Two Different Theories of Two Distinct Spontaneous Phenomena: Orders of Actions and Evolution of Institutions in Hayek

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Abstract: This article offers a critical appraisal of two distinct Hayekian theories, namely the theory of the spontaneous order of actions, and the theory of spontaneous evolution of social institutions. The purpose is to show how Hayek and some commentators and disciples have mistakenly conflated these two distinct theories, and have thereby generated confusion over many other related crucial issues. The aim is therefore to clearly distinguish the two theories in order to identify the real message of Hayek's teaching, and clear the way for a more useful exploration of self-organising social phenomena.

Keywords: Evolution; Hayek, institutions; invisible-hand explanations; spontaneous order.

INTRODUCTION

It is common knowledge that "spontaneous order" is one of the pivotal concepts of F. A. Hayek's thinking. Potts (2013) points out that Hayek's work contains two different mechanisms that tend to overlap within this concept of spontaneous order, namely the evolution of rules and network coordination. In the present article I intend to delve further into the issue and heighten this distinction even more radically. In particular, I will argue that we are not dealing simply with two different mechanisms within a unified theory, but with two distinct theories (which may or may not be combined): the theory of the spontaneous evolution of social institutions and the theory of the spontaneous order of actions. I will first outline the differences between these two theories and—on the basis of this distinction—I compare the idea of the market as spontaneous order with the idea of the market as a spontaneous institution in the following section. This is followed by a discussion about the possible links between the two theories. In the concluding section, I offer some more general observations on theories of self-organizing phenomena.

TWO THEORIES OF TWO DIFFERENT SPONTANEOUS PHENOMENA

As suggested, it is possible and indeed necessary to establish a clear distinction between two of Hayek's theories on two separate phenomena: first, his theory regarding the spontaneous evolution of social institutions (developed mainly in Hayek, 1982; 1988); and second, his theory of a spontaneous order of actions (already clear in his early work, e.g. Hayek, 1948). The two theories must be kept distinct because they pivot on (i) different "unintended (ordered) phenomena" that are "unplanned in a different sense"[1]; (ii) different kinds of "emergence"[2]; (iii) different kinds of "knowledge" (available in society); and (iv) different kinds of "invisible-hand explanations."[3]

Unfortunately, Hayek's later work tends to blur this distinction, principally because of his rather haphazard and increasingly diffuse use of the term "spontaneous order," a

habit followed by many of his disciples. Discussing Hayek's perspective, Kley (1994, p. 26) observes that "the idea of a spontaneous order does not receive a sufficiently systematic treatment in his writings. This shows in the secondary literature, where the views about its substance, its scope, and its significance as an analytical concept differ widely." Similarly, Hodgson (1993, p. 177) writes that a "serious shortcoming of Hayek's work [is] a lack of clarity about the crucial concept of spontaneous order."

The confusion has been further exacerbated by Hayek's notorious binary opposition between "constructivism" and "evolutionism." Employed by Hayek to qualify his personal position, the latter term shifts the bulk of the emphasis onto the theory of (spontaneous) evolution, demoting the theory of (spontaneous) order to second place.

For this reason I shall discuss these two theories separately. For each of them I shall briefly consider four questions:

(i) What are the basic claims of the theory?
(ii) What unintended ordered phenomenon does it aim to explain?
(iii) How does it do this? (What kind of invisible-hand explanation does it employ?).
(iv) Who were Hayek's precursors and who inspired him to explore this path?

Theory No. 1: The theory of the spontaneous evolution of social institutions

Hayek developed this theory toward the end of his life. Although elements of it can be found in earlier works (Hayek, 1967), it is in Hayek (1982) and, especially, Hayek (1988) that the theory is explored in most detail. Hodgson notes that:

> [w]e have to wait until the late 1980s to receive the fullest explicit statement of Hayek's evolutionary conception, in a few pages of *The Fatal Conceit*. Given the significance of an idea of the 'evolution' of social institutions in Hayek's mature work, it is odd that it receives so little elaboration (Hodgson, 1993, pp. 158-59).

Compared to the second theory, which is discussed below (the theory of the spontaneous social order of actions), the theory of the spontaneous evolution of social institutions is barely sketched; indeed Hayek gave it scant treatment: "Hayek's theory of cultural evolution is not a tightly reasoned, well-integrated body of arguments, but, instead, a more loosely connected set of general ideas and conjectures" (Vanberg, 2001, p. 59).

1 Characteristics

What are the basic arguments of the theory? Hayek's (1988) theory of the spontaneous evolution of "social institutions"—interpreted as durable and established systems of basic social rules of conduct—presents two arguments. The first argument is that most social institutions are the unintentional outcome of a slow evolution over a very long time. Evolution, in this sense, is a process of trial and error comprised of three steps. The first step is the *generation* of a variety of practices and rules, while the second step is the *competition* and reduction of the variety of rules via selection. The third and final step is the *propagation* and persistence of the solution—that is, the system of rules—selected. The specific mechanism at work here is a form of group selection: the central idea is that certain rules evolve and spread because members of groups that follow them enjoy greater success (in particular, in terms of welfare and numerical increase) than members of groups that do not accept them, or accept different rules.[4]

The second argument is that institutions which have evolved over time embody the acquired knowledge or wisdom of several generations. They are a store, a distillate, of successful experimentations. Hence they embody a quantity of knowledge which would be otherwise inaccessible to an individual mind. This accumulated wisdom is therefore of a largely stable and stabilizing nature (rather than dynamic and catalyzing). As Hayek (1988, p. 75) writes: "Most knowledge … is obtained not from immediate experience or observation, but in the continuous process of sifting a learnt tradition, which requires individual recognition and following of … traditions." Therefore, "[t]radition is in some respects superior to, or 'wiser' than, human reason" (*ibid*.).

What type of unintended (emergent) phenomena does the theory aim to explain? The type of ordered unintended phenomenon covered by the theory is a system of rules. The spontaneous emergent elements are, in this case, the basic social institutions.

What type of reasoning does the theory employ? The invisible-hand explanation used in this case does not presuppose the existence of given rules, but competitive sets of rules that are in the process of being formed or transformed. This invisible-hand explanation is generic, as it relies on few conditions from the outset. It employs a form of "conjectural history,"

which is to say that it is a reconstruction of how the systems of rules might have come into being.[5] In other words, conjectural history is a rational reconstruction of a hypothetical kind of social process which may never have been directly observed but which, if it had effectively taken place, would have produced the phenomenon being investigated (in our case, the propagation and perpetuation of certain institutions). Hayek (1988, p. 69) writes that this "is in effect an historical, even natural-historical, investigation, not an attempt to … justify, or demonstrate the system itself." It is this an investigation that tries "to make intelligible why some rules rather than other had prevailed" (*ibid.*).

It is also a kind of *teleological* explanation (even if a very particular one), in that even if it does not imply any specific designer, it effectively implies the idea that certain kinds of institutions would not have endured had they not acted in a manner likely to produce certain effects, such as increasing the number and welfare of the groups adopting them (Hayek, 1967, pp. 66-81).[6]

Who were the precursors and inspirers of this aspect of Hayek's work? Those who preceded and steered Hayek's thought toward this first type of theory include thinkers such as David Hume (1739), Adam Ferguson (1767), and Edmund Burke (1790). Endorsing the assertion that the two theories under discussion—the theory of the spontaneous evolution of institutions, and the theory of the spontaneous order of actions—should be treated as distinct from each other, we may note that the three authors just cited offered considerable inspiration for Hayek's theory of evolution of institutions, but limited material (and in some cases none) for the theory of the spontaneous order of actions. Ferguson ([1767] 1995), for instance, demonstrates considerable insight on the spontaneous evolution of social institutions, whereas the basic nature and advantages of the spontaneous market order seem to elude him.[7]

2 Clarifications

Similarities. Biological and cultural evolutionary processes have some similarities. Three key aspects that are particularly important to remember, for both biological and cultural evolution, are the following. First, neither biological evolution nor cultural evolution follow "inevitable laws of historical development." In other words, they do not conform to predefined specific phases or stages through which evolution must necessarily pass. Evolution is an open-ended process. It is then not possible to predict in detail future developments. Hayek (1988, p. 25) states that:

> [a]ll evolution … is a process of continuous adaptation to unforeseeable events, to contingent circumstances which could not have been forecast. … Evolutionary theory can never put us in the position of rationally predicting and controlling future evolution.

Second, every evolutionary process is contingent, inasmuch as it could just as easily not have come about—or not happened in the way in which it did. Third, every evolutionary process leads to sub-optimal results. An evolutionary process cannot attain optimal results because it acts on certain variants rather than on all possible ones (Simon, 1983; Elster, 1989; Hodgson, 2004). This notwithstanding, it can achieve certain results where other mechanisms would have failed.

Differences. Two important differences between natural evolution and cultural-institutional evolution are the following. First, while the contemporary biological evolutionary approach does not rest primarily on the inheritance of acquired characteristics and traits, cultural development rests specifically on such kinds of inheritance: that is, the inheritance of rules of conduct, rules that are not innate but learned through experience. Each individual then acquires rules of conduct from society at large: cultural evolution comes about through the transmission of information and habits, not solely from the individual's physical parents, but from an indefinite number of human ancestors (Hayek, 1988).
Second, there is a fundamental difference as regards the origin of variations. The raw material upon which natural biological selection acts is supplied by chance genetic mutations. Conversely, the material on which institutional evolution acts is supplied by human trial and error. Intentional agents provide such trial-and-error experiments while trying to address various life problems.

Theory No. 2: The theory of spontaneous social orders

In contrast with the theory of the spontaneous evolution of social institutions, Hayek began formulating his theory of the spontaneous order of actions as early as in the 1930s and, unlike the other theory, it is expanded and developed in great depth throughout his subsequent work.

1 Characteristics

What are the basic arguments of the theory? The theory of spontaneous social orders pivots largely on two fundamental arguments (Hayek, 1948; 1967; 1982). The first argument posits that complex social orders such as the market—that is, orders which entail the efficient coordination of innumerable independent individual actions—can come into being if the individuals follow certain abstract rules that allow all concerned to freely pursue their own ends according to their personal abilities and knowledge. The formation of a spontaneous social order is the result of individuals following certain abstract rules in their responses to their immediate environment. According to Hayek (1982, vol. I, p. 44), "[t]he responses of the individuals to the events in their environment need be similar only in certain abstract aspects to ensure that a determinate overall order will result."

Consequently, the general spontaneous order that emerges is not part of either the specific ends of the individuals (inasmuch as nobody acts with the aim of establishing an overall order of actions), or of the rules *per se* (inasmuch as no given rule is aimed intentionally at the formation of some overall order of actions). In this sense, order itself does not exist *ex ante* (in all its details) in the minds of individuals, but develops *ex post*. Thus the causes behind the emergence of order are endogenous: order is self-organizing. Furthermore, this polycentric and non-hierarchic order is flexible and dynamic; it is able to adapt itself to new circumstances.

We may therefore describe a spontaneous order as an abstract order, a transcendent order, or a super-individual pattern. It is an order that may persist even if its various components are different in type or in number. In fact, for such an order to endure over time a type of relational structure must be maintained; its components must remain interrelated in some way. The second argument—to resume the more general discussion—is that complex social orders of this type generate greater knowledge than any other type, with wide-ranging benefits. Moreover, the kind of knowledge that emerges in this case is dynamic and catalyzing rather than solely static and stabilizing, in the sense that it is continually produced and adjusted by the intrinsic competitive workings of the spontaneous order itself (Heiner, 1990; Witt, 1997; Chiles et al., 2010).

What type of unintended (emergent) phenomenon does it aim to explain? The type of ordered phenomenon to which the theory refers is an order of actions that depends on certain rules of conduct. The spontaneous aspect is the emergence of a pattern of cooperation. Observe that institutions—rules of conduct—grant a certain kind of correspondence of expectations (a first-level correspondence of expectations), but this does not constitute the order of society that is crucial for Hayek. The spontaneous order of actions (a second-level correspondence of expectations) is the unplanned result of the fact that individuals follow these rules and freely react to their environmental conditions.

What kind of explanation does it involve? The invisible-hand explanation presupposes in this case a certain set of abstract rules, and takes account of the unintended emergence of a particular form of interrelation between individual actions. This invisible-hand explanation is more specific than the previous one, because it can rely upon various preconditions: for example, the existence of certain rules (which are accounted for in the invisible-hand type of explanation employed within the theory of the spontaneous evolution of social institutions). In Hayek's words (1967, p. 72), "for the explanation of the functioning of the social order at any one time the rules of individual conduct must be assumed to be given." It is important to stress that the invisible-hand explanation as it is applied in this case does not constitute an example of "conjectural history." It does not reconstruct "history": the process it explains is synchronic, not diachronic. Moreover, it is not a teleological explanation.

Who were Hayek's precursors and sources of inspiration? For this second type of theory, Hayek's sources include Bernard Mandeville (1714–23) and Adam Smith (1776). So as to confirm that the two theories are distinct, we should note that while Smith and Mandeville are precursors of Hayek's theory of the spontaneous order of actions, their influence is absent from Hayek's theory of the evolution of social institutions. In the early editions of *The Fable of the Bees* (1714–23), Mandeville maintains, in fact, that social institutions and norms of conduct were introduced deliberately. He proposes a "conspiracy theory" on the emergence of social institutions and rules, suggesting that moral conduct is a "shrewd invention." In other words, Mandeville rules out the spontaneous emergence of social institutions and norms over time.[8]
Smith (1762-66) sketches a generic and tentative theory of development stages in his *Lectures on Jurisprudence*, but he never constructed an original or significant theory on the evolution of institutions.[9] According to Petsoulas (2001, p. 147), a "theory of cultural evolution ... is not present in Smith." This is also relevant to Darwin's work. Hayek (1988) reckons that Darwin derived his ideas for spontaneous evo-

lution from Smith. Darwin doubtless read the work of Smith, but while he may have found fodder for a theory of the spontaneous order of actions, he would have found nothing to inspire a proper theory of evolution. While it is true that the evolutionary study of society and culture long antedates Darwin (Sahlins and Service, 1960), Smith does not figure among the precursors of evolutionary theory. Hodgson (1993, p. 59) notes that "[t]he search for a sophisticated idea of evolution or anything clearly resembling natural selection in Smith's writings is in vain."

2 Clarifications

Three particular points need stressing. First we must clarify which rules must be present so that the emergence of a spontaneous order of actions is fostered. Then we must define the distinction between systems of rules and orders of actions, which seems to have eluded many of Hayek's commentators.[10] Finally we must observe that the emergence of a spontaneous order does not in itself require rules that are themselves spontaneous in nature (another point that has eluded many commentators and disciples).[11]

First: two types of rule. Made orders are regulated by "concrete rules" (i.e., rules of organization), whereas spontaneous orders are regulated by "abstract rules" (i.e., rules of conduct). Concrete rules are specific, end-state-dependent, have a short-run orientation, and tend to be positive. Abstract rules, on the other hand, are generic, end-state-independent, have a long-run orientation, and tend to be negative. Abstract rules are rules that refer to general types of situations or actions and apply equally to everyone, or at least to whole classes of individuals; they must be applicable to an unknown and indeterminable number of instances and persons. They are also independent of any specific result, outcome or end state. In addition, they must be stable and adhered to for long periods of time. Generally, abstract rules merely protect the private domains of individuals and do not impose any positive duty or action. They thereby prevent serious conflicts as well as predefined tangible harms.

Second: systems of rules and orders of actions. Spontaneous social order—a situation that entails the unintended reciprocal coordination of actions among individuals—must be distinguished from the system of abstract rules that contribute *indirectly* to its emergence. As noted by Hayek in the introduction to a key chapter in one of his most important books:

> [t]he purpose of these notes is to clarify the conceptual tools with which we describe facts … . More particularly, their aim is to make clear the important distinction between the systems of rules of conduct which govern the behaviour of the individual members of a group (or of the elements of any order) on the one hand, and, on the other hand, the order or pattern of actions which results from this for the group as a whole (Hayek, 1967, p. 66).

Hayek (*ibid.*, p. 67) proceeds to state that the fact that "the systems of rules of individual conduct and the order of actions which results from the individuals acting in accordance with them are not the same thing should be obvious as soon as it is stated, although the two are in fact frequently confused." This same point is stressed again in Hayek (1978, p. 9): "The order of society is therefore a factual state of affairs which must be distinguished from the regularity of the conduct of individuals." Hayek (1982, vol. I, p. 113) repeats this point one more time in a later book: "The order of actions is a factual state of affairs distinct from the rules which contribute to its formation."

The distinction between the system of rules and the order of actions can be highlighted in a simpler and more immediate way by observing that an order for the whole society does not simply materialize whenever individual behaviors of a certain kind are regular in themselves, but only when certain forms of regularity in individual behaviour occur (*ibid.*). In any event, in many cases we discover the particular function which certain rules serve only after we have understood the spontaneous order produced by individual actions in accordance with them. As Hayek (1982, vol. I, p. 113) observes, even scholars of law frequently confuse the system of rules of conduct with the order of actions: "Although people are usually well enough aware that in some sense the rules of law are required to preserve 'order,' they tend to identify this order with obedience to the rules and will not be aware that the rules serve an order in a different way, namely to effect a certain correspondence between the actions of different persons."

As we have already observed, the matching of some expectations granted by the existence of abstract rules does not already represent order in society; compliance with such abstract rules is only a precondition of order—an order of actions that effectively depends on both general rule-following *and* individual adjustment. The contrast between spontaneous and made orders is particularly salient in this context. In the case of a spontaneous order such as the market, the

system of rules and the order of actions do not coincide. Conversely, in the case of a made order such as an organization, the system of rules and the order of actions tend to be much more closely aligned.

Third: rules are not necessarily spontaneous. The spontaneous and unintended nature attributed to the complex orders of actions discussed above does not necessarily clash with the deliberate application of rules and regulatory systems, at least those of a certain kind. In other words, spontaneous orders of actions do not perforce or exclusively require spontaneous rules. As Hayek (1978, p. 74) writes: "A spontaneous order may rest in part on regularities which are not spontaneous but imposed." Later, Hayek contends that:

> [t]he spontaneous character of the resulting order must … be distinguished from the spontaneous origin of the rules on which it rests, and it is possible that an order which would still have to be described as spontaneous rests on rules which are entirely the result of deliberate design … . That even an order which rests on made rules may be spontaneous in character is shown by the fact that its particular manifestation will always depend on many circumstances which the designer of these rules did not and could not know (Hayek, 1982, vol. I, p. 45).

THE MARKET AS A SPONTANEOUS INSTITUTION VS. THE MARKET AS A SPONTANEOUS ORDER

In this section I will use the distinction between the theory of spontaneous evolution of social institutions and the theory of spontaneous social order to draw a clear demarcation line—contrary to some current trends—between the market as a spontaneous *institution* and the market as a spontaneous *order*. This demarcation does not imply a simple distinction between long-term and short-term (market) dynamics, but a more critical distinction between different types of emergent phenomena and social dynamics. Identifying a distinction between the market as a spontaneous institution and as a spontaneous order within Hayek's perspective is, to my mind, feasible both *historically* (the young Hayek explains the functioning of a spontaneous market order without referring to the idea of the spontaneous evolution of institutions, which is a concept that he introduces later), and *theoretically* (the Hayekian explanation of the functioning of the market—and of the formation of an order of actions within it—is possible and interesting whether we suppose either that the underlying abstract rules evolved spontaneously or that they were deliberately introduced).

The market as a spontaneous institution

If we embrace Hayek's theory of the spontaneous evolution of social institutions, we can argue that the market system—as a specific form of institution—is "spontaneous" because nobody deliberately invented or set it up at any particular time in history. Instead, it emerged spontaneously and unintentionally over a long period of time. (By the same logic, language is likewise a "spontaneous" institution.) Hayek speaks of a process of trial and error which overall lasted hundreds of thousands of years before producing the peculiar set of abstract rules that characterize our current market systems. The theory of the spontaneous evolution of social institutions therefore explains how and why certain types of institutions such as existing market structures pre-empted other types of institutions such as defunct non-market structures.

It is the idea of the market as a social institution that Hayek (1978, p. 11) has in mind when he observes that the market system could not have been invented deliberately: "This follows from the fact that the result could not have been foreseen. None of our ancestors could have known that the protection of property and contracts would lead to an extensive division of labour, specialization and the establishment of markets." He reiterates this point frequently in his work, as when he claims (Hayek, 1982, vol. III, p. 164) that "[w]e have never designed our economic system. We were not intelligent enough for that." Similarly, the market as a spontaneous institution was what Herbert Simon (1981, p. 47) had in mind when he wrote—in a text in which he acknowledged the contribution of Hayek's theoretical works—that "[n]o one supposes that a modern organization-&-market economy is the product of deliberate design. Surely it evolved from earlier subsistence economies … over thousands of years."

The market as a spontaneous order

> If we embrace Hayek's theory of spontaneous order, we can argue that the market is "spontaneous" because the abstract rules typically associated with it—whether they emerged spontaneously or were deliberately introduced—do not contain instructions that directly aim at constructing the order of actions that emerges.

> The mutual matching of individual expectations that emerges within a market system, thanks also to the mechanism of pricing that works like a telecommunication system, is therefore utterly unplanned: "The order of the market is spontaneous, and emerges from the exchange behavior of individuals within a pre-existing structure of property rights and rules of engagement … . It is an on-going process within rules" (Boettke, 2011, p. 273).

It is the idea of the market as a social order of actions that Hayek has in mind when he notes how it is a self-organizing mechanism that enables the individuals taking part in exchanges to have greater opportunities than are offered by any other known economic system. Similarly, this same idea of what constitutes a market was what Buchanan (1977, pp. 25-39) has in mind when he writes (in a chapter on Hayek's contribution) that the key principle worth highlighting in economics is the principle of the spontaneous order of the market. Buchanan is thinking of the principle whereby—in a market system that has no top-down planning—supermarket shelves supply such desired goods as tomato sauce.

Note that the coordination of independent actions, the efficient use of dispersed know-how, and the creation of widespread prosperity are possible in a market system thanks to the *combined* functioning of a framework of rules and the price system. Certainly, in his early work Hayek put the main emphasis on the role of prices, whereas in later works he laid greater stress on the abstract rules. The point is not that the abstract rules supersede the price system in fostering the coordination and employment of dispersed knowledge (Fleetwood, 1997) but, more simply, that those abstract rules are combined with the price system in carrying out this role (Runde, 1997). Notably, in their reflections on how to reduce the uncertainties of the social world through forms of coordination, sociologists tend to focus exclusively on the first aspect—the importance of social rules and institutions—while economists stress the second—the importance of orders of actions. The originality of Hayek's thinking is to consider both these aspects jointly.

As we have asserted above, the theory of spontaneous order only explains the *role* of certain rules (i.e., their function and importance). It does not explain their *genesis*, which then becomes the province of the theory of spontaneous evolution of institutions discussed earlier. This is what Langlois (1986, p. 7) terms the bidirectional connection between economic theory and institutions: "On the one hand, institutions influence economic phenomena, and this implies a need for economic theories in which institutional influences and constraints play a role ... . In the other direction, institutions and economic theory meet to the extent that theory can be brought to bear to explain the various economic and social institutions themselves."

It should also be noted that, by interpreting the market as principally a spontaneous institution rather than a spontaneous order, we cannot evoke Hayek's well-known "epistemic" critique of central planning.[12] It is by considering the market as a spontaneous order rather than as a spontaneous institution that allows Hayek to engage in his renowned epistemic critique of central planning. As is well known, this critique holds that it is not possible to use intentional organization and coordination of the various actions and activities that make up an economy in a way that can guarantee the activation or effective use of dispersed knowledge. More precisely, it is impossible to intentionally concentrate the dispersed knowledge that enables complex economic systems to function, since this knowledge is *situated* (know-how specific in space and time), *tacit* (know-how acquired through a process of "learning by doing," and therefore one that is internalized in the minds of individuals, who make use of it without deliberate, explicit reflection), and *dynamic* (it changes over time, sometimes rapidly).

It is therefore intrinsically impossible to make dispersed knowledge "public" through intentional action. Any attempt to do so—that is, an attempt to centralize knowledge and guide the economy—would result in a drop in productivity and efficiency due to the fact that we would be forcing the system to use less than the knowledge actually available in society, thereby reducing the scope for decentralized experimentation.

It is important to note that the market does not merely "gather" dispersed knowledge; it also provides incentives to the individuals who "generate" it (Butos and McQuade, 2002). Even Hayek himself, who placed little emphasis on this aspect in his early writings, later wrote that to define the problem of economic competition uniquely "as one of utilizing knowledge dispersed among hundreds of thousands of individuals still over-simplifies its character." Indeed, "it is not merely a task of utilizing information about particular concrete facts which the individuals already posses, but one of using their abilities of discovering such facts as will be relevant … in the particular situation" (Hayek, 1982, vol. III, p. 190).

REFLECTIONS ON THE "DEGREE OF RELATION" BETWEEN THE THEORY OF SPONTANEOUS EVOLUTION AND THE THEORY OF SPONTANEOUS ORDER

Five possibilities: commonality, compatibility, inseparability, interchangeability, genesis

So far I have argued that the theory of the evolution of social institutions and the theory of spontaneous social order are two distinct theories. That said, while they are distinct, might we say that they remain "relatives" in some way? In certain passages it would appear that Hayek himself (1967, p. 77; 1978, p. 250; 1982, vol. III, p. 158, and 1988, p. 146) considered the two ideas of evolution of institutions and of spontaneous order to be "twins," but unfortunately his statements to this effect remain very ambiguous, and he does nothing to spell out what he means exactly. As Petsoulas (2001, p. 16) writes, "[t]his is one of the most puzzling statements in his social theory, for it is never systematically explored." Schmidtchen (2000, p. 32) concurs, arguing that "Hayek never delivered a formal model of the 'twin ideas' hypothesis," as does Kley (1994, p. 39) when he states that Hayek "never explains satisfactorily what renders the idea of a spontaneous order and the theory of cultural evolution 'twin conceptions'".

If we hypothesize that somehow the two theories could be "twins," there are five possible ways that would support this (and Hayek seems to oscillate among them): (i) commonality; (ii) compatibility; (iii) inseparability; (iv) interchangeability; and (v) genesis.

The first possible reason for their being twin theories is that they have several significant characteristics in common. They might be said to be recognizable among many other theories because of certain "family traits" as it were. For instance, they both give precedence to unintended (ordered and emergent) phenomena; they give preference to invisible-hand explanations; and they acknowledge the central role of institutions. To my mind, this first interpretation is highly plausible.

The second possible reason for their being considered twin theories is that they are "compatible." In other words, they are not incompatible and can thus "operate in parallel." This too seems reasonably plausible. To say that the two theories are compatible does not necessarily mean that they are also interdependent, which in effect they are not[13].

A third possible reason is that the two theories are inseparable; they always run in tandem. To my mind this is only partly plausible. Although the two theories may run hand-in-hand (as stated above, they are in fact compatible), they can also come about separately. Hayek himself often points out that a spontaneous order of actions can come about even if the abstract rules that foster its emergence were introduced deliberately.

A fourth possible reason for their being twins is quite simply that the first is the "clone" of the second; that is to say, the theory of the spontaneous evolution of institutions is by and large a re-introduction of the original theory of spontaneous order, set in another ambit. I find this explanation unconvincing, given that Hayek's theory of the spontaneous evolution of social institutions is not merely a "projection" of his theory of spontaneous order onto another reality, but in many respects an entirely new theory in its own right.

A final possible reason is that they are both the offspring of the same "mother theory," namely a unified theory of unintended ordered phenomena. There can be no doubt that from the outset Hayek (1952) had a general theory of this type in mind, but my idea is that he simply did not develop it, nor, to my mind, have others done so. This is a significant point, and worth elaborating further. In this as in any other case it is clearly always possible to construct a more general "mother" theory that comprises others as simpler specifications. But we must ask ourselves whether the price is not too high. In Hayek's case my belief is that the price is exceedingly high. As matters now stand (i.e. without any substantial theoretical innovation—we will came back to this point), it would be a case of a theory that limited itself to affirming that it is possible for disparate elements to combine unintentionally in an ordered structure, without however affirming anything of relevance on the conditions and ways in which this happened; the entire argument concerning the crucial role of abstract rules, the use of local know-how, and the role of prices—crucial for understanding how complex social orders such as the market actually function – would be utterly lost.

To conclude, the theory of spontaneous social order and the theory of the spontaneous evolution of social institutions share certain similarities in how they are formulated, they often run in tandem (though not necessarily always), and they can also be complementary—but this in no way entails that the two are indistinguishable from each other. The degree of relation between the two theories is therefore not as close as it might appear at first sight; let us therefore say that their kinship is more in the nature of "sisters" or "cousins" than of "twins."

What evolution?

To avoid misunderstandings, I should point out a fundamental aspect of the two theories: while they both describe dynamic and competitive processes, the dynamic and competitive processes involved are different, and follow separate logics. One might say that both theories describe processes that deal with "innovation, competition, and selection," but they do so in ways that are significantly different and which involve different elements.

We should not imagine that the difference between the two theories evaporates simply by recognizing that the market comprises "evolutionary" processes, which bring about innovation, competition, and selection regarding forms of production—as is frequently affirmed in the wake of certain influential evolutionary approaches to economics (Nelson and Winter, 1982). Assuming this is possible,[14] it must be stressed that this would anyway be an evolutionary mechanism that is different from those implied by the theory of the spontaneous evolution of social institutions. Note that in itself the term "evolution" is anything but univocal (Hodgson, 1994). An "evolutionary" approach can therefore assume a distinct meaning only by systematically and rigorously specifying what type of evolution is intended, and what the phenomena are that are considered to evolve (Andersen, 1994, pp. 185-197).

The evolutionary theory of market institutions is thus not the same as an evolutionary theory of economic activities *within* the market. The latter may complete and integrate the former, but these two theories deal with different objects—the former with *social institutions*, the latter with *economic activities*—and in part perform differently. The well known phenomenon of path dependency, for instance, affects the two cases differently.

Alfred Bosch notes that the evolutionary process within the market:

> presents itself in retrospect as a chain of successful attempts on the part of the offerors to broaden the horizons of the selectors and improve the possibilities of realizing their aims by supplying an ever increasing diversity and range of commodities … . The driving force of this process is the striving of the mutually competing offerors to excel each other and gain the favour of the selecting public by discovering new problems and by offering better or cheaper solutions (Bosch, 1990, p. 92).

As Bosch observes, interpreting the market process as this kind of interaction among many different individuals out of which the world of economic practices, activities and commodities evolves through selection of the solutions that better fit the demand, implies accepting the market institutions—the rules constituting the market system—as exogenously given. In this case the market is the *context* of selection, not an *object* of selection.[15]

To conclude, I disagree with the contention of Richard Langlois (1994, p. 32) that Hayek supposedly limited the application of an evolutionary approach to his interpretation of the emergence of market institutions, without extending it (necessarily, according to Langlois) to include the inner functioning of the market mechanism as well. In my view, Hayek simply applied a dynamic mechanism of a certain type to the question of the emergence of market institutions, and another type of dynamic mechanism to the emergence of forms of production within the market.

Two explanatory theories

In light of these last comments too, I should reiterate the importance of considering the theory of the spontaneous order of actions and the theory of spontaneous evolution of institutions as separate theories. Many commentators and followers of Hayek still fail to appreciate this important distinction[16], which can lead to some undesirable overlaps among explanatory levels and concepts.

There is one last vital point that needs clarifying before closing. Throughout my case for drawing a distinction between the theory of spontaneous social order and that of the spontaneous evolution of social institutions, and for treating the two as separate but compatible, I have assumed that both of them are theories of a descriptive-explanatory nature, and not axiological-normative. While this assumption is quite plausible for the first of the two theories, it is admittedly problematic as regards the second.

Some critics in fact argue that Hayek implied that the theory of the spontaneous evolution of social institutions also (some say mainly) had a *normative* element, and hence it would deem evolutionary outcomes as positive in themselves. In other words, they impute that Hayek subscribed to a form of "evolutionary ethics" (Walker, 1986, pp. 53-54; Kley, 1994, pp. 137-138). I think such claims are off-target, while acknowledging that a more systematic inquiry by Hayek himself would have been useful. Hayek does not claim that the outcomes of the spontaneous evolution of social institutions are above criticism, but that such critiques should be partial and gradual. As Hayek (1988, p. 27) him-

self notes: "I do not claim that the results of group selection of traditions are necessarily 'good'—any more than I claim that other things that have long survived in the course of evolution, such as cockroaches, have moral value." Thus, "[r]ecognizing that rules generally tend to be selected, via competition, on the basis of their human survival-value certainly does not protect those rules from critical scrutiny" (*ibid*., p. 20). Elsewhere, Hayek (1960, p. 36) explains that "[i]t is, of course, a mistake to believe that we can draw conclusions about what our values ought to be simply because we realize that they are a product of evolution."

In Hayek's view, the kind of scrutiny applicable to systems of rules that have percolated down through time should be a type of "immanent criticism." It should be one that focuses on discrete issues, one at a time, proceeding gradually; that is, via piecemeal change (Hayek, 1978, pp. 18-22; 1982, vol. I, pp. 118-122; vol. II, pp. 24-27). While certain institutions and traditions cannot be justified and "demonstrated" in the way demanded by "scientistic rationalism," their long processes of formation and development can be reconstructed thanks to an evolutionary view. In doing so we can to some degree understand how they work, and to the extent that we succeed in this, we can revise and improve our institutions by remedying recognizable defects through gradual improvement (Hayek, 1988).

The notion that the acceptance of an evolutionary theory of social institutions entails the impossibility of reforming those same institutions, would amount to an error of logic (Goodin, 1996, pp. 27-30; Ruttan, 2003, pp. 4-8, pp. 271-272). Instead "reform of the basic rules of the game in a democratic society is fully compatible with an evolutionary view of social change" (Vaughn, 1994, p. 229).[17] The key point here is simply that acceptance of an evolutionary theory of social institutions (that is, an empirical theory of the emergence of institutions—albeit empirical in a special sense) implies that only certain specific types of deliberate institutional reform are possible, and not others. In particular, it is better to use a dynamic, strictly non-engineering approach that simultaneously acknowledges the peculiarity of social institutions (in particular, their difference from organizations), recognizes the non-tabula-rasa scenario in which the problem of reforming them normally arises (reformed institutions are always successor institutions), *and* encourages modesty.

Many times the point is not to "invent" institutions, but to be able to recognize and implement cooperative institutions that have evolved over time in a gradual manner (that is, incremental rather than revolutionary improvement) (Moroni, 2010; 2011). The issue is not simply one of being conservative or not, of recognizing or not the possibility of transcending our "institutional embeddedness"—in both cases, the answer lies somewhere in between. It is to recognize that institutions are entirely different as compared with the other elements we usually manage. We must thus use a wholly different approach if we want to comprehend them and, especially, if we intend to deal with them properly.

CONCLUSIONS: TOWARDS A GENERAL THEORY OF SPONTANEOUS PHENOMENA?

It is an interesting challenge to assess whether and how it is possible to devise a general theory of spontaneous phenomena that covers a variety of different types of unintended patterns (diZerega, 2013). To my mind, this challenge is still ongoing, and I hope that the discussion of Hayek's work conducted in this paper will shed some light on the intricacies, opportunities, and hurdles of this enterprise. The discussion conducted in this article makes it possible to clarify three different directions in which a greater generalization of Hayek's theories might move.

First, a greater generalization of the theory of the spontaneous order of actions (which, in the end, Hayek constructed with almost only the market in mind) may be attempted. In this case, the challenge is to construct a more general theory that is able to account for spontaneous social orders *of actions* in various domains. As Bernstein writes:

> The notion of spontaneous order has been developed in a large number of different fields, yet no general paradigm exists through which findings in these fields could be integrated with and elaborated by one another. The reason for this ... is that all of the existing conceptions of spontaneous order ... remain too much rooted in the concrete features of the field from which they emerged (Bernstein, 2009, p. 24).

The idea of developing a more general theory of the spontaneous order, able to explain social orders in different fields, was first explored by Polanyi (1951). diZerega (2008) and Butos and MacQuade (2009) offer recent interesting attempts in this direction. Butos and MacQuade (2009, p. 77; emphasis added) declare that they are concerned with "particular social arrangements ... conceived as networks of people interacting via *institutionalized transactions* which provide both local incentives to interact and global feedback." In particular, they seek to apply a more general theory

of the spontaneous order of actions to both the market and science (i.e. the set of people that engage in the knowledge-generating activities of a scientific community).[18] From a similar perspective, diZerega (2008, p. 1; emphasis added) treats spontaneous orders as "discovery processes *structured by abstract procedural rules*." He explains that "[p]rocedural rules are silent regarding the specific ends pursued within their framework … . These rules establish what I term a *systemic bias*, even if they do not specify which among a large number of mutually exclusive possibilities the system will at any time manifest" (diZerega, 2008, p. 4). On this basis, diZerega proposes a general approach which examines spontaneous orders through descending levels of abstract analysis, from the most general features—common to all forms of spontaneous orders—to more specific features—typical of specific spontaneous orders. In my view, these lines of inquiry are now yielding important and promising results.

Second, an even broader generalization can be attempted. This entails constructing a general theory of spontaneous social phenomena which takes simultaneous account of orders of actions and the evolution of institutions. In this case, however, it is not enough (Hodgson and Knudsen, 2006) to extend the theory of self-organization (i.e. the theory of the spontaneous order of actions). Further steps are necessary, such as constructing just one unified invisible-hand explanation. For some interesting attempts in this direction—that is, attempts to make the (Hayekian) theory of spontaneous evolution of institutions and the (Hayekian) theory of spontaneous order of actions not simply "compatible" but also "interdependent"—see Schmidtchen (2000), Gaus (2006) and Postema (2011).[19] Bernstein (2009) offers a more general attempt that focuses on the idea of distinguishing between direct and indirect self-reinforcing processes (feedback loops) at different time scales. That model involves putting the parameter of time back at the center of the analysis. Bernstein (2009, p. 33) writes that:

> there are situations in which many layers of feedback operate at once … . If a process is self-sustaining, it does not necessarily have to be self-sustaining only in a single way, but may be self-sustaining in multiple different and unrelated ways simultaneously; … by sustaining and being sustained by the same process, these different and unrelated feedback loops can therefore be seen to reinforce each other.

These attempts are indeed fundamental and stimulating, and they warrant consideration and critical discussion; they partly go beyond Hayek. In my view, this second route, unlike the first, is still in its infancy.

Third, a still greater challenge is posed by the question of whether—and how—one might devise an even more general theory of spontaneous phenomena that would cover both natural and social phenomena. Unlike the first two, this third undertaking is perhaps impossible, owing to a basic problem (Portugali, 2012): while in material systems the parts are simple and obviously non-intentional (atoms, molecules, etc.), in social systems the components involved are complex, purposeful, and active agents. As Hayek (1967, p. 76) writes: "Societies differ from simpler complex structures by the fact that their elements are themselves complex structures."[20]

NOTES

1 Unintentional consequences of human actions (i.e., consequences that diverge from the individuals' intentions) make it impossible to reduce social theory to mere questions of psychology (Hayek, 1952; Popper, 1945). The central questions which the social sciences address arise precisely because the intentional activities of individuals generate forms of regularity that are not foreseen, nor intended by any of them (Moroni, 2012).

2 "Emergent properties" stand in contrast to "aggregate properties": emergent phenomena depend on the constituent parts but are *irreducible* to them (Polanyi, 1958; Popper, 1972); the idea of emergence suggests that reality is stratified (Lewis, 2011; 2012); it entails genuine novelty (Foster and Metcalfe, 2012). Of particular relevance to the following discussion is Martin and Sunley's (2012) study on different *levels* of emergence in the social sphere.

3 "Invisible-hand explanations" take account of the formation of an "ordered" phenomenon not presupposing the presence of an "ordinator." Invisible-hand explanations therefore often supplant visible-hand (i.e. conspiracy-type) explanations, inferring *complex* and *indirect* cause-and-effect relations in the place of more *simple* and *direct* ones (Nozick, 1974, pp. 18-22; 1997, pp. 191-197). Invisible-hand explanations often contain an element of "surprise" (Ullmann-Margalit, 1978).

4 As many have pointed out, there are doubts as to whether Hayek's idea of group selection is actually compatible with the methodological individualism that he initially

professed; interesting as this point is, I shall not deal with it here (see Moroni, 2005, pp. 87-113).

5 The notion of *conjectural history* was first introduced by Dugald Stewart: "In examining the history of mankind […] when we cannot trace the process by which an event *has been* produced, it is often of importance to be able to show how it *may have been* produced" (Stewart, [1793] 1829, p. 31). "To this species of philosophical investigation … I shall take the liberty of giving the title of *Theoretical* or *Conjectural History*" (*ibid*., p. 32).

6 On the contention that this is still an invisible-hand explanation even if it is of a very particular (functional-evolutionary) kind, see in particular Ullmann-Margalit (1978). See also Heath (1992).

7 Here are three of Ferguson's ([1767] 1995) verdicts on commercial societies (characterized by the division of labor) that are polar opposites of Hayekian assessments of the spontaneous order of the market. "In every commercial state, notwithstanding any pretension to equal rights, the exaltation of a few must depress the many" (*ibid*., p. 177). "The desire of profit stifles the love of perfection. Interest cools the imagination, and hardens the heart" (*ibid*., p. 206). "The separation of profession, while it seems to promise improvement of skills, ... serves, in some measure, to break the bands of society" (*ibid*., p. 207).

8 "It is evident that the first rudiments of morality, broached by skilful politicians, to render men useful to each other as well as tractable, where chiefly contrived that the ambitious might reap the more benefit from, and govern vast numbers of them" (Mandeville, [1714–23] 1997, p. 39). "By society I understand a body politic, in which man either subdued by superior force, or by persuasion drawn from his savage state, is become a disciplined creature, that can find his own ends in labouring for others, and where under one head or other forms of government each member is rendered subservient to the whole, and all of them by cunning management are made to act as one" (*ibid*., p. 137). I believe (cf. Petsoulas, 2001, pp. 78–106) it is difficult to maintain that in his *Dialogues Between Horatio and Cleomenes,* Mandeville (1729) later develops an authentic evolutionary theory of social institutions, as claimed by Goldsmith (1985).

9 This point was made clear by Menger ([1883] 1985, p. 172): "What Adam Smith and even those of his followers who have most successfully developed political economy can actually be charged with is not the failure to recognize the obvious significance of the study of history for the politician. Nor is it failure to recognize the just as obvious principle that various economic institutions ... correspond to various temporal and spatial conditions of economy. It is their defective understanding of the unintentionally created social institutions and their significance for economy. It is the opinion appearing chiefly in their writings that the institutions of economy are always the intended product of the common will of society as such, results of expressed agreement of members of society or of positive legislation. ... The result is that the broad realm of unintentionally created social structures remains closed to their theoretical comprehension." Notably, this passage from Menger—which many considered incomprehensible or erroneous—acquires significance as soon as we draw a distinction between the theory of the spontaneous evolution of institutions and the theory of the spontaneous order of actions. In short, the originality that some (e.g. Meek, 1971) have attributed to the development stage theory sketched out in Smith's *Lectures on Jurisprudence* is hard to detect at all (Pesciarelli, 1986).

10 Those who clearly recognize this distinction include Galeotti (1991, p. 288, p. 292), Streit (1997, pp. 39-42), Kasper and Streit (1998, pp. 147-52), Van den Hauwe (1998), Gloria-Palermo (1999, p. 33), Gaus (2006, p. 236), and Postema (2011).

11 Among those who clearly recognize this aspect, see Ottonelli (1995, p. 32), Vanberg (2001, p. 69), and Ioannides (2003).

12 At most (by taking the market to be a spontaneous institution) we can say that any deliberate intervention that aims to radically modify certain social institutions would jeopardize the inherent capacity for stabilization and orientation they may have acquired over time (Leoni, 1961). On this, see Vanberg's (2001, pp. 78-80) discussion about "constructivistic rationalism I" (the view contested by the Hayekian critique of the central planning of economic activities) and "constructivistic rationalism II" (the view contested by the Hayekian critique of abstract institutional design).

13 Observe that to say that certain rules are selected because they contribute to the formation of beneficial spontaneous social orders (as Hayek does) does not reduce the *difference* between the two theories: it simply elaborates *one of them*, namely the theory of spontaneous evolution of institutions.

14 On the obstacles to applying the idea of "evolution and selection" to competition *within* the market, see Elster (1989, chapter 8).

15 Further elaboration on the difference between evolution *in* a market system and evolution *of* market systems themselves can be found in Potts (2007). See also Witt (1995).

16 Even those commentators who appreciate the distinction between the two theories (such as Barry, 1982; Galeotti, 1991) do not seem to have grasped how important it is. Alternatively, as happens in Kirzner (1992, pp. 163–179), they arrive via tortuous paths (after erroneously assuming that the two theories describe an identical mechanism). Those who to my mind clearly grasp the issue at hand include Klein (1997), Schmidtchen (2000, p. 34), Petsoulas (2001, pp. 12-52), Gaus (2006, p. 236), and Postema (2011). Another author who recognizes the distinction between the two theories with sufficient clarity is Kley (1994, p. 21). The differences between Kley's approach and my own are as follows: first, Kley severs the two theories from each other to facilitate his critique (driven by a questionable hypercritical standpoint that is to my mind partially preconceived) of each one separately; whereas I divide them for the purpose of highlighting the importance and originality of both. Furthermore, Kley (1994, p. 158) maintains that the two theories collide; whereas I believe them to be perfectly compatible.

17 See also Prychitko (1994), Vanberg (2001, pp. 78-80; 2006) and Buchanan (2005, p. 31).

18 For further discussion of the similarities and differences between (two forms of spontaneous ordering such as) market and science, see Andersson (2008), Sutter (2009), as well as Hardwick and Marsh (2012).

19 On certain aspects—and with a more historical approach—see also Benson (2010).

20 For an interesting discussion of these issues, see Foster (2005). He writes: "Although physical, chemical, biological, social and economic systems that exhibit 'organized complexity' all share common properties, they differ in important ways" (*ibid.*, p. 875). Bhaskar (1998, p. 38) notes that "[s]ocial structures, unlike natural structures, do not exist independently of the activities they govern … . Social structures, unlike natural structures, do not exist independently of the agents' conceptions of what they are doing in their activity."

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