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Philosophical Papers and Reviews

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**Hayek's concept of orders in relation to technicism
and neo-liberalism**

Petrus Simons

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Review

Hayek's concept of orders in relation to technicism and neo-liberalism

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Since the 1970s, neo-liberalism has become a key ideology driving the global economy. It originates in the liberalism of enlightenment thinkers, neo-classical economics (marginal utility) and a resistance to totalitarianism. In 1938 a colloquium of prominent economists/philosophers, discussed how 19th century liberalism could be renewed without a naturalistic 'laissez-faire' approach. From 1944, with the publication of "The road to serfdom" till almost the end of his life, Hayek expounded and developed key thoughts of the colloquium, such as the market economy or, in his words, catallaxy, a spontaneously evolving order, based on private property, subject to general rules of conduct, but not to state control. Its actors seek to maximise their income, albeit on the basis of fragmentary, dispersed, knowledge. Thus, Hayek's thoughts have contributed to the emergence of neo-liberalism during the 1980s and following years as a set of policy prescriptions guiding international organisations such as the international monetary fund (IMF) etc. as well as many nations. Neo-liberalism should be seen in relationship with technicism, an ideology of progress through science and technology. Since the renaissance and the enlightenment, technicism has become a pervasive influence on the whole of Western culture to the extent that it is hardly noticed. Neo-liberal policies have been acting as a catalyst of technicism, especially through global free trade. This study aims at identifying three weaknesses in Hayek's thinking, especially as expressed in his concept of three orders: catallaxi, taxes and cosmos: the theory of the catallaxi shows an imprint of technicism, especially in the form of an automatically working price mechanism and the construction of rules for the catallaxi; he has failed to appreciate problems such as the trend towards the formation of monopolies/oligopolies, based on expensive new technics, and its adverse environmental impacts. The latter cannot solely be solved through the price mechanism; the ordering of the market society by rules developed by experts might not be conducive to freedom. An alternative view of a free society is inspired by the order of taxes and the principle of sphere sovereignty developed by reformational philosophy.

Key words: Hayek, market society, price mechanism, neo-liberalism, orders, catallaxy, taxi, freedom.

INTRODUCTION

Friedrich von Hayek (1899 to 1992), was a key economic, political and philosophical thinker. This article attempts to

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characterise his philosophic concept, especially with respect to its influence on modern trends such as neo-liberalism, globalisation, the power of transnational corporations (TNCs) and free trade partnership agreements. Politically, Hayek denounced socialism and defended classic liberalism as advocated by John Locke and, particularly, by thinkers of the Scottish enlightenment such as David Hume, Adam Smith and Adam Ferguson. However, he did not agree to majoritarian democracy. His basic view was that progress should be achieved by what he called the extended or spontaneous order of a market society, not impeded or distorted by state interference, and originating in private property owned by individuals. Pursuing their own ends, they use whatever knowledge they can find, conveyed to them mainly by price signals and, thereby, help maintain and extend the order for the benefit of all in an evolutionary process. Thus, Hayek provided an evolutionary version of Adam Smith's invisible hand. Over the whole period of 1944 to 1988 Hayek's basic concept did not change.

The heritage of the renaissance and the enlightenment involves also the ideology of technicism, the basic idea of which is that all problems may be solved by means of science and science applied in technics on the way towards progress. The implementation of neo-liberal policies during the 1980s, in particular the introduction of global free trade policies, has had the effect of making neo-liberalism a catalyst for technicism, especially through large-scale specialist manufacturing and trade.

This paper starts by setting out what is meant by technicism and neo-liberalism. It then turns to Hayek's concept of 'order'. He elaborated this in 'The sensory order' (1952a), which deals with basic issues of psychology. In an order, elements are arranged in a particular way by a set of rules. The paper then critiques the concept of three orders: catallaxy or the order of a market society, the order of taxes (organisations) and the cosmos or nature, and identifies three problems:

1. The catallaxy overwhelms the order of taxes and, thereby endangers liberty.
2. Hayek fails to deal with the problems caused by technical-economic power accumulating in the hands of a few.
3. He has not spotted the impossibility of preventing environmental degradation by the price mechanism alone.

Despite an apparent lack of interest in technology, Hayek regularly invokes the price mechanism, and cybernetic feedback systems, suggesting a mechanistic or technicistic understanding the 'spontaneously evolving' market order.

This leads up to the question how reformational philosophy should respond to neo-liberalism as advocated by Hayek, amongst others. One way is to apply the principle of sphere sovereignty to Hayek's order of taxis.

No part of society should be considered more important than another. The development of technology in conjunction with the economic ordering, that is, the business sector, should serve the rest of society rather than be its master.

TECHNICISM

Technicism is part of the ethos of modern western culture. It is characterised by an image of the world as a machine. Egbert Schuurman has analysed technicism extensively. His definition is:

Technicism is the pretension of humans, as self-declared lords and masters using the scientific-technical method of control, to bend all of reality to their will in order to solve all problems, old and new, and to guarantee increasing material prosperity and progress. By means of their technology humans want to control and safeguard the future. This technicism answers to two important norms as though they are the two great commandments: the norm of technical perfection or effectiveness and the economic norm of efficiency. In other words, by means of the scientific-technical method of control the stated goals must be reached as directly and efficiently as possible. The entire technical progress, therefore, is clearly set within a narrow framework. Everything outside that narrow framework is denied recognition. This concerns the value of nature and the distinctive character of plants and animals. Such norms as that of appreciation, care, love, harmony, doing justice, and so forth are, accordingly, discounted (Schuurman, 2003:69).

Technicisation is the process whereby plants and animals, to mention just these, are increasingly turned into technically performing units. Technicism and technicisation have been changing the world to such an extent that it is appearing like a ship that directs its own course on the basis of its own mass, as physicist Werner Heisenberg once put it:

Humankind having arrived by its apparently unlimited expansion of material power in a situation similar to that of the captain of a huge ship made of iron and steel such that the needle of the compass pointed to the ship itself rather than due North' (Schuurman, 2014:81,82; my translation).

Clearly, people generally will not state that they are technicists. It functions rather as a hidden ideology. However, it is possible to find its signs in the way people think, write, form policies etc. Since Western culture as a whole is marked by technicism, institutions, thinkers, policy-makers tend to share its values and its utilitarian ethics. Hans Sachsse has identified technicism in the works of various key philosophers from the time of the

renaissance in the 15th century, which inspired the belief 'that all of life's problems can be solved by means of a scientific-technical change of the world' (my translation). Leonardo da Vinci proclaimed that mechanics is the paradise of mathematics (Sachsse, 1978:180).

Descartes drew a distinction between a *res cogitans* and a *res extensa*, with a paradigm that the latter is populated by machines or automatons and forms the material for the former. Nature is a machine. With the enlightenment such technicism became part of the public mind, especially as the industrial revolution began. Kant saw a sharp contrast between humans and nature, with the former as rulers over the latter. Even knowledge had to be constructed. He interpreted thinking as a technical performance.

Fichte continued in this vein by drawing a distinction between the I and the non-I, which depends on the I. The world needs to be made, even god. It is an apotheosis of man, albeit a 'homo faber'. Similar thoughts of technically fashioning or refashioning the world Sachsse found in Hegel and Feuerbach (Sachsse, 1978: 191-197). As expressed by Heisenberg's metaphor, technicism has become a dominant feature of our culture. The question to be asked is in what way, if any, Hayek's thinking might have been influenced by technicism or have contributed to it? He came close to denouncing it when he referred to Descartes as the one who had formulated the basic idea of 'constructive rationalism', meaning that 'human institutions will serve human purposes only if they have been deliberately designed for these purposes' (Hayek, 1973a). However, his misgivings concerned the attempt to design or re-design human (legal) institutions rather than a possible misuse of scientifically designed technics.

NEO-LIBERALISM

Given that there is a close relationship between what is technical and what is economic in our culture, neo-liberalism, which has been a powerful influence on politics and economics since the 1970s, might suggest an answer as to Hayek's position with regard to technology and or technicism.

A SYSTEM OF FREE MARKETS

Classic liberalism, as a view of society in which individuals are free to pursue their own ends on the basis of private property with the state's task seen as defending private property and taking care of public goods such as defence, basically *laissez-faire*, was substantially modified, if not abandoned, in the late 19th and 20th centuries by the introduction of social welfare, and particularly since the great depression of the 1930s by policies designed to secure full employment and protection of trade unions, which contributed to or were responsible for higher

inflation and/or balance of payments problems for many countries during the 1980s.

Politicians like Margaret Thatcher in the UK and President Ronald Reagan in the USA began to implement policies of deregulation, reducing the influence of trade unions, reducing social welfare and privatising publicly owned corporations and institutions. Other countries followed suit. Thatcher referred to Hayek's "The Constitution of Liberty" as a basis for her policies. In 1985, international bodies such as the international monetary fund (IMF), the World Bank and the organisation for Economic co-operation and development (OECD) adopted policies that were based upon what became known as the Washington consensus. It is crystallised in the following "ten commandments", as adapted from Ziegler (2004: 20):

1. Run small fiscal deficits or preferably fiscal surpluses.
2. Convert state subsidies into expenditures on health, education, and infrastructure.
3. Have a large tax base, but low marginal rates of income tax.
4. Let interest rates be determined by international financial markets.
5. Float foreign exchange rates.
6. Abolish all barriers to international trade (tariff as well as non-tariff).
7. Encourage foreign investment.
8. Reduce the public sector, as the private one is more efficient.
9. Deregulate and implement flexible labour markets.
10. Strictly enforce private property rights.

FROM THE 1938 COLLOQUIUM TO THE MONT PÈLERIN SOCIETY

The ground for this approach had been prepared since 1938 when Walter Lippman convened a colloquium in Paris in between twenty six philosophers, key officials, and economists, including Hayek and Wilhelm Röpke, as described by Dardot and Laval (2009).

Lippman considered that the classic liberalism of the 19th century, based upon natural law principles, had become sterile and dogmatic (*laissez-faire*) and, therefore, unable to deal with the challenges posed by the introduction of social welfare, progressive taxation, state planning and intervention in various forms to deal with the major depression of the 1930s, the emergence of the Soviet Union and fascist states such as Nazi Germany and Italy.

The discussions showed a major divergence between the likes of von Mises, Hayek, Rueff and L. Robbins, who argued that the problems had been caused by political interference with the self-correcting price mechanism, a betrayal of the principles of classic liberalism, and others, including Röpke, who believed that the concentration of

large industrial enterprises marked by production on the basis of fixed costs had destroyed competition.

Such differences notwithstanding, the colloquium managed to formulate a neo-liberal view of the world. Louis Rougier argued that the established economic and social order should not be seen as a natural, given, order. On the contrary, liberalism should be seen as progressive in the sense of a perpetual adaptation of the legal order to scientific discoveries, progress made in the organisation and technique of economics and changes in the structure of society. He used cars as an example. They should not be able to drive in whatever direction or at what speed they want, which would cause incessant accidents, nor should an authority determine for every car when it could enter which trajectory. No, it would impose a road code that would take into account the type of vehicles to which it applied (Dardot and Laval, 2009).

The idea of the road code has become a keyword of neo-liberalism. Hayek used it already in his book "The Road to Serfdom" (Hayek, 1944) and in all his subsequent writings. The state should not interfere in the working of the price mechanism as such. Rather it should make sure that market participants operate by complying with general rules, almost without having to think about them.

Hayek's views are close to Lippman's, who believed the historic significance of neo-liberalism to be that of a true revolution, of "a capitalist and merchant economy extended to the whole planet, a capitalism that permanently upsets the (old) ways of life by turning the market into the 'sovereign regulator of specialists in an economy based on a very specialised division of labour' " (Dardot and Laval, 2009). This capitalist system requires a permanent adaptation of people and institutions to an economic order which is intrinsically variable (Dardot and Laval, 2009).

After World War II, Hayek continued the work of the colloquium by organising in 1947 the Mont Pèlerin Society, which annually convened liberal economists. It now has about 5,000 members across the world. Similar discussions, but with much broader audiences have been held yearly in Davos. Around the world many think tanks have been set up to propagate the neo-liberal view of the world (Douérin, 2002).

PHILOSOPHICAL BASE

This view of the world turns the market into a unique model of human relationships. Laval notes:

The only conceivable human destiny is presented as an aspiration to material well-being, with humans themselves as indefatigable pursuers of their personal maximum advantage in all the circumstances of their existence, and without there being any domain of that existence that would not be subject to a striving for maximum individual satisfaction. The market has become the great absolute

signifier, source of all benefits and the way of solving all things bad, both public and private (Laval, 2007). Such a laudatio of the market could, *mutatis mutandis*, also apply to technicism. So, what is the relationship between these two –isms? Since what is technically produced must be traded and markets must be formed, I suggest that neo-liberalism functions as a catalyst for technicism.

This is shown, for instance, in its emphasis upon free trade, which should extend across the globe so as to enable the highest degree of specialisation of agriculture, manufacturing and the provision of services and, hence, a maximisation of profits. Imports of cheap industrially produced foodstuffs tend to push small subsistence farmers from their land into urban pools of labour available to international business corporations. Often, the farmers and their ancestors had managed to grow food in a way that preserved the ecology of their area (Dufumier, 2004). Business competes not only on the basis of cheap labour but also, and importantly on the basis of scientific technical innovation.

Characteristics of neo-liberalism

In order to enjoy the full benefits of the price mechanism, there should be unfettered competition between all market participants, including wage earners. Indeed, since all elements of society need to obtain the means for their material welfare, competition should extend to all. Dardot and Laval (Dardot and Laval, 2009), therefore, identify the following four characteristics:

1. Markets should be constructed. The state should intervene in order to construct a market economy that is based upon its own laws/rules (the road code).
2. Competition rather than exchange should be the general norm for economic practice. The state should make sure that all economic agents are able to compete freely.
3. The state itself should be subject to competition; otherwise it cannot be a proper guardian of a competitive market society. Private law that comprises the rules for competition should apply to the state and all of its organisations. The state is regarded as an economic enterprise, therefore, in all of its relationships, internally as well as internationally.
4. The universal rule of competition applies also to individuals in their mutual interaction (the I-enterprises), so that their individual capital may bear fruit (Dardot/Laval, 2009:457,458).

The combination of these tenets points to an over-arching importance of the market society. The idea that 'markets should be constructed' is a technicistic notion. It is a matter of debate as to whether Hayek would agree with all features of current neo-liberalism. He would not agree,

for instance, with many policies of central banks such as 'quantitative easing', as he believed that money should be provided from within the market system itself.

HAYEK'S CONCEPT OF PHILOSOPHY

Such reservation should inspire caution with regard to interpreting Hayek. It is necessary to attempt an outline of his view of the world, based primarily on his own writings. A brief biography may serve as an introduction.

Brief biography

Hayek was born in Vienna and studied economics, law, psychology, philosophy and political theory in Vienna under Fr. von Wieser, a prominent representative of the Austrian theory of neo-classical economics, earning a doctorate in law in 1921 and in political science in 1923. The well-known liberal economist Ludwig von Mises was one of his mentors. After serving in World War I, he worked briefly in a science laboratory, staining brain cells. From 1927 to 1931 he was Director of the Austrian Institute for Economic Research, and from 1929 to 1931 lecturer in Economics at the University of Vienna. From 1931 to 1950 he taught economic science and statistics at the London School of Economics. He was professor of Social and Moral Science at the University of Chicago from 1950 to 1962. He then returned to Europe where, from 1962-1968, he taught economics at the University of Freiburg. From 1969 to 1977 he was a visiting professor at the University of Salzburg. He returned to the University of Freiburg in 1977, where he stayed until his death in 1992. He published a range of books on economic theory from 'Prices and Production' (1931) to 'The pure theory of capital' (1941). During the 1930s/1940s his views on monetary theory and the causes of and remedies for the Great Depression differed markedly from those advocated by John Maynard Keynes (1883 to 1946). However, Keynes's views prevailed in terms of popularity and influence on post-war policy-making. In 1944 'The Road to Serfdom' established his reputation as a political thinker. In 1947, Hayek became one of the founders of the Mont Pèlerin Society. Since the 1940s Hayek published widely on how law, state and democracy would work together in a functioning market economy. The foundation of such ideas is set out in 'The Constitution of Liberty' (1960) as well as in the three volume work "Law, Legislation and Liberty (1973, 1976 and 1979). In 1974 he was awarded the Nobel prize in economics.

Intellectual biography

Bruce Caldwell (2004), has published a detailed account

of how Hayek developed his thinking over the course of his life. During the 1930s, for instance, he wrestled with the problems of economic equilibrium in relation to the dynamics of the trade cycle, the use of money in an economic system based upon capital investment and the attempts of contemporary socialists to show that a planned economy would not only be feasible but would also be superior to a market economy and its inevitable cycles.

In 1937 his thinking began to change when he discovered the importance of knowledge that is dispersed amongst the millions of individuals that participate in a market economy. This mirrors in fact the division of labour. Co-ordination of the plans of individuals whose knowledge may be insufficient or wrong is achieved through competition and freely adjusting prices as transmitters of information. To enable an efficient process of discovery it is also necessary to have 'a fuller set of institutions whose presence would create an environment that would least hinder the coordination of knowledge (Caldwell, 2004). Precise predictions are not possible in such a system. Pattern predictions are the best one can hope for. The next step came with the work on the foundations of psychology, the spontaneous order of the brain in 1952. In "The Constitution of liberty", published in 1960, Hayek combined the idea of spontaneous orders with evolution. This would remain a feature of his subsequent publications (Caldwell, 2004). The concept of spontaneous orders also raised his interest in cybernetics, systems theory and complexity theory that were developing in the late 1940s and 1950s, amongst others by Ludwig von Bertalanffy (Caldwell, 2004). Caldwell has given an overview of the exceedingly wide-ranging views of one of the 20th century's major thinkers about economic-social policies. The overview suggests that the concept of order was basic to Hayek's thinking. Despite the associated modifications of his economic views, he remained within the mainstream of neo-classical economics.

BACKGROUND IN NEO-CLASSICAL ECONOMICS

Neo-classical economic theory was developed in the 1870s and 1880s, independently, by William Stanley Jevons in England, Léon Walras (1834 to 1910) in France, and Carl Menger (1840 to 1921) in Austria. Menger's disciples included Friedrich von Wieser (1851 to 1926) and Eugen von Böhm-Bawerk (1851 to 1914). A key tenet of this school is that individuals are endowed with rights, enter freely into contracts, exchange goods and services in markets, respect property rights and are responsible for what they make, think and choose to do. In fact, only individuals think, act and have a conscience (Douérin, 2002). The theory abstracts from all social and class differences between individuals as well as their social situation, upbringing, etc. They are like robots

equipped with an algorithm to work out the purchases for the shopping basket by means of their marginal utility.

Marginal utility

Stonier and Hague (1953) define marginal utility, as follows:

In a market individuals will exchange money for units of any commodity, A, up to the point where the last (marginal) unit of A bought has a marginal significance in terms of money just equal to its money price. This marginal significance or value is entirely subjective.

Laval shows that the ground for its emergence in the late 19th century had been prepared over about 600 years as Western Europe moved away from christian economic precepts in favour of interests and passions as economic motivations. He concludes:

By substituting the satisfaction provided by the consumption of the last unit of a good for the general consideration of the utility of a good, the job of moral purification has been deepened. From now on, only the strict psychological and formally mathematical law of decreasing marginal utility is what counts (Laval, 2007).

Under the assumption that consumers maximise their utility and producers their profits, given relative scarcity of means available, marginal utility, and its counterpart marginal revenue for producers enable a mathematical determination of market equilibrium. Hayek stresses the importance of the theory of marginal utility for achieving economic prosperity both from the point of view of individual consumers and individual producers (1988:100). By maximising their 'utility', given incomes and prices, consumers signal to producers what their needs and wants are. As Hayek put it:

...only marginal utility theory brought real understanding of how demand and supply were determined, of how quantities were adapted to needs, and of how measures of scarcity resulting from mutual adjustment guided individuals. The whole market process then became understood as a process of transfer of information enabling men to use, and put to work, much more information and skill than they would have access to individually (Hayek, 1988). In 1952 Hayek points to recent progress made in economics as being 'particularly closely connected with the advance in subjectivism' and the new problems it has created such as 'the division of knowledge between people' (1952b: 33). The latter is the counterpart of the division of labour.

Modern technics

In general, Hayek's basic view is that with the

renaissance, western people became individualists such that the freedom they enjoyed led to great scientific advances and a rising standard of living (progress):

Only since industrial freedom opened the path to the free use of new knowledge, only since everything could be tried-if somebody could be found to back it at his own risk-and, it should be added, as often as not from outside the authorities officially entrusted with the cultivation of learning, has science made the great strides which in the last hundred and fifty years have changed the face of the world (Hayek, 1944).

Despite paying scant attention to the technical developments brought by progress, in 1960 he noticed their shadow-side, inasmuch as radio, TV, drugs and psychological techniques might curtail the freedom of the individual (Hayek, 1960).

Nevertheless, when demonstrating the working of markets and prices under free competition, Hayek uses the analogy of automatically working machines for the price mechanism inasmuch as it attains and maintains equilibrium between supply and demand. Thus, care should be taken to 'create a suitable framework for the beneficial working of competition', so that the mechanism would operate best (Hayek, 1944). Indeed, 'it is the only method by which co-ordination can be adequately brought about' when the division of labour is as complex as it is 'under modern conditions'. Tellingly, he notes:

'It enables entrepreneurs, by watching the movement of comparatively few prices, as an engineer watches the hands of a few dials, to adjust their activities to those of their fellows' (Hayek, 1944). Indeed, 'the more complicated the whole, the more dependent we become on that division of knowledge between individuals whose separate efforts are co-ordinated by the impersonal mechanism for transmitting the relevant information known by us as the price system' (Hayek, 1944).

This thought recurs through all of Hayek's publications after 1944. Thus, in his last book (Hayek, 1988) he refers to views that see Adam Smith as 'the originator of cybernetics' and notes: 'from the Scottish moral philosophers stem the chief impulses towards a theory of evolution, the variety of disciplines now known as cybernetics, general systems theory, synergetics, autopoiesis etc., as well as the understanding of the superior self-ordering power of the market system' (Hayek, 1988). Indeed, already in his work on psychology, he expresses a preference for the 'feedback principle' of cybernetics (Hayek, 1952b). In this light we may surmise that Hayek inclined towards technicism.

HAYEK'S ECONOMICS

In 1978 Hayek provided a popular view of his economics

in three lectures on Radio 4 (BBC, London). Individuals are guided by prices set by markets to find out what they ought to do in the interests of themselves and, thereby, in the general interest. They will change their behaviour if the market prices available to them leave no surplus over their costs.

This leads to long chains of substituting relatively cheaper products for those that have become relatively dearer. If some cannot make a profit anymore, they will adapt by buying cheaper inputs or by adopting a more efficient newer technology of production that, for example, requires less labour or raw materials. There is a constant adaptation to new circumstances. It is as if all parties in the market had before them the current results of a giant computer into which each of them, in the light of the figures before him, could feed his own offers and demands by pressing a few buttons.

He also compares the market to a telecommunication system.

The benefits of the division of labour would be lost if one attempted to guide production by central direction or through a syndicalist-corporate effort because it lacks an understanding that something which has never been deliberately designed, but has grown through a process of selective evolution, can achieve more than rational direction ever could. The only thing that is possible is a slow correction of the legal framework: 'to catch those external effects, which at present are not adequately taken into account'.

Asking why many do not approve of the operation of the market system, to which he believes we owe our wealth, Hayek refers to our inherited moral feelings, which demand that we consciously aim at benefitting other known persons. This is impossible in a market society where the beneficial effects of our efforts on other people are mostly unknown and cannot guide us: 'In order to do most good, the individual must let himself be guided by abstract and impersonal signs, and cannot consciously aim at the greatest gain for others but only at the greatest gain for himself and his associates'.

Hayek defended the right of trade unions to strike, provided they would not break contracts and did not commit the type of grave offences they had in Britain, with impunity. By raising the remuneration of their members unions deprived other workers of opportunities. The deleterious effect of this had been that 'the average level of real wages of the British workers has thereby been substantially lowered' by a reduction in their productivity.

By using their monopoly power, the unions had raised wages arbitrarily, so that relative wages no longer reflected the relative scarcity of the different skills. Only the impersonal signals of the market, in a process which nobody controls can indicate what the best way is of using people's talent. The market 'absorbs and digests all the bits of information possessed by all who trade in it'. The study notes a) the metaphor of a giant computer for

the intricate working of the market system of prices and b) the chain of substitutions carried out by producers. If externalities, as Hayek suggests, might be internalised into the pricing system, it should trigger such chains of substitution of more environment-friendly and more human-friendly materials for those that cause environmental degradation or climate warming.

Hayek's view of society

As a social and political thinker, Hayek had a distinct view of modern society, marked by three orders, a belief in progress through an evolutionary process and a strong aversion to totalitarianisms, whether socialist, communist, fascist or majoritarian democracy.

THE CONCEPT OF ORDER

The concept of order is central to Hayek's thinking. In his book on the foundations of psychology he describes its main features, as follows:

That the same order of events can be formed from elements of a very different individual character, can be illustrated from a great number of different fields. The same pattern of movements may be performed by a swarm of fireflies, a flock of birds...; the same machine, a bicycle or a cotton gin, a lathe, a telephone exchange or an adding machine, can be constructed from a large variety of materials and yet remains the same kind of machine within which elements of different individual properties will perform the same functions. So long as the elements, whatever other properties they may possess, are capable of acting upon each other in the manner determining the structure of the machine, their other properties are irrelevant for our understanding of the machine (Hayek, 1952b). An order, therefore:

involves elements plus certain relations between them, and the same order or structure may be formed by any elements capable of entering into the same relations to each other (Hayek, 1952).

Elements should be seen in relation to the advances in the physical sciences by which the sensible qualities of things have been steadily found to be things physical such as patterns of waves (colours and sounds):

the world of science might in fact be described as no more than a set of rules which enables us to trace the connections between different complexes of sense perceptions' (Hayek, 1952b).

Indeed, there are, according to Hayek, 'two different orders, a physical one, which is revealed to us through

natural science, and a phenomenal, or mental, or sensory order, which we experience as individuals' (Caldwell, 2004). Yet, the sensory order results physically from stimuli received by the central nervous system. The complexities to which this gives rise in what we know as mind is achieved by the central nervous system 'acting as a giant classification mechanism' (Caldwell, 2004). It is remarkable that Hayek's theory of the brain is being borne out by recent neurological studies (Caldwell, 2004).

In the social sciences: 'the true elements of the social structure are the individual concepts, the views which people have formed of each other and of the things'. A policeman will perform the same functions (elements), given the rules for his job, regardless of the particular person who fulfils the role (Hayek, 1952a). In terms of social orders, we must place 'the individual elements in the appropriate places':

In order to induce the self-formation of certain abstract structures of inter-personal relations, we need to secure the assistance of some very general conditions, and then allow each individual element to find its own place within the larger order (Hayek, 1988).

Three orders

Although the concept of order, or structure, applies to a wide range of things, Hayek focusses on three orders in particular when discussing social, economic and political issues.

The catallaxy or market order

A catallaxy is an order whereby subjects enter into contracts to exchange goods and services, in competition with others, via markets, using prices, and which grows or is extended spontaneously without human design or seeking to achieve particular ends. Given individual elements such as the preference of individuals for higher incomes or profits rather than for lesser, they will seek information (conveyed by prices) that will satisfy such needs. Given that numerous others are trying to do the same:

Every individual becomes a link in many chains of transmission through which he receives signals enabling him to adapt his plans to circumstances he does not know. The overall order becomes infinitely expandable, spontaneously supplying information about an increasing range of means without exclusively serving particular ends (Hayek, 1988).

Since a modern society is based on exchange, 'one of the chief regularities in individual behaviour will result from the similarity of situations in which most individuals

find themselves in working to earn an income' (Hayek, 1973a). A larger return tends to be preferred to a smaller one.

The catallaxy strives towards equilibrium from within, meaning that it comes about endogenously or spontaneously, like a biological organism. With reference to cybernetics Hayek dubs the catallaxy a self-organising or self-generating system. It is an orderly structure which results from the action of many people, albeit without having been humanly designed as such (Hayek, 1973b). How do we observe such an order? Our senses do not reveal it. Rather, we have to 'reconstruct it mentally by tracing the relations that exist between the elements. For this reason it is an abstract and not a concrete order' (Hayek, 1973b). Since such an order is not deliberately made it cannot 'have a particular purpose' (Hayek, 1973b). Hayek specifies the nature of 'abstract' by noting that spontaneous orders as such may not be abstract, but will often consist of a system of abstract relations between elements which are defined only by abstract properties which can be recognised only 'on the basis of a theory accounting for their character' (Hayek, 1973b). The order may persist even when all its elements or even the number of its elements changes (Hayek, 1973b).

Individual consumers and producers will have to make choices when operating in dynamic orders. They learn by doing. Whilst they may try to maximise, their choices might either help or frustrate such endeavour, thereby creating opportunities for other participants or otherwise (Hayek, 1973b). Hayek believes that he has found in dispersed knowledge a key to what makes for an advanced civilisation through a spontaneously growing catallaxy:

Yet it is the utilisation of much more knowledge than anyone can possess, and therefore the fact that each moves within a coherent structure most of whose determinants are unknown to him, that constitutes the distinctive feature of all advanced civilisations (Hayek, 1973b).

A spontaneous order

Will utilise the separate knowledge of all its several members, without this knowledge ever being concentrated in a single mind, or being subject to those processes of deliberate coordination and adaptation which a mind performs (Hayek, 1973b). The spontaneity of the order arises from its basic institution of private (several) property owned by individuals. Without private property the spontaneous or extended order could not exist and certainly not grow. Once individuals are free to deal with their property, they will also need markets, money and prices. Historically, the protection of several property, not the direction of its use by government, laid the foundation for the growth of the dense network of exchange of services that shaped the extended order (Hayek, 1988).

Importantly, competition is necessary 'to prevent abuse of property' (1988: 35).

General rules of conduct (the road code)

The concept of order requires rules that enable its elements to be arranged and to work as intended. In a catallaxy these should include institutions to enable demand and supply to function that is, markets, prices, money, information systems and rules of general conduct that prevent interference with private property, lest producers and consumers are unable or unwilling to maximise their utilities and revenues. The latter "delimit personal domains chiefly by the law of property, contract and torts, and the penal laws which protect 'life, liberty and property' " (1973a: 16). However, in democracies subject to majority rule particular interests tend to be favoured by successful candidates. To avoid such interference with the catallaxy, Hayek proposes a division of parliament into two bodies:

1. A special legislative body to establish general, abstract rules of conduct. Its members should be at least 40 or 45 years old, and be elected by those of that age group for a period of 15 years.
2. A body to oversee the organisation of government, the usual form of parliament, but without having the power to alter the rules of the other body (1973a: 18-22).

A constitutional court 'would be competent in the case of conflict between the legislature proper and the governmental bodies' (1973a: 21). Judges would continue applying the common law, given the general rules. Dardot and Laval note that with these proposals Hayek deviates from John Locke's liberalism in three major respects:

1. Economic relationships within the catallaxy are the foundation of society; the business enterprise is the key subject in this order. As it carries out its objectives it may clash with other enterprises, so that the judiciary will be called upon to arbitrate;
2. The constitution of the market order is removed from natural law, so that legal rules are identical to the private civil and criminal law, and form the basis of a society ruled by private law;
3. The state should subject itself to the rules of private law (Dardot and Laval, 2009).

Hayek has come to this position through his opposition to 'constructivism', meaning attempts to re-design society by the central direction of a rational ordering mind or socialism, as advocated by Rousseau, following Descartes. In his view reason is created by culture and evolution:

So far as scientific explanation is concerned, it was not

what we know as mind that developed civilisation, let alone directed its evolution, but rather mind and civilisation which developed or evolved concurrently. Mind consists more in the capacity to restrain instincts (1988: 22).

In fact, the catallaxy was able to grow because moral rules and customs progressively displaced innate responses and 'exceeded anyone's vision' and allowed 'more effective collaboration, so that its members were enabled, however blindly to maintain more people and to displace other groups' (1988: 23). Attempts to re-design society by central rational direction are bound to fail because they will require ever more areas to be brought under central control, with less and less success.

Taxis

A taxis is an organisation which is deliberately designed by humans so as to pursue particular ends, often according to a plan of action. Many organisations may be properly called 'economies' since they must obtain the means to survive if they are to attain their ends. They do this mostly by taking part in the catallaxy, apart from rare cases of organisations that are self-sufficient such as subsistence farmers. In my view, this is a very important order. An economy consists not just of individual consumers and producers, but also of families, schools, states, universities, hospitals, orchestras, churches, sport clubs, etc. Of course, one may call them individuals, but given that their well-being is tied up with the catallaxy and the latter depends in many ways upon their services, it is a pity that Hayek has not been able to elaborate the interactions between them more closely. This is also relevant from the point of view of technology. Ford (2015), has analysed the rise of the robots and their impact on society, especially the likelihood of growing and permanent unemployment. To blunt that impact he suggests a new economic paradigm, featuring Hayek's proposal for a guaranteed basic income (Ford, 2015).

Cosmos

In addition to the two social orders there is a natural order, which exists independent of human will, a cosmos, or 'nature'. It can, of course, be influenced by human actions.

The relationship between the orders

In Hayek's view, the state is an organisation that should not interfere with the catallaxy through central banks organising credit expansions or contractions, central planning, redistribution of wealth and incomes, progressive

taxation, social welfare or decisions favouring particular groups or individuals. If one wants to do something for those who are poor, then, one should use a market institution such as insurance. Little about how the catallaxy operates in relation to the cosmos was learnt. Yet, the participants in this order will use its resources, transform them through their technics, and deplete or pollute them. In theory such events might cause the participants to change their acts of consumption and production, especially if prices would reflect the changes involved. Hayek appears to assume that the price mechanism will automatically react to scarcities arising from a depletion of raw materials, pollution or the effects of climate change (the change of substitutions referred to under 4.5 above) and, thereby reverse them or encourage the development of alternatives. However, many changes will be irreversible or can only be reversed in processes lasting centuries.

THE CATALLAXY AS MIND OR BRAIN

As the catallaxy is a rationally devised construct even to the point of requiring a reformation of parliament to make it effective, it may be considered in analogy to the sensory order. It is driven by stimuli such as prices, new technologies or discoveries of new materials. The subjects acting in the order assess this knowledge and use it in their production and consumption plans. The results are conveyed back to the various hierarchies in the catallaxy in the form of profit and loss accounts, balance sheets, and prices of shares, thereby leading to adaptation of plans.

The overall concept

Hayek divides the world into a) things that are physical, including plants and animals, the order of the cosmos, and b) the social or moral human world, which includes the sensory order, the catallaxy and the various taxes or organisations. Each order consists of basic elements that are related by a structure of rules. He puts his faith in the spontaneously evolving market society or catallaxy as an engine of progress through developing and extending markets. It should be guided by a 'road code'. Its subjects use their fragmentary knowledge to maximise their utility and revenues, assuming they are secure in their private property. The state's role is to ensure that the catallaxy remains free from central controls or ill-considered interference from social justice or central bank actions.

A critique

The following attempt at critique has two parts. First, it asks what sort of problems arise from within the concept

as outlined, and second, whether an alternative approach, building on Hayek's concept, might be possible.

Problems of modern catallaxies

Hayek's belief in private property owned and managed by individuals appears to have blinded him to the acquisition and deployment of economic power by those participants in the catallaxy that have been able to beat their competitors or have become part of small powerful groups (oligopolies) such as major pharmaceutical concerns. In a globalised world many transnational corporations (TNCs) are more powerful than states and willing to throw their weight around, for instance through partnership free trade agreements, negotiated in secret, whereby they can overrule the laws of nation states through binding decisions of international tribunals.

TNCs want free access to world markets to get a return on their investment in scientifically designed technics, often developed in conjunction with universities, and/or with finance provided by State organisations. If states want to preserve their natural heritage, their biodiversity etc. and this is perceived as against the interests of foreign TNCs, then, they will be forced to give up such protection. What all this amounts to is that the catallaxy obtains dictatorial powers over states. In addition, the ever higher speeds at which the expanding 'machinery' runs, require high inputs of energy, which since the industrial revolution of the 18th century has been mostly generated by fossil fuels. As a result the world is now faced with a rapid warming of the climate and all the consequences thereof. Industrial agriculture, with large inputs of chemicals, mostly derived from fossil fuels, is carried out in mono-cultures that reduce the long-term productivity of soils, the nutritional value of food and precious bio-diversity.

Private property rights are important in modern catallaxies. They have even been extended to life-forms. They are not necessarily able to prevent environmental problems as they can be purchased by those who want to mine, for instance, on fertile land held by farmers for generations. The technical-economic system, the catallaxy, grows not only through the extension of the market society across the world, but also through technical innovations. The technical changes initiated since the industrial and agricultural revolutions of the 18th century have intensified and extended globalisation immensely. In terms of Hayek's view on evolution, they appear to fulfil the same role as random mutations in the genetics of plants and animals.

The danger is that thereby both nature and the rest of society are reduced to an input into the technical-economic system. Although Hayek strongly objected to the engineering mentality of planners who believe that they are able to design a better society by means of science, which he called scientism (Caldwell, 2004), he

has not remained free from technicistic notions such as the need to design rules for the proper working of the catallaxy, following judge made law, and not subject to majority-democracy, and an interest in systems theory and the negative feedback principles of the pricing system.

ANOTHER CONCEPT OF FREEDOM

If Hayek had put a greater stress on the order of taxis, then, he would have been close to Aristotle (1959), provided, of course that he would have allowed for trade and interest rates. Conceivably, since taxes as organisations take part in the catallaxy, one could stress the importance of their being free to pursue their peculiar vocations, without states or business corporations making that impossible. Indeed, it would be the task of a state to ensure that such interference would be censured. Such a concept of freedom has become known as sphere sovereignty. It posits that the bodies that make up society are called upon to act in accordance with God's law for their sphere. It was developed by Abraham Kuyper (1837 to 1920) in the Netherlands (Kuyper, 1956), particularly to defend the right to establish a Christian university. D.H.Th. Vollenhoven (1892 to 1978) and H. Dooyeweerd (1894 to 1977) have developed this principle into a full-blown philosophy, known as reformational philosophy (Vollenhoven, 2005). Since all parts of society are inter-related, the complement of sphere sovereignty is known as sphere universality. Taking the two together one can see the possibility of an approach to economics that aims at preserving the ecological integrity of the kingdoms of minerals, micro-organisms, plants and animals, so that their 'capital' is able to bear fruit for many generations to come. This requires the establishment of rules for economising by bodies in which all key parts of society, including the state, are represented.

CONCLUSION

F. A. von Hayek was a significant economic and political thinker of the 20th century, and a key proponent of neo-liberalism. The latter is seen as a catalyst of technicism. Hayek's interest in systems theory, and the automatism of the price mechanism indicate an influence of technicism. Philosophically, he is close to the Enlightenment thinkers, especially the Scottish moralists.

The three orders of catallaxi, taxis and cosmos form an important part of his thought after 1950. It was triggered by his work on the sensory order. The individuals who make up the spontaneously evolving market order, the catallaxy, are to be guided by their partial knowledge and need to discover what suits them best in terms of production, technology, and potential demand. Despite being made up of fallible agents, the catallaxy evolves

towards the best outcome for all.

Hayek tends to make the catallaxithe most important order, overwhelming the other two. When we see the catallaxy in analogy to the brain, it functions like the current complex technical-economic system, although it also deviates from Hayek's ideas, especially through the operation of central banks. His lack of attention to problems caused by economic-technical power accumulating in the hands of a few operators in the catallaxy is a serious shortcoming. Similarly, he has not spotted the impossibility of preventing environmental degradation by the price mechanism alone.

If Hayek had developed his concept of freedom in terms of the set of taxis in a state, with each having the freedom to pursue their own vocations, he could have moved close to the concept of freedom proposed by reformational philosophy as sphere sovereignty, with special bodies set up to oversee the use made of the kingdoms of things, micro-organisms, plants, animals and people.

Conflict of interests

The author has not declared any conflict of interests.

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