries stating what law is. Lawyers through their practice influence courts' decisions in the same way legal research and doctrine or experts' opinion influence the action of the judge when deciding.

In addition legal doctrines can import political communication such as the doctrine supporting the interpretation of statutes according to the will of the legislator. The whole point is that despite their influence they do not determine the action of the judge and yet they help to ensure a consistent interpretation of what law is. We could say the same about police forces practices of reporting crimes or accepting complaints or legal secretaries accepting cases being filed. All these practices influence and are part of the law as a complex system. Similarly, even though individuals and systems cannot directly access other systems, the latter are not immune to the former. Judges are naturally influenced by the media, public protests, social conditions of living and many other influences. Systems theory does not deny it; it merely states

that all these irritations have to be translated in the legal logic to be considered social communication; to affect the social system of law. Otherwise, if legal decisions do not reflect them; they could only possibly have affected the *mind* of the judge.

6.4 Center/Periphery and Time

As Luhmann wrote, among this profusion of different elements and structures the centre of the legal system is today occupied by courts (Luhmann 2008: 291 ff.). This does not mean that everything in the periphery is less important or secondary. But courts have necessarily to decide when cases reach them. They cannot deny justice and therefore they close the system saying what law is. As Luhmann put it, both legislation and contract are in the periphery of the legal system. For example political protests like environmental ones or demands for gay rights can become pieces of legislation *or not*. Transactions between ordinary people can become legally binding contracts *or not*. In practice this can be observed in the discussion over the legal value of letters of comfort; or the judicialization of sexual duties among spouses which gradually have entered the legal system and ceased to be mere private law in the sense portrayed by Hayek. The periphery of the legal system composed by systems like family, economy and so on provides continuous irritations that *may* become part of the legal system.

This allows me to reconsider the example provided by diZerega (2008: 7) *a propos* of the threatening influence organizations could have toward the survival of spontaneous orders. He speaks of how credit card companies were able to change the bankruptcy laws so as to reinforce their position and power inside a given spontaneous order. From a systems theory point of view this is an oversimplified perspective. They couldn't have done it directly. Legislation had to be approved according to specific rules even if lobbying took place. In addition, the enactment of legislation does not stop social communication about this event. This statute can be disputed on different grounds in court by individuals or companies. It can trigger public protests pressuring political organs to amend it. Complex systems won't stop *living* because of this event. They will use it in new communications as the basis for new decisions. This is the potential offered by Luhmann's conceptual architecture.

Autopoietic systems and their different codes enable us to capture and follow to the last consequences social communication (even if there is no end state properly speaking because communication does not end). At this point we easily figure out how Hayek's conceptualization is too abstract because it puts an end to the analysis. Let us take his argument of legislation as an organization.

His argument stops in the a priori category of command type of rules irrespective of how these rules *empirically* affect the organization's evolution, other social systems and how they are continued by other means in different systems. Basically, his analysis of systems leaves out the temporal dimension. There are no reactions to the stimulus produced.

Finally, notice that I am not demanding this chain of influences to be empirically carried out, but simply underlining that an adequate conceptual framework should give us the tools to do it. The truth is that these dynamics do not exist in Hayek's *static* and *a priori* conceptualization.

Final and most importantly, we should keep in mind that communication is not *substantially* political or legal. Communication is political or legal according to its coding by different systems. The same piece of information can be looked at in several different dimensions according to the point of view of the observer. Consequently, the same piece of information can originate political or legal communication. Again, *materialistic* metaphors are inadequate. This information is not physically contained within the systems but can always be appropriated by operations of other systems.

6.5 Courts as Organizations

Saying that courts and organizations are at the center of the legal system requires us to elaborate a bit more on the nature of organizations. How do courts ensure the autopoiesis of law?

Organizations, in Luhmann's conceptual architecture, are centers of decisions. They communicate decisions. A decision is always a choice between possibilities, foreclosing ones, opening up new ones (Luhmann 2008: 283). Yet, most importantly, a decision connects past and future decisions. Through a chain of decisions, organizations develop a life of its own; they constantly reshape their direction. And yet it is impossible to say that they *factually* direct the system toward a rationally designed goal or plan.⁴²

The above paragraph can be better explicated by looking at the legal system. Courts produce decisions, sentences that have to connect to other sentences. Cases filed by individuals produce input to the system: *variation*.⁴³ By taking into account not only past decisions, legal scholarship and research but also future consequences and decisions (confer last section description of irritations), courts' decisions always operate a *selection* of what law is by discarding some elements and passing on others. The historicity of the legal system, the amount of legislation and courts' decisions prevents that the entire system can be changed in a single moment and therefore decisions *stabilize* the system (*ibidem*: 259). They ensure the system keeps on running and working

autonomously while at the same time ensuring the possibility of learning without jamming it.

The last paragraph offers the connection between autopoiesis and evolution. Teubner perfectly summarized this link (1988: 232, emphasis added) “the emergence of autopoiesis signifies for the legal system *a dynamic shift of the functions of evolution inwards*; an *internalization of the mechanisms* for variation, selection and retention.”

Organizations as centers of decision which ensure the mechanisms of variation and selection seem a promising conceptualization of their *own* autopoiesis and evolution. For once, it definitely places the emphasis of evolutionary accounts on the *internal* workings of social systems recognizing their evolution is not dictated by the environment they are in.

In addition they do away with a unique historical evolution presupposed by Hayek. The above paragraphs have made clear that Hayek’s conceptualization of spontaneous order and organizations depend on immutable structures of legal system; all deciding in the same direction. Luhmann’s abstraction of legal autopoiesis guaranteed by courts’ decisions not only puts organizations in the center of contemporary social life as suits the study of their future evolution by not crystallizing their structures or their content.⁴⁴ They are simply decisions enabling any future path. What they do guarantee though, is the nature of self-correcting systems to organizations.

As simple this move might be, it explains the way how autopoietic systems interact with each other in systems theory. The media system or the protest groups (organizations) irritate political parties which are part of the political system. However, protest groups cannot turn automatically their pretensions into legislation since they have to follow the logic of the political system and be politically successful (e.g. enact legislation). Their pretensions are dependent on, first of all, the decision of the parties to support them and secondly on the application of the political system’s code. Courts cannot also tell the legislator to regulate the matter unless prompted in any case. Still, even then, their mandate (assuming that can be done) has to be translated into the political type of communication and be the target of bargaining and negotiating which prevent the direct influence of one system onto the other. Each system can operate by means of different organizations and naturally organizations operate within different systems.

The description above depicted seems to talk partially to Hayekian spontaneous orders and partially to organizations. There are two main differences regarding Hayekian spontaneous order, i) systems’ actions (through organizations) are the ones building (apparent) order and not individual action⁴⁵ ii) systems are also composed by organizations (and not only rules) which despite working according to their own goals contribute to the unpredictable

and unguided evolution of the legal system. As a consequence, the distinction between spontaneous order and organization seems even feebler once we grow complex enough to grasp the legal system as all operations carrying legal communication.

It is now easy to see that it is Hayek's deficient conceptualization that makes legislation's intervention to correct spontaneous order an anomaly of his ideal theory. It is not an anomaly once we adequately conceptualize the legal system. Legislation is part of legal communication and can be put forward by the political system with a specific goal. However, this goal does not translate directly in the legal system but has to be reconstructed by the latter. In the same way, it is not because legislation posits someone's goals that they are to be necessarily obeyed and pursued. As different systems have to filter external irritations into their own logic; human beings actually do the same. This can be seen in how often legal reforms fail completely to change individual behavior triggering new legislative reforms. Still, let us interpret it rightly. According to systems theory, such reforms and all other attempts to steer systems such as the passing of environmental legislation or compulsory education contribute to social change. However the relationship is not 1 to 1. We cannot say that the outcome was *causally* determined by them.

Conclusion

How could we amass the contribution put forward? Overall, I have argued at length that Hayek is not enough to ground a unified science of complex systems.

First, I criticized the consistency, the explanatory power and the scientific nature of Hayek's famous distinction, when applied to law, between spontaneous order and organization.

This led me to reject Hayek's definition of complex system. The complexity of a social system does not derive from the degree of freedom they grant individuals but from their intrinsic features. Social structures are not complex systems because they are liberal! As complex (capable to evolve and assume any content) they have the possibility to become liberal. I suggested that Hayek's methodological individualism strongly limits his conceptualization at the systems level.

I introduced Luhmann's systems theory to overcome the identified problems. Next to individuals we have autopoietic systems capable of cognition and action (including organizations). Complex systems should be taken as such whenever they evolve to be able to control their self-organization and self-reproduction. When applied to law, the theory of autopoietic systems helps us to configure the interactions of law with other social systems. Furthermore, the

description of courts both as an organization and an autopoietic system enabled me to present the advantages of systems theory to study the interaction between complex systems and organizations.

All in all, the paper challenges current literature on emergent orders using a Hayekian framework and shows that the latter is no good to pursue some of the problems that are currently being dealt with. I hope that I was able to show how the questions that are now open can be framed in a richer way.

Acknowledgments: I thank all the participants of the “Organization and Emergence: Tensions and Symbiosis” conference sponsored by the Fund for the Study of Spontaneous Orders, White Plains, NY, December 3-6, 2009, and the ones of the Evolutionary Theory Working Group at the European University Institute for their useful comments. I gratefully acknowledge Gus diZerega, Gonçalo Vilaça and Furio Stamati for encouragement and detailed criticism. Dennis Patterson and Fritz Kratochwil provided generous advice for the finalization of the paper. All errors are mine.

Notes

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² Lewis & Steinmo (2007) discuss its application to social sciences.

³ Dupuy (1988) wrote the only article I am aware of explicitly comparing Hayek and Luhmann analyses of the legal system focusing, however, merely on their treatment of the autonomy of law.

⁴ However, Hayek’s conceptualization of social order does not change accordingly. Similarly, actual social and political science research of evolutionary phenomena tries to understand contemporary social order and behavior by studying behavior in ancient societies. Can we really learn much for today’s life from, for example, the fact that human cooperation emerged because biologically more advantageable?

⁵ Action is conceptualized differently by these two authors. However, since the point I try to make in the article does not depend on such difference I shall set it aside.

⁶ See Hayek (1982, I: 102) “The task of rules of just conduct can thus only be to tell people which expectations they can count on and which not”.

⁷ The tradition of spontaneous order is far older than Hayek, despite his fundamental importance for its revival. Barry (1982) offers a valuable historical account.

⁸ Law is too easily assimilated to economic life, as if its only purpose would be serving the latter. We shall revisit this view later. Furthermore, human action seems to be perfectly represented by the individual interacting in the market. DiZerega (1989) explores critically this issue regarding the spontaneous order of democracy.

⁹ For a summary of his distinction between these two types of rules see Hayek (2008: 125). See (*ibidem*, Chapter 10) for a more detailed treatment. Confer volumes 1 and 2 of his *Law, Legislation and Liberty* (1982) for the most exhaustive account.

¹⁰ Hayek provides another argument. Such concentration of powers was not seen as undesirable because of the blind belief in a specific understanding of democracy that came to replace its ancient reading, “It seems to be the regular course of the development of democracy that after a glorious first period in which it is understood as and actually operates as a safeguard of personal freedom because it accepts the limitations of a higher nomos, sooner or later it comes to claim the right to settle any particular question in whatever manner a majority agrees upon” (Hayek, 1982, III: 2).

¹¹ Hayek (2008: 173) acknowledges that the common law tradition because offering more flexibility could also be more permeable to “the tendencies undermining it.”

¹² Hayek (1982, II: 101-107) was viscerally against the multiplication of *positive* individual rights and its crystallization on declarations such as the Universal Declaration of Human Rights.

¹³ Hayek digs his way out of this conclusion in a different number of ways, which I will dismantle in the following pages.

¹⁴ Hayek would also have, for example, to disprove strategic use of courts by repeated litigants. Again, he assumes that individuals only litigate when the expectations protected by the spontaneous order are upset and never to obtain private benefits through the removal or creation of legal rules.

¹⁵ As it will become clear later, it is no good to argue that the true mechanism is the maintenance of the doctrine limiting the legislative power of parliaments/executive to abstract rules. This doctrine cannot impede creative judicial behavior; especially today when courts are at the center of the legal system. One could also be tempted to blame unlimited parliament sovereignty for the pervasiveness of legislation. Yet again, this argument forgets that this is a legal doctrine and as such can be changed by creative courts.

¹⁶ Mayr (2002: 82) called it the (scientifically wrong) ideology of finalism. Guttman wrote (2006: 10), “[...] evolution says nothing about progress”. We might say that the world grew more complex but calling it progress is quite a different thing.

¹⁷ The problem in our contemporary post-metaphysical world is to determine which value should be given priority. Let us take as case study the failure of socialism. Hayek showed how socialism was self-defeating due to its unrealistic assumptions on the capacities of a body to concentrate and use information in a totally centralized way. Yet, he admits of no equivalent problems of a liberal order. Perhaps it ensures a better use of information but which problems does it create? From a systems theory point of view (Moeller 2006: 34-35), socialism is insufficiently complex since it assumes that one system (the political) can steer another one (the economy). More technically, the issue was that the political system by determining how the economic system is to operate applies its code instead of the economic one. So, economic plans were relevant insofar they were met or not met. True economic communication could not be used. Naturally, forged data emerged as the response to ensure the success of the plans. This is narrated in Ji Chaozhu's (one of Mao and Shu En Lai interpreters) biography (2008). Yet, capitalism from a systems theory perspective raises other issues because it produces the illusion that political interventions can help the economy. Enough looking at

financial markets to understand that they absorb whatever legislation can be enacted unless they are dismantled.

¹⁸ Teubner (1993: 56-57) also criticizes Hayek's picture of legal evolution. However, I find his criticism off the mark. Even though, he is right in saying that Hayek overvalues customary law; he wrongly accuses Hayek of ignoring the role that internal mechanisms of law fulfill in the variation and selection of rules. Re-confer my section 4.1.

¹⁹ Norman Barry (1982: b 82) stresses Hayek's expression "the twin ideas of evolution and spontaneous order."

²⁰ Hayek (1988: 25): "This is another reason why evolutionary theory can never put us in the position of rationally predicting and controlling future evolution. All it can do is to show how complex structures carry within themselves a means of correction that leads to further evolutionary developments which are, however, in accordance with their very nature, themselves unavoidably unpredictable."

²¹ In blatant contradiction with Hayek (1982, I: 51, emphasis added) "We shall see that it is impossible, not only to replace the spontaneous order by organization and at the same time to utilize as much of the dispersed knowledge of all its members as possible, but also to improve or correct this order by interfering in it by direct commands. *Such a combination of spontaneous order and organization it can never be rational to adopt.*"

²² In this respect Hayek follows a clear legal theoretical account of the system of law. Dworkin (1967) provides a good summary of the normative internal differentiation of law over time. The problem is that Hayek is not interested in a purely legal account of law. He studies law as a complex system that evolves in society. Consequently, he needs an account of law *in* society which he fails to provide: the place of law in the social order (and not merely the *internal* differentiation of the legal system in different types of rules).

²³ MacCormick (2008: 35-37) employs the concept *institutions-agencies* to address the same object.

²⁴ Instead of striving at Hayek's goal of maximum freedom enabled by a type of rules, what this institutional dimension of law adds is a new question: how to maintain the confidence of individuals in their normative expectations? How does law reduce the complexity of social life and makes human interaction possible and meaningful?

²⁵ The post-humanism advocated by Luhmann is also clear in Michel Serres' work (for example 2007: 226), "The ball isn't there for the body; the exact contrary is true: the body is the object of the ball: the subject moves around this sun") and more recently in the ANT theory which became famous for its assertion that objects have agency. See Latour (2007, Ch. X).

²⁶ Hayek (1982, I: 45-46) admits that spontaneous orders can arise from man designed rules making my argument much less distant from Hayek than it could seem at first glance.

²⁷ Hayek wrote (1988: 6) "that socialists are wrong about the facts is crucial to my argument [...]". In my paper, I imply exactly the same in Hayek's analysis. Hayek got it wrong.

²⁸ If Luhmann was the precursor, Teubner (1988 & 1993) elaborated some of his views, responded to criticism and essentially developed a milder version of systems theory. However, it lacks the comprehensiveness of Luhmann's own work.

²⁹ His is an esoteric work due to the extension and surprising selection of sources he makes use of. Moeller (2006) aptly introduces Luhmann's work and his place in the history of ideas. Geyer & van der Zouwen's volume (2001) connects systems theory and sociocybernetics including many articles explicitly dealing with Luhmann's work. Finally, King & Tornhill (2006) and Nelken & Priban (2001) discuss applications of Luhmann's theory.

³⁰ See Luhmann (1995, Chapter 4 and 408, "for everything that is communication is society").

³¹ This is not to say that individuals cease to exist. Luhmann's point is rather different. Human beings (bodies and minds) are autonomous and separate from social systems and therefore they cannot communicate *directly* meaning that social systems interpret according to their own rules the input provided by human beings whereas human being react to the input of social systems according to themselves (Luhmann, 1995: 210 ff.). It is famous Luhmann's assertion that individuals do not communicate with each other, communication does. Similarly, Lacan (2008) once said that a marriage is two monologues. Finally, for the co-evolution of persons and systems see Luhmann (1995: 59 ff.).

³² See Hornung (2006) for an accessible exposition of Luhmann's functional-structuralism.

³³ See Luhmann (1995: 1-11) accounting for the differences between classical and autopoietic systems' theory.

³⁴ See Teubner (1993: 70) for a synthetic formulation. Hayek (1988: 9) was aware of autopoiesis as a response to the challenge of "evolutionary formation of such highly complex self-maintaining orders".

³⁵ Luhmann wrote (1995: 39) "In other words the system contains, as complexity, a surplus of possibilities, which it self-selectively reduces".

³⁶ This way, complexity is shared among different functional systems each one specializing in managing and processing only one type of communication. For the presentation of each system's codes and functions see Moeller (2006: 29).

³⁷ There are some stable connections between systems which Luhmann named *structural couplings* (2008: 381-422). These, however, do not entail the unity of systems.

³⁸ Naturally this description refers to the regular operation of the systems. Systems can be "disrupted" by revolutionary episodes, such as if the judges of the constitutional court are overthrown by the President with constitutional adjudication lying in his hands (the political system).

³⁹ The elaboration of this point would force a long detour. For the time being it shall suffice to say that Luhmann rejects a "monoculture of reason". The semantics of subjectivity associated the existence of reason with the subject. To Luhmann, any system capable of cognition, of distinguishing itself from the environment, shares a functionalist reason. See Luhmann (2006) and Moeller (2006).

⁴⁰ In short, we should attest it as an historical fact (Nelken 1988: 206). This is exactly the focus of Biggiero's article (2001) where he concludes that firms are not autopoietic systems. Teubner (1993: 124 ff.) attempts to conceptualize "the legal concept of the corporate group as an autopoietic system" even though it is important to notice that he conceptualizes autopoiesis as a matter of degree instead of all-or-nothing fashion.

⁴¹ This list is not exhaustive and far from definitive. Important is to remember that law also differentiated itself internally in diverse institutions and not only rules.

⁴² Luhmann (2008: 81) identifies the source of irritation provoked by his theory with the fact that it says nothing about the "kind of structures that are developed" and nothing about "the normative programs that are developed".

⁴³ In Serres' poetic words (2007: 41, emphasis added) "A fluctuation, a noise, *a spark of chance* [...]".

⁴⁴ Courts are organizations in the same way political parties are organizations of the political system.

⁴⁵ If action is restricted only to individuals we would be denying the application of evolutionary theory beyond biological phenomena (Luhmann 2008: 233, footnote 10) leaving out of the analysis the vast majority of our desired object of study: cultural evolution.

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