

SPONTANEOUS ORDER

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The concept of spontaneous order is an important framework in many fields of research in the natural and social sciences today, and it bears heavily on methodological problems related to economics in particular. In fact, all domains of scientific and philosophical research where it can be maintained intelligibly that an undesigned but nevertheless effective order has emerged solely through the interaction of the constituent parts of a given system and also through the interaction of this system as a whole with its environment fall under what is now often preferably called the "paradigm of auto-organization". This paradigm can be traced back to Leibniz (Dobuzinkis 1989, p. 245) or even to the Spanish Jesuits of the Salamanca School of the XVIth century (Lepage 1983, p. 347), and a lot of scientific work has now been done from within its conceptual framework, for instance Varela & Maturana's theory of "autopoiesis", Heinz von Foerster's second generation cybernetic models, Ilya Prigogine's thermodynamics of open systems and dissipative structures, and chaos theory. In economics, the concept of *social spontaneous order* is intimately linked with Friedrich Hayek's work, and Hayek has himself insisted on the effective kinship of such approaches (Hayek 1979, p. 158). One can say that there is today in economics a full-fledged Theory of Spontaneous Order (TSO) which articulates four distinct arguments.

- **The invisible hand thesis**

The first argument can be labeled *the invisible hand thesis* (Nozick 1974, pp. 18-22; but see also Nozick 1994, Ullmann-Margalit 1978, Rotschild 1994, Brennan and Pettit 1993). Hayek

distinguishes sharply between *cosmos* and *taxis*. The first term is used to refer only to natural systems that have emerged from evolution by natural selection and to social systems that spontaneously arose during human history. The second term is used to refer uniquely to those systems which have been deliberately planned. Because the latter have been engineered, they are the only ones that can be legitimately considered human artefacts, for they can be said to be products of the will. But the former cannot, for they owe their existence to the fact that, as systems of rules of conduct, individuals use them to coordinate their personal plans. Thus they bring about spontaneous social order without individuals being aware of the process leading to it and without these having explicitly intended to enforce such a resulting order (Hayek 1963 and Hayek 1973, Chap. 4).

This invisible hand thesis asserts that what is characteristic of social *institutions*, as opposed to *organizations* or forms of deliberate coordination of actions, is that they do not emerge out of individual awareness, deliberate decision or collective consent. As Hayek puts it, social spontaneous orders are just those that are "the results of human action but not of human design" (Hayek 1967b). This idea is in fact the convergent result of a long intellectual tradition inextricably intertwined with the reflexion on the nature and function of British Common Law. Each in turn, Bernard Mandeville, Adam Ferguson, David Hume, Josiah Tucker, Dugald Stewart, Thomas Reid and Adam Smith have contributed to articulate the general idea of spontaneous order. Hayek borrows from Adam Ferguson a formula which became widely known largely due to him: "nations", writes Ferguson, "stumble upon establishments, which are indeed the result of human action, but not the execution of any human design" (Ferguson 1767, p. 122; Hayek 1967).

The idea of a spontaneously emergent order is also at work in David Hume's *Treatise of Human Nature*, (Hume 1739, Book III, Part I) where, arguing against Hobbes's constructivist rationalism, Hume gives a penetrating exposition of how moral rules come into existence. But

this very idea is perhaps fully grasped and exposed for the first time in Bernard Mandeville's famous *Fable of the Bees* (Mandeville 1723), which presents itself at first glance as a vindication of egoism, self-interest and individual passion but which is rather meant as a broad metaphorical argument showing how, because private vice sometimes produces public virtue, a coherent social order can unexpectedly result from innumerable independent actions. Hayek says of Mandeville that "for the first time [he] developed all the classical paradigmata of the spontaneous growth of orderly social structures: of law and morals, of language, the market and money, and also the growth of technological knowledge" (Hayek 1978, p. 253). Adam Smith's views on the workability of an efficient social and economic order are closely akin with those of Mandeville. Indeed, for Adam Smith the observable division of labor is not "originally the effect of any human wisdom, which foresees and intends the general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence, of a certain propensity in human nature which has in view no such extensive utility: the propensity to truck, barter and exchange one thing for another" (Smith 1776, p. 25).

This classical tradition of economics was revived by the Austrian School of Economics which arose during the marginalist revolution. Carl Menger, the founder of that school, has had a tremendous methodological influence because of the role he played in the "*Methodenstreit*", a crucial dispute in which he opposed Gustav Schmoller, head of the new German Historical School (Menger 1883). Menger insisted that we conceive of economics as a fully theoretical or nomological science, fully comparable to Newtonian mechanics. He advocated for economics what he called the "compositive-resolutive method", which holds that while it may be legitimate to refer to societies as intricate wholes, such emergent aggregates must always be further analysed and explained in terms of lawful individual action. Menger argued that economics had to explain how thousands and thousands of individual actions could give rise to *organic* institutions like money, language, markets and legal systems. The aim of social science as a whole, according to Menger and his Austrian followers up to Hayek, was to discover the

regularity patterns of those institutional realities, patterns related to the obvious empirical fact that those institutions all served the common human welfare without ever having been designed by any benefactor and, for that reason, without ever having been deliberately created by a common will. For Menger, money was without a doubt the paradigm example of an institution emerging as a spontaneous order. The explanations of such institutional regularities have been commonly characterised from Adam Smith onwards as "invisible hand explanations", since they give justification for the existence of those processes by which "man is led to promote an end which was no part of his intention" (Smith 1776, p. 456). It can be said of the invisible hand thesis that it "merely claims that a social order will emerge from the spontaneous actions of individuals without the necessity for an all-powerful central institution" (Barry 1985, p.146).

- **The thesis that society is not a super-brain**

The second argument of TSO claims consequently that society as a whole has to be modeled as a system that has no proper center of operation: the more numerous the interacting component parts of that dynamic system, the more cohesive, robust and productive will be the social order it implements. According to TSO, the quality of a social order, its efficiency and endurance, are a direct function of the amount of reliable knowledge that millions of individuals living together are capable of using in making their own personal decisions. The more rapidly they can exchange reliable information between them, the more they can increase their understanding of the situation in which they find themselves and, for that matter, the more *coordination* they produce between themselves. This second ingredient of TSO is linked in Hayek's system of thought with considerations deriving from Michael Polanyi's philosophical reflexions.

Polanyi argues for the primacy of "tacit knowledge" over propositional knowledge. He gives prime importance to practical knowledge over theoretical knowledge, and priority to personal knowledge over the bookish sort. This epistemological argument amounts to saying that in all social sciences, one has to start from the fact that the building blocks of the structures whose functions we have to explain are human individuals possessing a certain amount of information which will cause them to act as they decide. But this knowledge is not representational for any individual. Rather, it presents itself as skills, acquaintances or other kinds of personal knowledge, that is, as diverse rule-governed practices that individuals master up to a certain degree, some being innate but many others being acquired through education or by cultural transmission. Most of this knowledge, formed by sets of unconsciously acquired rules of perception and action, is said to be "tacit" because it is usually doomed to remain more or less inarticulate and not explicitly formulated.

The best example of this is perhaps linguistic knowledge. Most humans can speak a natural language and have mastered its grammatical rules more or less well, but few have studied these rules at a theoretical level (Hayek 1967c, p. 45). The kind of knowledge TSO focuses on is incorporated into very different systems of rules of perception and conduct. But while the invisible hand thesis settles the question of how those rules are made to exist and how they come to constitute a social order, it does not say a word about the way those rules work in a given community. This is the problem which is being addressed with this second argument. For two distinct typical models are possible here: either those rules exist in a central organ which transmits the proper information from the center to the periphery, or they exist by way of being dispersed among individuals forming a group. It is crucial to grasp "the difference between an order which is brought about by the direction of a central organ such as the brain, and the formation of an order determined by the regularity of the actions towards each other of the elements of a structure" (Hayek 1967a, p. 73). Michael Polanyi's dichotomy opposing monocentric to polycentric forms of order (Polanyi 1969) is quite illuminating here. Finally, as

Hayek insightfully remarks, "(S)uch spontaneous orders as those of societies, although they will often produce results similar to those which could be produced by a brain, are thus organized on principles different from those which govern the relations between a brain and the organism which it directs. Although the brain may be organized on principles similar to those on which a society is organized, society is not a brain and must not be represented as a sort of super-brain, because in it the acting parts and those between which the relations determining the structure are established are the same, and the ordering task is not deputized to any part in which a model is preformed" (Hayek 1967a, p. 74).

- **The cultural evolution assumption**

The third component of TSO is the empirical conjecture that there exists a cultural evolution process at work in human history. The *cultural evolution assumption* evokes a process akin to the Darwinian natural selection of species but of which the units are competing moral traditions. If, in order to explain anything about the functioning of the social order at any one time, one is to assume that sets of collective rules of perception and conduct like those alluded to are at work, then one has to ask not only how those rules operate but first of all where they come from and why they keep functioning over time. The only legitimate answer to this crucial question seems to require that we take an evolutionary stance, even if one can challenge the idea that the mechanism implied here is really of the Darwinian kind (Rosenberg 1992). What seems to be clear enough is that the rules of action followed by individuals in specific contexts have been selected for, and they have been enforced in virtue of the effects that they have on the formation and subsequent upholding of the social order itself. TSO then necessarily has to incorporate an explanation of cultural evolution, that is, of the selection of the rules of perception and action of just those organized groups of human beings which predominantly survive and outgrow all the others.

Natural languages, common law and markets are for Hayek, as they already were for Menger, the best examples of such traditional rules. The origin of such institutions absolutely cannot be traced back to a decision of a single or collective mind. Markets in particular are not the kinds of things humans manage to create by way of central planning. Markets do not emerge as the constructive results of the rational actions of a designing mind. Markets are nothing but the process itself of coordination between individuals. "It is evident", insists Hayek, "that this interplay of the rules of conduct and of the individuals with the actions of other individuals and the external circumstances in producing an overall order may be a highly complex affair. The whole task of social theory consists in little else but an effort to reconstruct the overall orders which are thus formed...It (is) also clear that such a distinct theory of social structures can provide only an explanation of certain general and highly abstract features of the different types of structures...Of theories of this type economic theory, the theory of the market order of free human societies, is so far the only one which has been developed over a long period" (Hayek 1967, p. 71-2).

The hypothesis of cultural evolution assumes that human groups are in competition with one another. Human groups throughout history have been seeking to adapt themselves in order to survive, reproduce, and if possible grow, expand and spread abroad. What ties individuals together in such cultural groups are the practical rules they unconsciously follow, and one cannot explain the predominance of some groups except by appealing to cultural selection, that is, to the survival of the fittest. These sets of rules supervene on groups that get selected so that it can be said that the groups are selected *for* their rules (Hayek 1988). This is why the most far reaching methodological consequence of the adoption of TSO in economics is perhaps that it forces the theoretician to seek a diachronic rather than a synchronic understanding of the phenomena under study. Hayek makes it clear that "...(T)he existence of structures with which the theory of complex phenomena is concerned can be made intelligible

only by what the physicists would call a cosmology, that is, a theory of their evolution." He adds: "The problem of how galaxies or solar systems are formed and what is their resulting structure is much more like the problems which the social sciences have to face than the problems of mechanics; and for the understanding of the methodological problems of the social sciences a study of the procedures of geology or biology is therefore much more instructive than that of physics" (Hayek 1967a, p. 76).

- **The pre-eminence claim regarding the market economy**

The presentation of TSO would not be completely articulated if we did not state the normative argument that is essentially tied to it. One can surely try to maintain that no moral value judgement is really at stake here (Gray 1984, pp. 33-4 and pp. 118-125) but it is difficult not to see that TSO serves to support a *pre-eminence claim regarding the market economy*. It has already been said that Hayek opposes the form of order that results from an emergent evolutionary process to the one that is "rationally constructed" by human beings, for example legislators. On that basis, TSO serves indeed to counter the arguments of "constructivistic rationalism" (Hayek 1973, pp. 8-11; Hayek 1979, p. xii). TSO undeniably includes as one of its core elements the thesis that market economies are superior as social orders to all centrally planned economies.

Preferring the term *catalaxy* to refer to market economy considered as a rule-based process, Hayek claims that this economic system has to be considered fully as a social spontaneous order because it is an evolutionary and undesigned process based on the price mechanism and the general rule of law. Consequently, the resulting social order is never intended as such neither controlled by anyone, but it surely can be said that the consequences of the actions of each and every individual taking part in the process are necessarily accounted for in its

aggregate result. TSO thus gives ground not only to an argument in favour of free market economy but also against the very essence of the Welfare State, and especially the Welfare State of the Keynesian brand (Hayek 1995).

Basing himself on this shrewd analysis of catallaxy, Hayek puts forward the normative claim that it manifestly forms a social order which is far superior to any kind of state-governed social order. Hayek speaks here not only of an economic superiority in terms efficiently allocated resources but also of an ethical and political superiority in terms of the quality of life that such a free market-based social order renders possible for the large majority of individuals. Hayek always maintained as a core thesis of his economic theory and of his political philosophy that a socialist economy, that is, a social order generated by an interventionist state, will necessarily lead to such undesirable results as limits to human rights and liberty — if not , sooner or later, to complete serfdom (Hayek 1944, Hayek 1988).

The error of constructivistic rationalism is to take it for granted that a designed economic order will be necessarily superior to an undesigned one because it will be formed by and based on Reason. But, as Hayek points out, Reason itself is the product of evolution and should not be seen as capable of planning and directing evolution. More than that, economic planning by itself does not create order if by "order" we mean, with Hayek, "a state of affairs in which a multiplicity of elements of various kinds are so related to each other that we may learn from our acquaintance with some spatial or temporal part of the whole to form correct expectations concerning the rest, or at least expectations that have a good chance of being correct." (Hayek 1973, p. 36). Human reason, and especially the individual minds of a small group of people, as inspired, wise, knowledgeable and thoughtful as they may be, cannot by itself achieve an order that would be better than the one from which rationality itself progressively emerged. "On the contrary, by disturbing the regularities based on impersonal rules which are the product of evolutionary learning, rationalist social engineering results, if

not in chaos, at least in unworkable or unnecessary coercive organizational structures" (Dobuzinskis 1989, p. 243).

Hayek has stressed as a central fact that in an undesigned or spontaneous social order, the economic knowledge globally available at one time is being used more efficiently than in a centrally planned social order. As John Gray puts it, "(A) spontaneous social order can utilize *fragmented knowledge*, knowledge dispersed among millions of people, in a way a holistically planned order (if such there could be) cannot." (Gray 1984, p. 28). Hayek was the first one to analyse from the economic point of view the use of knowledge in society (Hayek 1937). This reflexion played a crucial role in Hayek's transformation during the mid-thirties (Caldwell 1988).

Thus TSO ultimately presents itself as an epistemological refutation of socialism. Some will plead that TSO is value-neutral, the concept of order being a descriptive and not a normative one. "It is in this way, as a value-free explanatory device, that I believe Hayek's idea of spontaneous order is to be understood. This interpretation foreswears the device of building into spontaneous-order explanations a definite moral content...which would disallow an explanation of statism as a spontaneous formation." (Gray 1984, p.121) Of course, TSO supports quite evidently the idea of liberty, even if liberal order is not a necessary terminus or an ineluctable consequence of cultural evolution. But more to the point, TSO serves to support the general argument that market economy is largely superior as a social order to any kind of planned economy. Catallaxy is held to be pre-eminent because it is more efficient, and it is said to be more efficient because it is alleged that no central political organism can adequately replace or even simulate the market pricing process. Hence, a full-fledged spontaneous social order will always be economically preferable to a full-blown collectivist planned one. This is surely Hayek's understanding of what the whole socialist calculation debate was about (Hayek, ed. 1935; Hayek 1940). TSO avowedly claims, not only on moral but first of all on logical and

empirical grounds, that a resolutely interventionist state is bound to fail as the source of social and economic order: it will not only lead progressively to serfdom, but it will also ultimately cause the unavoidable collapse of the economy.

This fourth and last argument has to be considered not only as an integral part of TSO, at least from the Hayekian standpoint, but as its boldest claim. But it is also probably its most challengeable argument and it has indeed been submitted to criticism (for instance Dobuzinkis 1989, De Vlieghe 1994 and Steele 1994). It seems that if one adopts Hayek's evolutionary perspective, one cannot prove that a social order based on market processes is obviously superior: "If anyone assumes an evolutionary point of view, where the individuals have a severely limited knowledge about the environment and their own rules of conduct, there is simply no room for saying that anything similar to optimality exists in Hayek's world" (Petroni 1995, p. 119). Indeed, if social and economic orders are plainly contingent, that is, if they are the unintended and unforeseeable products of evolution in a struggle for the survival of the fittest traditions, then the question of which is the optimal one is empirically undecidable because we cannot predict which one will outlast all others. If this holds, then advocating that market economies and liberal orders as we now know them are, on an absolute scale, the best social traditions there can be is an untestable, thus a normative claim, and it should be considered as the expression of an ideological preference.

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