
41 Friedrich August von Hayek (1899-1992)

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Biographical note

Friedrich August von Hayek, a central figure in twentieth-century economics and a representative of the Austrian tradition, 1974 Nobel laureate in economics, was born on 8 May 1899, in Vienna, then the capital of the Austro-Hungarian empire. Following military service as an artillery officer in the First World War, Hayek entered the University of Vienna, where he attended the lectures of Friedrich von Wieser and obtained doctorates in jurisprudence (1921) and political science (1923). After spending a year in New York (1923-24), Hayek returned to Vienna where he joined the famous *Privatseminar* conducted by Ludwig von Mises. In 1927 Hayek became the first director of the Austrian Institute for Business Cycle Research. On an invitation from Lionel Robbins, he delivered four lectures entitled 'Prices and production' at the London School of Economics in 1931 and subsequently accepted the Tooke Chair. He was a vigorous participant in the heated debates that raged in England during the 1930s concerning monetary, capital and business cycle theories. Hayek was to become the only intellectual opponent of John Maynard Keynes (see Caldwell, 1995). As an outgrowth of his participation in the debate over the possibility of economic calculation under socialism (Hayek, 1948 [1980], 119-208), the focus of Hayek's research shifted during the late 1930s and early 1940s to the role of knowledge and discovery in market processes, and to the methodological underpinnings of the Austrian tradition, particularly subjectivism and methodological individualism. In 1950, Hayek moved to the United States, joining the Committee on Social Thought at the University of Chicago. His research there engaged the broader issues of social, political and legal philosophy. He associated with such figures as Frank Knight, Milton Friedman, Aaron Director and, somewhat later, George Stigler. He returned to Europe in 1962, with appointments at the University of Freiburg, West Germany, and then, in 1969, at the University of Salzburg, Austria. However, in 1977, Hayek moved back to Freiburg, where he died on 23 March 1992.

Hayek was a prolific author not only in the field of economics but also in the fields of political philosophy, psychology, epistemology and legal theory. However, his contributions to social and political philosophy and to legal theory emerged, to a significant degree, as extensions of his scholarship in the field of economics and its methodological foundations. The present entry is

concerned mainly with Hayek's contributions in the fields of legal theory and constitutional economics.¹

Epistemological foundations

In retrospect and with the benefit of hindsight, it is apparent that Hayek's approach to the social sciences is rooted in a physiologically derived epistemological basis, the foundation of which he worked out during the 1920s. It was further developed in the time thereafter and finally published in 1952 as *The Sensory Order*. Although the book has for a long time been neglected, several commentators have recently recognized its importance (Bouillon, 1991; Streit, 1993; Caldwell, 1997). Hayek himself had already pointed out that his work on *The Sensory Order* had greatly helped him in developing his conception of evolution and of a spontaneous order and in analysing the methods and limits of our endeavours to explain complex phenomena (Hayek, 1979, pp. 199-200, fn 26). One of the central arguments of *The Sensory Order* is that our perception of the world around us is theory guided or conjectural, in the sense that it is informed by a pre-existing system of classification - or set of classificatory dispositions - which is itself the product of a kind of 'learning', the outcome of an evolutionary process that can be said to reflect the accumulated 'experience' of the species. Thus Hayek's views as expounded in *The Sensory Order* come close to some of the tenets of what later became known as 'evolutionary epistemology'. In fact, Hayek's work can be interpreted as a systematic elaboration of the consequences that follow from an evolutionary epistemology for the issue of socioeconomic-political organization. His main subject is the social dimension of the knowledge problem, the problem of social learning; that is, the nature of the process by which knowledge is accumulated and utilized in society.

Hayek's concept of perception as classification has a systematic counterpart in his concepts of rules and rule-following behaviour (see also Hayek, 1967, pp. 43-65). Both our perception and our behavioural responses to situations are a matter of classification. Both are abstract in the sense that we respond not to the unique properties, but to typical features of situations with certain kinds of actions. In both realms, learning is a matter of reclassification. If, at the level of our cognitive apparatus, the existing classification system generates expectations which are disappointed, there will be a tendency for the mind to reclassify experience. The mind will rearrange sensory experiences into new configurations that allow better predictions to be made about reality. Those expectations that are 'fit' tend to survive while those that are 'unfit' tend to be weeded out. This selection process clearly has a counterpart operating at the social level. As will be seen, the role of the judge consists in upholding those rules that will 'maximize' the match-

ing of expectations. Rules in effect draw the demarcation line between 'legitimate' expectations and 'illegitimate' expectations, thus defining the kind of expectations that can be expected to enjoy social protection. On all levels, expectations have a tendency towards coherence and coordination. The criterion of fitness is confirmation of expectations as indicated by the success of our actions. Expectations more consistent with social reality give a competitive advantage to the individuals holding them. Rules are thus valued for instrumental reasons.

To conclude this introductory section about Hayek's epistemology, *The Sensory Order* constituted Hayek's decisive step away from standard economic theorizing. It marked Hayek's further movement away from the equilibrium and rationality constructs used by economists to understand the market order. It paved the way for his rejection of *homo economicus* and ultimately also for the constitutional reorientation of his work, that is, his proposal that we examine the role of various institutions in assisting the creation, discovery, use, conveyance and conservation of knowledge. The mind of the individual described in *The Sensory Order* is a complex adaptive self-organizing neural order. The study of such complex orders led Hayek to criticize particular uses of the equilibrium construct in economics and to question quantitative economics. The newly acquired philosophy also permeates his mature work on legal theory. As he wrote in volume 3 of *Law, Legislation and Liberty*, Hayek (1979), in a section entitled 'The evolution of self-maintaining complex structures':

These changes in structure are brought about by their elements possessing such regularities of conduct, or such capacities to follow rules, that the result of their individual actions will be to restore the order of the whole if it is disturbed by external influences. ...

There is now, in particular, no justification for believing that the search for quantitative relationships, which proved so effective for accounting for the interdependence of two or three different variables, can be of much help in the explanation of the self-maintaining structures that exist only because of their self-maintaining attributes. ... In particular, in order to explain the economic aspects of large social systems, we have to account for the course of a flowing stream, constantly adapting itself as a whole to changes in circumstances of which each participant can know only a small fraction, and not for a hypothetical state of equilibrium determined by a set of ascertainable data. And the numerical measurements with which the majority of economists are still occupied today may be of interest as historical facts ... With the functions of the system these magnitudes have evidently very little to do. (pp. 158-9)

Spontaneous order and the theory of cultural evolution

The problem of social learning has two aspects which, although they cannot be sharply separated, are nevertheless distinct (see also Hayek, 1960, ch. II, esp. p. 27). First there is the cross-sectional problem of using and communi-

cating the fractional knowledge that is dispersed among the individual contemporaries in a society.

This aspect is the subject of Hayek's theory of the spontaneous order of the market which is best known for its emphasis on the capacity of markets to utilize dispersed knowledge (Hayek, 1948 [1980], pp. 77-91). On account of his work about the social role of prices as carriers of information, allowing the specialized knowledge of each individual to be fully incorporated in decisions concerning resource allocation, Hayek has been considered a precursor of the economics of information (Laffont, 1989, p. 68; Landsburg, 2002, p. 306). Markets are polycentric orders. They can be seen as continuing, open-ended processes of trial-and-error elimination, processes in which constantly a multiplicity of independent trials, of conjectural problem solutions are tried out and selected through the choices of market participants. Through the interaction of experimental exploration and competitive selection, markets can be expected to generate a cumulative growth of problem-solving knowledge. Hayek's notion of competition as a 'discovery procedure' (see Hayek, 1978, pp. 179-90) alludes to this role of the market as an evolutionary learning process.

Hayek's theory of the spontaneous order of the market delivers the insight that, if we want to generate in society any particular order of a certain degree of complexity, we should look for general rules of conduct which, if followed by individuals, would tend to induce that order to form spontaneously. Such a spontaneous or polycentric order rests on a 'division of knowledge' which is analogous with the division of labour in classical economic theory. Because each individual makes use of his or her specific knowledge in deciding how to act, spontaneous orders embody a totality of knowledge that is not known to any single mind. Via the insight that a spontaneous order utilizes much more knowledge than can possibly be made accessible to any central agent or agency, the theory gives us reasons for doubting the ability of governments to achieve complex feats of social organization by deliberate planning. At the same time the theory amounts to an instrumental justification of a particular type of rules. Spontaneous orders emerge out of the interaction of a multiplicity of elements which, in their responses to their particular environment, are governed by certain general rules. The individuals themselves may be unable to articulate the rules they follow. However, the rules of just conduct on which spontaneous orders rely exhibit certain structural characteristics that make them conceptually distinct from rules of organization. They are negative, purpose-independent, abstract, universal and permanent (Van den Hauwe, 1998, p. 101). The character of these rules will permit the inference only of the general features of the overall pattern. The particular content of the resulting order will always be dependent on the specific circumstances to which the elements respond and consequently will be unpredictable. Further-

more, it should be noted that the specification of the criteria that rules must meet in order to allow for the formation of a spontaneous social order remains, equally, very general. In fact, Hayek's account offers only a very general schema which has to be filled in in detail.

The theory of the market, or the catallaxy, is only one part of Hayek's idea of an evolutionary process of collective learning. The second aspect is concerned with the accumulation and growth of knowledge over time, that is, the intertemporal problem of profiting from experiences that previous generations have had. With regard to the intertemporal dimension of the use-of-knowledge problem, Hayek has advanced a theory of cultural evolution. At the core of this theory is the notion that 'the various institutions and habits, tools and methods of doing things, which ... constitute our inherited civilization' (Hayek, 1960, p. 62) have passed 'the slow test of time' (Hayek, 1967, p. 111) and can, therefore, be expected to embody the experience of generations. They are, as Hayek argues, the 'product of long experimentation in the past' (Hayek, 1978, p. 136) and 'embody the experience of many more trials and errors than any individual mind could acquire' (Hayek, 1967, p. 88). What is distinctive in Hayek's theory is his account of social institutions and rules of conduct as 'bearers of knowledge' (Kukathas, 1989, p. 220).

The rules and institutions that define the frameworks within which social interactions take place embody knowledge of which we are otherwise unaware because they are themselves the outcome of a process of competitive selection. The abstract frameworks which contribute to the formation of spontaneous orders - basically the rules of the law of property, tort and contract (see Hayek, 1976, p. 109) - are thus themselves conceptualized as more or less unintended products of an evolutionary process. Thus Hayek sees common law both as a codification of previously unarticulated rules of conduct and as providing a framework within which spontaneous orders can form.

As Vanberg points out (Vanberg, 1994, *passim*), Hayek's theory of cultural evolution becomes disputable where it seems to argue that because of our 'incurable ignorance' we ought necessarily to rely largely on unquestioned traditional rules instead of attempting to choose rationally or to construct the system of rules that we want to follow.

The question of how the different kinds of rules differ in their nature - rules of conduct versus organizational rules - must be distinguished from the question of how they originate - whether they 'spontaneously evolve' or are 'deliberately designed'. In a particular sociohistorical situation there may exist a *de facto* correlation between the two aspects, but this need not be so. The two dimensions are conceptually distinct. This fact was acknowledged by Hayek (see Hayek, 1973, pp. 45-6).

The evolution of common law and the role of the judge

A central theme in Hayek's system of thought refers to the interplay between the order of rules and the order of actions. Hayek distinguishes between the legal framework, upon which the relative certainty of expectations is founded, and the system of market exchanges within that framework, in which there is no certainty of expectations. Because of the stability of the legal framework, agents can rely on expectations regarding the typical form or pattern of economic interactions. In contract law, for example, there are criteria for a valid contract regardless of the price or nature of the goods exchanged. But within this overall pattern equilibrium at the level of legal institutions, there is a disequilibrium or continual change in the economic variables. Agents will continually change their plans in accordance with new facts about both the external world and other agents. In fact, the stable legal framework, in facilitating such changes, ensures maximum market coordination. In other words, maximum coordination - the highest possible degree of coordination - does not necessarily mean a state of full or exact coordination. The very process of coordinating must involve a certain amount of (adaptive) discoordination.

Moreover, the stability of the legal framework is not absolute. As will be seen, the rules themselves evolve. Hayek's account of the role of the common law judge is very illuminating in this respect. In Hayek's theory of the common law and the role of the judge, the emphasis is on the coordination of individual activities through a process of systematic mutual adjustment of expectations (Hayek, 1973, p. 86). The function of the judge is to ensure a maximal coincidence of (legitimate) expectations, that is, to create a situation in which the chance to form correct expectations is as great as possible. But the chance of as many expectations as possible being fulfilled will be best enhanced if some expectations are allowed to be systematically disappointed.

Thus the judges, by upholding those rules which make it more likely that expectations will match and not conflict, are consciously trying to give greater internal coherence to the law. However, they do not need to know anything about the nature of the resulting overall order which they serve, beyond the fact that the rules are meant to assist the individuals in successfully forming expectations in a wide range of circumstances. They are unintentionally playing a part in the formation of a spontaneous order: a system of rules of conduct conducive to the efficient operation of the order of actions which rests on it. The body of the common law constitutes a spontaneous order, which evolves as an unintended consequence of the following of meta rules. One of the most fundamental meta rules is that, when deciding a difficult case, the judge's task is to try to make the law as a whole a little more coherent: he is required to think only about the internal logic of the law. Hayek quotes a famous statement by the great eighteenth-century judge Lord

Mansfield, who stressed that the common law 'does not consist of particular cases, but of general principles, which are illustrated and explained by those cases', thus highlighting the fact that a law based on precedent is more rather than less abstract than one expressed in verbal rules (ibid., p. 86).

The judge assists in the process of selection of rules. In fact, three distinct evolutionary mechanisms are involved in Hayek's account of the *modus operandi* of the judiciary. If there were no variation, evolution could not get started as a result of selection. At first sight, however, there seems to be little room for a *variation or mutation mechanism* in Hayek's account of the judge's task. The judge will merely assist in 'the process of articulation of pre-existing rules' (ibid., p. 78). The judge 'is committed to upholding the principles on which the existing order is based' (ibid., p. 120). He discovers the rules 'presumed to have guided expectations in many similar situations in the past' (ibid., p. 86). The judge 'is not a creator of a new order order but a servant endeavouring to maintain and improve the functioning of an existing order' (ibid., p. 119). 'The task of the judge will be to tell [the parties in the dispute] what ought to have guided their expectations ... because this was the established custom which they ought to have known' (ibid., p. 87). Thus the emphasis is laid on the fact that judges adjudicate particular cases by means of custom and precedent. This is what is meant by *stare decisis*, which can be said to account for the *transmission or replication mechanism* in the evolution of the law.

How then does variation arise? 'Experience will often prove that in new situations rules which have come to be accepted lead to conflicting expectations' (ibid., p. 115). And further: 'Since new situations in which the established rules are not adequate will constantly arise, the task of preventing conflict and enhancing the compatibility of actions ... is of necessity a never-ending one, requiring ... the formulation of new rules necessary for the preservation of the order of actions' (ibid., p. 119). Thus variation is generated. However, 'This will in some measure always be an experimental process, since the judge ... will never be able to foresee all the consequences of the rule he lays down, and will often fail in his endeavour to reduce the sources of conflicts of expectations' (ibid., p. 102); and: 'The judge may err' (ibid., p. 119).

By what mechanism are errors, that is, unfit rules, eliminated?

[It is] only by their effects on that order of actions, effects which will be discovered only by trial and error, that the adequacy or inadequacy of the rules can be judged. (Ibid., p. 102)

Like most other intellectual tasks, that of the judge is ... one of testing hypotheses at which he has arrived by processes only in part conscious. ... he must stand by his decision only if he can rationally defend it against all objections that can be raised against it. (Ibid., p. 120)

As in all other fields advance is here achieved by our moving within an existing system of thought and endeavouring by a process of piecemeal tinkering, or 'immanent criticism', to make the whole more consistent both internally as well as with the facts to which the rules are applied. (Ibid., p. 118)

Thus a learning process of trial-and-error elimination accounts for the *selection mechanism*.

Law and legislation

Hayek clearly recognized that 'the spontaneous process of growth may lead into an impasse from which it cannot extricate itself by its own forces' (ibid., p. 88). It is therefore acknowledged that 'grown' law may require correction by legislation. It seems that legislation may be required both to generate novelty - that is, legislation works as a mutation mechanism - and to eliminate errors in past developments - that is, it also works as a selection mechanism.

The insight that spontaneous growth will not necessarily operate to generate efficient results is corroborated by the game-theoretic analysis of invisible hand processes. The institutions that develop may be suboptimal in nature and they need not be efficient to persist. For example, in impure coordination games, the players may get stuck in a self-enforcing Nash equilibrium that is not Pareto efficient and thus suboptimal self-sustaining conventions may evolve (Van den Hauwe, 1998, p. 111).

The rule of law

Hayek undertakes to show that the operation of the market leads not only to the creation of an order, but also to a great increase of the return which men receive from their efforts. 'The game of catallaxy' is 'a wealth-creating game (and not what game theory calls a zero-sum game), that is, one that leads to an increase of the stream of goods and of the prospects of all participants to satisfy their needs' (Hayek, 1976, p. 115). However, the tendency of the market to promote welfare is subject to some qualifications. Hayek accepts that the state should provide a safety net of social security provision for the very poor, that it should finance the supply of certain public goods, and that it should impose regulations to control negative externalities. Since, on Hayek's argument, the monopoly on coercion is to be centralized in the hands of government, that is, essentially a monocentric organization, it is crucial that this immense power should not be misused. Government must therefore itself be constrained by general rules, or by what Hayek calls the 'Rule of Law'.

Hayek's doctrine of the Rule of Law is a meta-legal doctrine - a political ideal - a set of standards against which we can judge any laws, regardless of their particular content. The guiding idea is that interventions should, as far as possible, take the form of laying down general rules, which apply equally

to everyone and which must be known and certain. In *The Constitution of Liberty* (Hayek, 1960), Hayek traces the history of the Rule of Law tradition. Moreover, he sets himself the task of answering the question of what liberalism means 'when applied to the concrete problems of our time' (ibid., p. 3). He examines the problems, among others, of welfare statism, labour unions, taxation and transfer payments, money, housing and town planning, agriculture and natural resources, education and research, and 'neighbourhood effects'. This book, in which Hayek developed the ethical, anthropological, legal and economic bases of a liberal economic and social order, is by some considered his *magnum opus*.

In conclusion, it should be clearly understood that through the theory of polycentric or spontaneous orders Hayek grounds the political ideal of the Rule of Law 'positively', that is, on an empirical-scientific basis and not on arbitrary metaphysics.

Proposal for constitutional reform

Hayek became increasingly concerned about the problem of controlling the growth of government. The problem was raised as early as in his *The Road to Serfdom* (Hayek, 1944). This concern finally led him to question democracy as it now exists: the kind of democracy based solely on the principle of majority rule, which has gradually been transformed into a new kind of despotism and under which legislative and administrative powers are increasingly confused. On one hand, omnipotent democracy is quite strong since the individual can hardly escape from its far-reaching coercive power; on the other, however, it is rather weak in that it easily succumbs to the pressure of special-interest groups. Hayek had been particularly impressed by Mancur Olson's (Olson, 1965 [1971]) description of the mechanism of the process of government by coalitions of organized interests and of the tendency towards a persistent exploitation of unorganized and unorganizable groups by organized group interests (Hayek, 1979, pp. 97, 143). Through this analysis, Hayek came to propose a model of an ideal constitution along the following lines (ibid., pp. 105-27).

The task of stating the general rules of just conduct, the rules of action that are followed only to preserve the social order and not to achieve specific targets, would be entrusted to a legislative assembly, the composition of which is different from the governmental assembly entrusted with the task of government. The coercive powers of the latter assembly would be limited by the rules of justice laid down by the first. Thus a true separation of powers would be achieved. The basic clause of such a constitution would have to state that in normal times men could be restrained from doing what they wished, or coerced to do particular things, only in accordance with the recognized rules of just conduct designed to define and protect the individual

domain of each. Practical difficulties are worked out through a special constitutional court.

An application of Hayekian law and economics: the comparative analysis of alternative monetary and banking regimes

It is Hayek's emphasis on the theme of the interrelation between the system of rules and its systematic outcome at the level of the order of actions that qualifies him as a law and economics theorist (see also Hayek, 1967, pp. 66-81). Hayek views the economic problem of society as essentially a coordination problem:

The essential problem remains that of whether the plans of different individuals will tally and will accordingly all stand a chance of being successful, or whether the present situation carries the seed of inevitable disappointment to some, which will make it necessary for them to change their plans. (Hayek, 1941, p. 22)

Thus in a sense the theme of the interplay between institutional structure and economic order was, at least implicitly, already touched upon in Hayek's early economic work on business cycle theory. Business cycles are instances of how an economy can suffer coordination failures on economy-wide scale. In the so-called 'Austrian' theory of the trade cycle (Hayek, 1935 [1967]), the boom is a self-reversing process set into motion by monetary expansion brought about by the central bank, which is essentially a governmental bank. If the banks were truly competitive, the business cycle would never get under way.

It had long been recognized that the Austrian theory of the business cycle embraces a constitutional perspective with respect to monetary problems: the search is not so much for a proper policy but for an appropriate monetary framework. The cycle depends on the elasticity of bank credit, that is, the characteristic of a developed financial system that allows the supply of money credit to differ from the supply of credit based on real saving.² Economists may study different institutional arrangements in order to determine which type of institution is most likely to minimize the tendency for the market rate of interest to be reduced below the natural rate. Monetary and banking arrangements will acquire particular significance in this respect.

As Vera C. Smith reminds us:

Any attempt to make a final evaluation of the relative merits of alternative systems of banking must look primarily to the tendencies they manifest towards instability, or more particularly to the amount of causal influence they exert in cyclical fluctuations. Most modern theories of the trade cycle seek the originating force of booms and depressions in credit expansions and contractions with the banks as the engineering agencies. (Smith, 1936 [1990], pp. 192-3)

Hayek, however, never endorsed free banking in his early economic writings, despite his general emphasis on the coordinating properties of market competition. Hayek believed that the impulse initiating unsustainable cyclical booms was often the failure of the market rate of interest to rise with the equilibrium or natural rate when the demand for loanable funds increased. To explain why the market rate failed to rise, Hayek elaborated Thomas Joplin's argument as to how commercial banks responded to an increase in loan demand by varying only the quantity of loans and not the price (Hayek, 1935 [1967], pp. 15-17); in other words, the argument is built on the assumption that the short-run supply of bank loans is perfectly elastic at the prevailing rate of interest (Hayek, 1933 [1966], pp. 171-3; White, 1999b).

Therefore a useful central bank, Hayek advised, 'will have to act persistently against the trend of the movement of credit in the country, to contract the credit basis when the superstructure tends to expand and to expand the former when the latter tends to contract' (Hayek, 1937 [1989], pp. 89-90).

Hayek's later 'The denationalisation of money' (Hayek, 1978 [1991]) constituted a radical policy departure from his earlier support for central banking. Hayek, following up on an earlier suggestion by Benjamin Klein (1974), now envisaged a market in which all issuers, public and private, would offer non-redeemable currencies, each currency constituting its own monetary standard. Each private issuer would pledge to maintain purchasing-power stability in terms of a particular basket of goods, but this pledge would not take the form of an enforceable redemption contract. Thus, and consistent with his early scepticism toward free banking, Hayek did not suggest free competition among banks offering wholly or fractionally backed liabilities redeemable for a commodity money.

Although Hayek's proposal with regard to the denationalisation of money has not been exempt from serious criticism,³ it has led to a variety of proposals for fundamental financial and monetary reform. The development of a contemporaneous free banking school in economics has thus been stimulated (White, 1984 [1995]; Selgin, 1988; Salin 1998). The advocates of fractional reserve free banking believe that one of the desirable macroeconomic characteristics this system would exhibit is the avoidance, or at least the limitation of Hayekian cycles. Monetary economists Greenfield and Yeager (1983) on the other hand have proposed a multi-commodity standard involving a separation of the medium of account from the medium of redemption, a system which, as these authors believe, would foster price level stability and the avoidance of monetary disequilibrium. More recently the search for institutional alternatives in the domain of money and banking has also led to the development of law-based macroeconomics, a project which culminates in a consistent argument for a return to a 100 percent reserve requirement in banking (Jesús Huerta de Soto, 1998).⁴

Notes

1. For a more complete intellectual biography of F.A. Hayek, see now Hennecke (2000).
2. Several excellent accounts of the theory of the business cycle are available; reference is here made to Garrison (2001) and Skousen (1990). The theory was originally conceived in Mises (1912 [1981], pp. 377-404). Mises's achievement resulted from the integration of different strands of thought: he essentially combined Böhm-Bawerk's capital theory and Wicksell's interest rate mechanism with his own sequence analysis of monetary forces. The theory highlights how changes in the market for loanable funds lead to capital restructuring, and how changes emanating from some sources can lead to unsustainable capital structures that will inevitably require a later correction. An artificial boom is an instance in which the change in the interest rate signal as a result of credit expansion and the change in resource availabilities are at odds with one another. With seemingly favourable credit conditions, long-term investment projects are being initiated at the same time that the resources needed to see them through to completion are being consumed. As the market guides these projects into their intermediate and late stages, the underlying economic realities become increasingly clear. The sequence of malinvestment and overconsumption, followed by crisis, liquidation and unemployment characterizes the intertemporal disequilibrium that is summarily described as a business cycle.
3. More particularly, and in light of the general problem of time-inconsistency identified by macroeconomists the question can be raised of whether the keeping of such a nonenforceable pledge would be consistent with profit maximization. A profit-maximizing fiat-type issuer could choose to hyperinflate its own brand of money, and would do so if staying in business promised less than the one-shot profit available from an unanticipated hyperinflation (White 1999c, 227 ff.). Moreover, the feasibility of private fiat-type money may be doubtful in view of the money regression theorem; on the latter, see Mises (1912 [1981], pp. 129-46) and Selgin (1994, pp. 809-11).
4. Jesús Huerta de Soto (1998) basically demonstrates that Hayek's business cycle theory can be integrated with his legal theory, his constitutional economics and his spontaneous order paradigm. This accomplishment raises doubts as to the merits of the thesis of an author like Witt (1997) who argues that the distinction between Hayek's early investigations into price theory, capital theory, and theory of the business cycle prior to and during his time at the London School of Economics (Hayek I) and, thereafter, his work on social philosophy, spontaneous economic order, and societal evolution (Hayek II) is one between two different and basically incompatible research programmes pursued consecutively by Hayek. It is nevertheless correct that Hayek himself never reconsidered the theory of business cycles from the perspective of his later work. The comparative institutional approach to the study of business cycles is also embraced in Van den Hauwe (2005).

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