

HAYEK'S MONEY ECONOMY: THE DYNAMICS OF COMPETITIVE EQUILIBRIUM AND SOCIO-ECONOMIC ORDER

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Hayek's economics is focused upon adaptation: the continuously changing social order requires no conscious direction. That evolutionary thesis applies even to itself; no one can remain intellectually active throughout a long life without the adaptation of concepts or conclusions. If complete reversals are rare, reconsideration and refinement of notions previously held are normal. And while intellectual thought is consciously disciplined by the precepts of science and rationality, serendipity has the dominant role in the process of discovery.

Among the many aspects of the chronology of Hayek's work (see Hutchinson 1981, pp. 203–32; Caldwell 1988; Lawson 1994; Fleetwood 1995; Foss 1995; Witt 1997; Lewin 1997), one is afforded particular attention. Did Hayek continuously refine his notion of equilibrium, or was there an abrupt change? While this is likely to remain a moot issue, a case is presented for coherence and continuity in the important themes: the conceptualization of equilibrium within the money economy; the relevance of money's non-neutrality to business cycles; and coordination within the extended social order which is only possible within a money economy.

BUSINESS CYCLES AND EQUILIBRIUM THEORY

Interest in the origin and nature of business cycles had been kindled by the enormous price fluctuations across Europe in the 1920s. The search was for a feature of market economies that might serve as a general explanation. Here, the crucial problem was "the incorporation of cyclical phenomena into the system of equilibrium theory"^m (Hayek 1933, p. 33 n):

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¹This remains a live issue: the general observation that one business cycle is very much like any other business cycle, "suggests the possibility of a unified explanation... grounded in the general laws governing market economies" (Lucas 1977, p. 10) and "constructed so as to *The Quarterly Journal of Austrian Economics* vol. 1, no. 3 (Fall 1998): 1–14

production is governed by prices, independently of any knowledge of the whole process on the part of individual producers, so that it is only when the pricing process is itself disturbed that a misdirection of production can occur. The "wrong" prices, . . . which lead to "wrong" dispositions, cannot . . . be explained by a mistake. Within the framework of a system of explanations in which, as in all modern economic theory, prices are merely expressions of a necessary tendency towards a state of equilibrium, it is not permissible to reintroduce the . . . idea of the misleading effect of prices on production without first bringing it into line with the fundamental system of explanation. (Hayek 1933, pp. 84-85)

No doubt can exist: Hayek sets his task firmly within the framework of modern economic theory, which is structured upon a necessary tendency toward a state of equilibrium.

Hayek began his work on business cycle theory with an outline of some provisional ideas on "some extremely complex problems in pure theory" (Hayek 1928, p. 113). This had offered "an isolated analysis of what is so important a technical problem" (ibid., p. 114): "the significance of the temporal pattern of prices of a good for the undisturbed functioning of an economy" (ibid., p. 74) and the consequences of an "artificial stabilization of the 'price level' with the means available to monetary policy" (ibid., p. 113). Unless the (equilibrium) conditions are first established for an economy whose functioning is undisturbed by monetary forces, there is no basis for judging the likely impact of monetary policy.

Yet, the theoretical structure which Hayek built upon is not that which became popularized as mid-twentieth-century microeconomics. Hayek drew a distinction between "an economic system in which all processes are assumed to take place simultaneously, and hence all prices of all commodities of a given type are formed under the same conditions" (ibid., p. 71), (i.e., a static Walrasian general-equilibrium system), and

the monetary economy, with prices which necessarily are set at successive points of time. . . . Instead of needing to explain merely the necessity for the existence of a particular structure of simultaneously existing prices and its function, what must now be done is to analyze the necessity and significance of relative levels of prices at successive points of time. (ibid., p. 72)

The latter, which is the more difficult task, found no general appeal. Hayek describes his preliminary efforts toward those ends as the first attempt ever to analyze "the function fulfilled by the relative levels of prices at different points in time"^{M2} (ibid., p. 100). His conclusion — "that changes in the price level due to continuous improvements occurring in all branches of production are not merely

predict how agents with stable tastes and technology will choose to respond to a new situation" (Lucas 1977, p. 12).

²The paper is built on the notion, which we nowadays associate with Arrow and Debreu, that physically similar goods separated in time are appropriately treated as distinct entities whose prices are determined within a general-equilibrium system which extends over time" (Laidler 1994, p. 7).

not detrimental but are even necessary if disturbances of equilibrium are to be avoided⁴—was in contradiction of the dominant view (but not in contradiction of the facts) that "only an invariable price level will ensure an undisturbed course of production" (Hayek 1928, p. 100).

The theoretical point is straightforward: to maintain stable prices, monetary expansion is required during a boom, and monetary contraction is required during a slump. So, if a monetary system were manipulated to prevent (necessary) price changes, there would be an additional monetary stimulus to production whenever real conditions were set for expansion, and an additional monetary curtailment of production whenever real conditions were set for contraction. Business cycles would be exacerbated.³

With his development of a dynamic version of the Walrasian system, in which monetary variations have the effect of causing a general over-expansion (or over-contraction) of production, Hayek was able to expose the detail of the incentives which derive from non-neutral money. Within a dynamic economy, neutral money

refers to the set of conditions, under which it would be conceivable that events in a monetary economy could take place . . . as if they were influenced only by the "real" factors which are taken into account in equilibrium economics. (Hayek 1935, p. 130)

It was upon this basis that Hayek painstakingly attempted to build (Hayek 1931; 1933; 1935; 1939b; 1941) a monetary theory of business fluctuations and recommendations for the exercise of monetary policy.

The manner in which resources are integrated within more or less capitalistic (or roundabout) methods of production is central to Hayek's theory.⁴ Any change to this structure of production has a cumulative impact. In setting Austrian capital theory within this dynamic framework, Hayek was able to explain how monetary expansion generates incentives which initiate a boom, but which steadily disrupt the balance between production methods. Whereas *Monetary Theory and the*

³In the February 1929 report of the Austrian Institute for Business-Cycle Research, Hayek predicted an impending business crisis in the U.S. Against the widespread view that sustained growth would continue, Hayek warned that maladjustments were an inevitable consequence of monetary expansion and that a crisis was impending; the price stability which had accompanied sustained growth in U.S. real output was misleading. According to the prevailing orthodoxy, it signaled monetary stability. To Hayek it signified inflation: with rising real output, price stability was evidence of monetary expansion. On the favorable side, U.S. prices had not actually risen prior to 1927, so there was every reason to suppose that the (inevitable) recession would be mild. However, the U.S. authorities

succeeded, by means of an easy-money policy, inaugurated as soon as the symptoms of an impending reaction were noticed, in prolonging the boom for two years beyond what would otherwise have been its natural end. And when the crisis finally occurred, for almost two more years, deliberate attempts were made to prevent, by all conceivable means, the normal process of liquidation. (Hayek 1935, p. 162)

⁴A contemporaneous and related development was "Hicks's attempted dynamic recasting of general-equilibrium theory in *Value and Capital*" (Salerno 1994, p. 119, n. 3).

Trade Cycle emphasized "the monetary causes which can start the cyclical fluctuations" (Hayek 1933, p. 17), *Prices and Production* focused more closely upon "successive changes in the real structure of production," which are the real phenomena of the trade cycle. Later still, and taking account of recognized defects in the earlier analysis, came *Profits, Interest, and Investment* and *The Pure Theory of Capital*. In the two earlier books, the impact upon investment incentives of a fall in the rate of interest (brought about by new money or new saving) is discussed. In the two later books, attention is directed at the impact upon investment incentives of changes in relative prices.

Although the conditions under which money remains neutral "will never be given in the real world," the most obvious pitfall is that of monetary expansion which directs capital investment into inherently non-viable areas as a consequence of its impact upon interest rates and relative prices. From this came the view that

the only practical maxim . . . is probably the negative one that the simple fact of an increase of production and trade forms no justification for an expansion of credit, and that—save in an acute crisis—bankers need not be afraid to harm production by over-caution. (Hayek 1935, p. 125)

Of course, monetary contraction also misdirects capital investment and so the above proviso strengthened into the more emphatic argument that "there is no justification for supporting or permitting a process of deflation." In particular, positive intervention by the monetary authorities could bring advantages "in the later stages of a depression" when "deliberate attempts to maintain the money stream" would be justified to counter the "cumulative process of secondary deflation" (Hayek 1975, p. 5; see, also Hayek 1978b, p. 210).

Throughout, there is little or no concern with quantity theory conceptualizations: with "demand for money," "money supply,"⁵ and monetary disequilibrium in the sense of an inequality of the two. Only upon one occasion were such topics briefly touched upon; in the 1928 essay, a supposed world-wide improvement in agricultural techniques and production stimulates (by the reduction of product prices) gold production:

the temporary rise in the profitability of the sectors first affected by the gold inflow will have led to their expansion, an expansion which must show itself to have been unjustified as soon as the gold inflow slackens because of the rise in prices which takes place as a result of it. . . . The final effect of the gold movements will therefore be that the economy, in return for temporarily giving up a larger part of its overall output to the gold producers, will once again achieve an equilibrium between supply and demand only after it has incurred some losses. Apart from the losses caused by this disruption of equilibrium, every individual must see an additional source of loss in the fact that at least part of the rise in his money income does not represent for him a means to an increased acquisition of goods but constitutes his ultimate payment. Hence the only

⁵Note especially the items marked here in quotation marks (Hayek 1928, pp. 106 and 109).

recompense he obtains for that part of his output with which he has acquired it is that the stock of money he possesses has been uselessly enlarged. . . . when the money supply is expanded, the individual is forced to accept as final payment something which he had no desire to take as such. (Hayek 1928, pp. 110–11)

This concept of (temporary) monetary disequilibrium was developed no further: "it is not changes in the value of money which should be at issue, but disturbances of the inter-temporal price system which are without any economic function" (Hayek 1928, p. 99). Although, from the perspectives of neoclassical economics, the neo-quantity theory of money, and Keynes's *General Theory*, money had "a positive marginal utility due to its demand as an asset under conditions of uncertainty" (McCloughry 1984, p. x), Hayek drew nothing from arguments which elevated the status of money above the level of an instrument to facilitate the market process. Rather, on the basis of the theoretical structure first formulated in 1928, he criticized the conduct of monetary policy by "the fashionable pseudo-quantitative economics of averages with its argument running in terms of national 'price levels,' 'purchasing power parities,' 'terms of trade,' the 'Multiplier,' and what not" (Hayek 1939a, p. 45), and he cited Keynes as the "leading exponent" of a "pernicious" doctrine (*ibid.*, pp. 2–3): "policies and practices which not long ago would have been frowned upon by all financial experts, are now generally employed throughout the world" (*ibid.*, p. xi). Undoubtedly, Hayek sought to refute the clamor for monetary policy to be directed toward achieving "an autonomous rate of interest, unimpeded by international preoccupations": an option alleged to be open to all nations, and so a panacea to restore "economic health and strength internationally" (Keynes 1936, p. 349). In this, he failed.

EQUILIBRIUM

Nothing in Hayek's work suggests that the concepts of equilibrium and rationality were regarded other than as pivotal to economic analysis. Disequilibrium incites action. Rational action instigates coherent movement toward equilibrium. The exact theoretical characteristics of equilibrium and rationality are set by the principal paradigms of economics: from the Classical School (Walrasian general-equilibrium), the New Classical School (rational-expectations, neo-Walrasian general-equilibrium), and the Austrian School (communication and cohesion through the market process).

In Walrasian general-equilibrium, rational agents act upon full and certain information to equate marginal gains and losses. Under perfect competition, there is a Pareto optimal allocation of resources. Transactions costs and money are inessential.

Neo-Walrasian general-equilibrium incorporates uncertainty. Expectations are formed rationally in the sense that expectational errors are random. Action—motivated by an individually-held subset of information—affects prices which, thereby, embody the import of information not symmetrically available to all; i.e., there is an efficient market. Such exogenous (public) information is

assimilated by spot and futures markets. Efficient market prices are an externality which allow all contractual arrangements to be optimally contingent upon future events. Transactions dates and money are inessential.

The Austrian paradigm also incorporates uncertainty but it allows for endogenous (private) information which cannot be used to define contingent circumstances (see Zappia 1996). In compromising the function of spot and futures markets and inter-temporal equilibrium, endogenous information is the starting point for sequence economics, path dependency, and multiple equilibria. Competition is an unending voyage of discovery wherein price movements are ambiguous: prices (1) embody the import of asymmetrically distributed exogenous information; but (2) are also an invitation to explore uncharted areas of ignorance. Equilibrium is defined as a set of mutually compatible decentralized plans; but endogenous information renders the requirements (i.e., the *ex post* elimination of *ex ante* incompatibilities) of Walrasian and neo-Walrasian general-equilibrium theory meaningless. Instead, rational action is defined in terms of institutional and contractual arrangements which incorporate incentive mechanisms to promote the most pragmatically efficient use of endogenous information.

The socialist calculation debate⁶ of the 1930s had sharpened Hayek's criticisms of Walrasian general-equilibrium (for the neglect of informational aspects of competitive markets), but his own reformulations were open to (mis)interpretation to the extent that they can be represented as developments within either the New Classical or the Austrian paradigms,⁷ or as a hybrid. Their details—which incorporate the allocation of economic resources and the fullest use of existing knowledge—are presented across four publications: "Economics and Knowledge" (Hayek [1937] 1949), "The Use of Knowledge in Society" (Hayek [1945] 1949), "The Meaning of competition" (Hayek [1946] 1949), and "Competition as a Discovery Procedure" (Hayek [1968] 1978).

"Economics and Knowledge" is notable for Hayek's claim "that the coordination problem is the central problem"; for his "emphasis on subjectivity"; and for his "new definition of equilibrium" (Caldwell 1988, p. 514):

in his early work Hayek virtually identifies economic theory with equilibrium theory; he thought that any legitimate economic theory must make use of some concept of

⁶The debate focused upon knowledge and calculation and the relative merits of centralized planning and the market economy. Even were it possible to centralize knowledge and to achieve the calculations for optimal resources allocation, the requirement to anticipate future prices would remain (see Salemo 1994). This is the crux; market competition is an adaptive process in which merit and luck are relevant to entrepreneurial success or failure: "[w]e allow the individual share to be determined partly by luck in order to make the total to be shared as large as possible" (Hayek 1978b, p. 91). Prosperity derives from profits earned by those who "discover new ways of doing things better than they have been done before" (Hayek [1946] 1949, p. 101).

⁷See Mark Blaug (1993):

Let anyone compare Mises's 1920 essay on "Economic Calculation in the Socialist Commonwealth" and the treatment of the same issue in Mises's *Human Action* (1966), written after the publication of Hayek's papers, and the point is made. It is Hayek, not Mises, who deserves to be the patron saint of Austrian economics.

equilibrium. Hayek does not abandon this belief in "Economics and Knowledge," for he seeks to define equilibrium for both the individual and for society. What has changed is Hayek's new emphasis on subjectivism: any adequate definition of equilibrium must now take into account the fact that knowledge is subjectively-held and dispersed. (Caldwell 1988, p. 529)

Economists had overlooked the problem of knowledge. In conflating two different kinds of propositions—the a priori and the empirical—economists had obscured the relevance of any particular analysis "to the phenomena of the real world" (Hayek [1937] 1949, p. 56). The primary empirical task is to explain how "fragments of knowledge existing in different minds" (*ibid.*, p. 54) are germane to the achievement of equilibrium "in the special sense in which equilibrium is regarded as a sort of optimum position" (*ibid.*, p. 53).

The socialist calculation debate caused Hayek to emphasize subjectivism and the effectiveness of markets in reaching optimality of a sort. It is in respect of the latter that Hayek is placed in the vanguard of New Classical analysis. Prices reflect all the known alternative uses of resources:

[i]n order that the results of the combination of individual bits of knowledge should be comparable to the results of direction by an omniscient dictator, further considerations must be introduced. . . . One condition would probably be that each of the alternative uses of any sort of resources is known to the owner of some such resources actually used for another purpose and that in this way all the different uses of these resources are connected, either directly or indirectly [footnote: That it is not necessary. . . that every possible alternative use. . . should be known to at least one among the owners is due to the fact that the alternatives known to the owners of the resources in a particular use are reflected in the prices of the resources]. (*ibid.*, pp. 53–54)

The "knowledge and intentions of different members of society are supposed to come more and more into agreement" (*ibid.*, p. 45); but this could happen only if "the subjective data of different people . . . were due to the experience of the same objective facts" (*ibid.*, p. 44). The problem is "how the 'data' of different individuals on which they base their plans are adjusted to the objective facts of their environment (which includes the action of other people)" (Hayek [1946] 1949, p. 93).

In attempting to explain this process of harmonization, the onus was upon economics to deal with "propositions . . . about causation in the real world" which rest upon "statements about how knowledge is acquired and communicated" (Hayek [1937] 1949, p. 33). Our social order relies upon a high degree of correspondence between objective facts and subjective data. Economics must explain the achievement of that correspondence with an empirically testable theory of expectation formation and learning: the "empirical element in economic theory. . . consists of propositions about foresight. . . [and] . . . the concept of equilibrium itself can be made definite and clear only in terms of assumptions concerning foresight" (*ibid.*, pp. 33–34).

This joint emphasis upon subjectivism and efficient markets is taken further in "The Use of Knowledge in Society," where "the problem of a rational economic order" is defined as "a problem of the utilization of knowledge which is not given to anyone in its totality" (Hayek [1945] 1949, p. 78). It is impractical to expect a central authority to deal adequately with "the economic problem of society [which] is mainly one of rapid adaptation to changes in the particular circumstances of time and place" (*ibid.*, p. 83). It is not that the information is not there, but that the statistical procedure of "lumping together . . . items which differ as regards location, quality, and other particulars leaves the central planner in ignorance of these circumstances of time and place" (*ibid.*). Non-theoretical practical inarticulated knowledge is crucial, and it is the function of efficient markets to incorporate those multifarious exogenous particulars into decision processes.

Yet, rational expectations are only a part of the solution. Rational expectations are set in the context of exogenously (public) dispersed information, but many of the decisions which are most effectively left to the "man on the spot" also draw upon endogenous (private) knowledge, which derives from the unique position and activity of every agency. Endogenous knowledge is not conveyable by the procedures of fully informational rational expectations equilibrium. Access is gained only through the direct compliance of information-possessing agents: "the method by which such knowledge can be made as widely available as possible is precisely the problem to which we have to find an answer" (*ibid.*, p. 81). An implicit complication is that no ex post appraisal is possible: only the actor knows what he knew. So it becomes necessary (the New Classical School must give ground to the Austrian School) to determine the nature of the institutional structures which are likely to facilitate the most effective use of endogenous information; i.e., "to provide inducements which will make individuals do the desirable things without anyone having to tell them what to do" (*ibid.*, p. 88).

"The Meaning of Competition" gives further emphasis to the nature of social relationships as empirical processes of knowledge acquisition and dissemination: "the decisions of many individuals influence one another and necessarily succeed one another in time" (Hayek [1946] 1949, p. 93). This is the purposeless, continually readjusting, spontaneous market order (catallactics) which has nothing remotely equivalent to the optimal conditions for achieving some well-defined organizational goal (economics). Hayek laments that the competitive process—the moving force of economic life—is left almost undiscussed by economists: "[t]he argument in favor of competition does not rest on the conditions that would exist if it were perfect" (*ibid.*, p. 104). Rather, under perfect competition there is no competition; in

a highly organized market of a fully standardized commodity produced by many producers, there is little need or scope for competitive activities because the situation is such that the conditions which these activities might bring about are already satisfied to begin with. (*ibid.*, p. 103)

There is no Paretian welfare loss: consumers can benefit from a monopoly supplier if the monopoly is achieved through superior efficiency, and providing it is constantly threatened by the discovery of even more efficient methods.

In addition to the mutual adjustment of individual plans which the catallaxy achieves, Hayek asserts a further quality. It "produces in some sense a maximum or optimum" (Hayek [1968] 1978, p. 183) in that "as much will be produced as we know to bring about by any known method" (ibid., p. 185). Competition is not a zero-sum game, but one through which, by playing it according to the rules, the pool to be shared is enlarged, but

[t]he so called "maximum" . . . cannot be defined as a sum of particular things, but only in terms of the chances it offers to unknown people to get as large a real equivalent as possible for their relative shares, which will be determined partly by accident. (ibid., p. 186)

The logic of economic choice defines a *priori* a set of optimum conditions; but the invisible hand mechanism of resources allocation is an empirical process. To qualify as a social (rather than mathematical) science, economics must analyze social processes: how does convergence (social equilibrium) occur in the context of changing preferences, technologies, endowments, and expectations? Explanations derive from an appraisal of social cohesion and economic performance under different institutional structures.

Although Hayek describes his early self as a "very pure and narrow economic theorist" dealing with "technical economics" (Hayek 1994, p. 91), those early preoccupations were with a social theory of sequential causation which bore no resemblance to the neoclassical paradigm of constrained optimization: "[i]n his first major paper he criticizes the notion of timeless, stationary equilibrium" (Caldwell 1988, p. 514). So, observations of the kind that "Hayek long ago abandoned any thoughts of end states" (Fleetwood 1995, p. 143) are inappropriate. The narrow economic theorist was fully alert to the significance of the assumptions with which he chose to work:

the methodological valuable fiction is employed, at least initially, by which time is abstracted from. The analysis then begins from an economic system in which all individual processes are assumed to take place simultaneously. . . . The result is that the propositions arrived at in this stage of the analysis provide no more than a partial explanation of *what goes on in the economy as it actually exists*. (Hayek 1928, p. 71; emphasis added)

This work drew little from conceptual end states⁸ which, *per se*, reflect nothing of the shifting evolutionary tendencies of continuous readaptation.

Although "endogenously emerging cyclical fluctuations in aggregate economic activity seem at odds with the notion of a spontaneous order," and although Hayek "never came back to discussing the business cycle from the point of view of his theory of the spontaneous order" (Witt 1997, p. 54), explanations are not

⁸A commentary on *The Pure Theory of Capital* (1941) is apposite: "but Hayek, of course, is not much concerned with stationary equilibrium. . . . He analyzes economic time paths in which, in general, relative quantities and relative values are always changing" (Steedman 1994, p. 11).

hard to find. Even as the "pseudo-quantitative economics of averages" (Hayek 1939a, p. 45) engulfed the economics profession, Hayek found no cause to refute his early conclusions: that with any stabilization of bank deposits, "the stability of the economic system would be obtained at the price of curbing economic progress" (Hayek 1933, p. 191); and that conditions under which money would remain neutral "will never be given in the real world" (Hayek 1935, p. 125).⁹ The advent of Keynesian monetary manipulations only reinforced the practical relevance of the monetary origins of business fluctuations, and brought the realization that no government could be trusted; that "only the market can discover the optimal quantity of money" (Hayek 1978a, p. 77; also see Hayek 1986).

The essence of a money economy is that decisions may be deferred, that informational requirements are minimized, and that an extensive social order of economic specialization, capital investment, and trading relationships is afforded maximum facilitation. These topics held Hayek's interest throughout. Only details changed. In the early period, attention was given to the linkages between monetary theory and equilibrium theory, where Hayek exposed the contradiction between the automatic equilibrating force of price adjustment and business cycle theories which were not grounded upon the disruption of equilibrium prices.¹⁰ In the later period, the focus was upon the informational prerequisites which underlie equilibrium theory (see Butos 1985, p. 108).

Equilibrium is defined by the compatibility of subjective expectations, the coordination of plans based upon those expectations, and the consistency of those plans with an objective reality. According to Hayek, this is achieved by the dynamic feedback of competitive market processes. However, that achievement exists only as a tendency. Of course, the need to accommodate a variety of contingent circumstances implies that no plan is ever fully specified, so that "complete plan coordination *ex ante* is not even logically possible" (Lewin 1997, p. 14). Yet, as an intended criticism, this misses the point: rational actions (plans) are defined in terms of institutional and contractual arrangements which incorporate

⁹(Hayek 1935, p. 131):

It is quite conceivable that a distortion of relative prices and a misdirection of production could only be avoided if, firstly, the total money stream remained constant, and **secondly**, all prices were completely flexible, and, **thirdly**, all long term contracts were based on a correct anticipation of future price movements. This would mean that, if the second and third conditions are not given, the ideal could not be realized by any kind of monetary policy.

In respect of the Monetarist rule of tracking real productivity growth, Hayek asserted that [i]t demands something similar yet significantly different, namely that the quantity of money (or rather the aggregate of all the most liquid assets) be kept such that people will not reduce or increase their outlay for the purpose of adapting their balances to their altered liquidity preferences. (1978a, p. 77)

¹⁰"[T]he only way out of this dilemma... [is]... the introduction of money... [which]... does away with the rigid interdependence and self-sufficiency of the 'closed' system of equilibrium and make possible movements which would be excluded by the latter" (Hayek, 1933, pp. 44-45).

incentive mechanisms to promote the most pragmatically efficient use of endogenous information as a force to remove incompatibilities as and when they are revealed.

As a theoretical fiction, Hayek's concept of dynamic social equilibrium is no more or less fanciful than the static equilibrium of neoclassical theory, "since in order to arrive at a stationary equilibrium it would be necessary to pass through a phase in which the changes required to bring about a stationary state were still going on but their results were correctly foreseen" (Hayek 1941, p. 16 n). The theoretical structure of dynamic social equilibrium is simply a basis for the analysis of an existing state of affairs, which is necessary in order to reach "a prognosis of what is likely to happen in the future" (ibid., p. 22). Do current plans tally, or is disappointment inevitable? The purpose of that fiction is to provide a coherent basis for making that judgment; and it allows explanation in terms of causal sequences by revealing how and why an individual might feel compelled to alter any chosen course of action.

In seeking empirical verification of the tendency to social equilibrium, as the outcome of the spontaneous interaction of a multitude of individuals, the division of knowledge is a central issue. Knowledge of current prices and expectations of future prices are but a small part of the problem of knowledge. Wider issues relate to how, and under what conditions, different commodities might be obtained and used; but, within the succession of mistakes, reappraisals, and readjustments, the tendency to equilibrium is supported by the empirical evidence that prices exhibit a consistent tendency to correspond to costs."

Competition as a process and equilibrium as an ever-receding goal were once commonly held conceptions,¹² but in the post-war period, the attention of economic theorists was increasingly grabbed by the neo-classical and Keynesian paradigms. Their grasp tightened to a stranglehold, and general familiarity with Austrian economics declined to the point where it became necessary to adopt new terminology in order to remove an ambiguity of meaning:

[e]conomists usually ascribe the order which competition produces as an equilibrium—a somewhat unfortunate term, because such an equilibrium presupposes that the facts have already been discovered and competition therefore has ceased. The concept of an "order" which... I prefer to that of equilibrium, has the advantage that **we** can speak about an order being approached to varying degrees, and that order can be preserved throughout the process of change. While an economic equilibrium never really exists, there is some justification for asserting that the kind of order of which our theory describes an ideal type, is approached in a high degree. (Hayek [1968] 1978, p. 184)

¹¹"[B]y the time *The Wealth of Nations* appeared, competition had long been analyzed by a whole series of eighteenth-century authors as a process which brings temporary 'market' prices into line with underlying cost-covering 'natural' prices" (Blaug 1995, p. 3).

¹²"The replacement of the process conception of competition by an end-state conception... was finalized by 1933 or thereabouts" (Blaug 1995, pp. 3–4).

So, the case that "[t]he notion, then, of order and a tendency towards order is fundamentally different from the notion of equilibrium and a tendency towards equilibrium" (Fleetwood 1995, p. 143), may be conceded, but only as a matter of semantics. This distinction may prove pedagogically useful, but it is one which can distort a retrospective view of the evolution of Hayek's economics. Such distortion lies in the suggestion that

[i]n 1968 Hayek explicitly abandons the notion of equilibrium for the alternative notion of order. . . . Order, unlike equilibrium, is not an alternative description of an end state but rather a continual process of reproduction and transformation. . . . [Spontaneous socio-economic order is not a different conception of equilibrium, it is the rejection of equilibrium and equilibrium economics. (Fleetwood 1995, p. 141; emphasis in the original)]

There is no evidence in Hayek's published work that the notion of an end-state ever held any interest. Across more than 60 years of original publications (Hayek 1928; 1989), Hayek's notion of equilibrium was well-defined, dynamic, and consistent with his conceptualization of competition as a continuing process as opposed to a static end-state of affairs. The semantics are appropriate when they are used to clarify the development of a great idea, beginning with the focus of a narrow economic theorist, but widening to that of a philosopher with a vision of a multi-faceted social order. The technical economics was directed to business fluctuations and the relevance of money, and Austrian capital theory to those fluctuations. In shaping a wider perspective, Hayek emphasized the division of knowledge, its subjective nature, the problems of coordination, and the role of human action and market transactions in producing a coherent and evolving social structure.

REFERENCES

- Blaug, M. 1993. "Review of Kirzner's *The Meaning of the Market Process: Essays in the Development of Modern Austrian Economics*." *The Economic Journal* 103, no. 418 (May): 757–58.
- . 1994. "Competition as an End-State and Competition as a Process." Discussion Paper in Economics 95/16. University of Exeter.
- Bohm S. 1995. "Hayek and Knowledge: Some Question Marks." In Colonna, Hagemann, and Hamouda 1994b. Pp.160–77.
- Brunner, K., and A.H. Meltzer. 1977. *Stabilization of the Domestic and International Economy*. Amsterdam: North-Holland.
- Buchanan, J.M., and V. Vanberg. 1991. "The Market as a Creative Process." *Economics and Philosophy* 7, no. 2 (October): 167–86.
- Butos, W.N. 1985. "Hayek and General Equilibrium Analysis." *Southern Economic Journal* 25 (October): 332–43; cited from Cunningham Wood and Woods 1991. Pp. 102–17.
- Caldwell, B.J. 1988. "Hayek's Transformation." *History of Political Economy* 20, no. 4: 514–41.
- Colonna, M., H. Hagemann, and O. Hamouda, eds. 1994a. *Money and Business Cycles*. Vol. 1. *The Economics of F.A. Hayek*. Aldershot: Edward Elgar.
- . 1994b. *Capitalism, Socialism, and Knowledge*. Vol. 2. *The Economics of F.A. Hayek*. Aldershot: Edward Elgar.

- Cunningham, Wood J., and R.N. Woods, eds. 1991. *Friedrich A. Hayek. Critical Assessments*. Vol. 4. London and New York: Routledge.
- Fleetwood, S. 1995. *Hayek's Political Economy. The Socio-Economics of Order*. London and New York: Routledge.
- Foss, N.J. 1995. "More on Hayek's Transformation." *History of Political Economy* 27, no. 2:345–64.
- Haan, N., R.N. Bellah, P. Rabinow, and W.M. Sullivan, eds. 1983. *Social Science as Moral Inquiry*. New York: Columbia University Press.
- Hayek, F.A. 1928. "Das intertemporale Gleichgewichtssystem der Preise und die Bewegungen des 'Geldwertes'." In *Welwirtschaftliches Archiv* 28, no. 2:3376. Translated as "Intertemporal Price Equilibrium and Movements in the Value of Money." Cited from Hayek 1984. Pp. 71–117.
- . 1931. *Prices and Production*. London: Routledge and Kegan Paul.
- . 1933. *Monetary Theory and the Trade Cycle*. London: Jonathan Cape. Originally published in German in 1929 as *Geldtheorie und Konjunkturtheorie*. Vienna: Julius Springer Verlag.
- . 1935. *Prices and Production*. 2nd ed. rev. enl. London: Routledge and Kegan Paul.
- . [1937] 1949. "Economics and Knowledge." *Economica* NS, 3, 33–54; cited from Hayek, 1949. Pp. 33–56.
- . 1939a. *Monetary Nationalism and International Stability*. Geneva: Institut Universitaire de Hautes Etudes Internationales. No 18, 2nd ed. London: Longmans, Green.
- . 1939b "Profits, Interest, and Investment." In Hayek 1939c. Pp. 3–72.
- . 1939c. *Profits, Interest, and Investment and other Essays on the Theory of Industrial Fluctuations*. London: Routledge.
- . 1941. *The Pure Theory of Capital*. London and Henley: Routledge and Kegan Paul.
- . [1945] 1949. "The Use of Knowledge in Society." *American Economic Review* 35, no. 4 (September):519–30. Cited from Hayek 1949. Pp. 77–91.
- . [1946] 1949. "The Meaning of Competition." Stafford Little Lecture. Princeton University, May 20. Cited from Hayek 1949. Pp. 92–106.
- . 1949. *Individualism and Economic Order*. London and Henley: Routledge.
- . 1967. *Studies in Philosophy, Politics, and Economics*. London and Henley: Routledge and Kegan Paul.
- . 1975. *A Discussion with Friedrich von Hayek*. Washington, D.C.: American Enterprise Institute for Public Policy.
- . [1968] 1978. "Competition as a Discovery Procedure." Delivered to the Philadelphia Society at Chicago, March 29, and to the Institut für Weltwirtschaft of the University of Kiel, 5 July. Cited from Hayek 1978b. Pp. 179–90.
- . 1978a. *Denationalization of Money*. 2nd ed. Hobart Special Paper 70. London: Institute of Economic Affairs. Reprinted in Hayek 1991. Pp. 125–235.
- . 1978b. *New Studies in Philosophy, Politics, Economics, and the History of Ideas*. London and Henley: Routledge and Kegan Paul.
- . 1984. *Money, Capital, and Fluctuations. Early Essays*. R. McCloughry, ed. London, Melbourne, and Henley: Routledge and Kegan Paul.
- . 1986. "Market Standards for Money." *Economic Affairs* 6, no. 4:8–10. Reprinted in Hayek 1991. Pp. 237–43.
- . 1988. *The Fatal Conceit: The Errors of Socialism: The Collective Works of Friedrich August von Hayek*. W.W. Bartley, III, ed. London: Routledge.
- . 1991. *Economic Freedom*. London: Basil Blackwell.

- . 1994. *Hayek on Hayek: An Autobiographical Dialogue*. S. Kresge and L. Wenar, eds. Chicago: University of Chicago Press.
- Hutchinson, T. W. 1981. *The Politics and Philosophy of Economics: Marxians, Keynesians, and Austrians*. Oxford: Oxford University Press.
- Keynes, J.M. 1936. *The General Theory of Employment, Interest, and Money*. New York: Harcourt, Brace.
- Laidler, D. 1994. "Hayek on Neutral Money and the Cycle." In Colonna, Hagemann, and Hamouda 1994a. Pp. 3–26.
- Lawson, T. 1994. "Realism and Hayek: A Case of Continuous Transformation." In Colonna, Hagemann, and Hamouda 1994b. Pp. 131–59.
- Lewin, P. 1997. "Hayekian Equilibrium and Change." *Journal of Economic Methodology* 4, no. 2:245–66.
- Lucas, R. 1977. "Understanding Business Cycles." In Brunner and Meltzer 1977. Pp. 7–29.
- McCoughry, R. 1984. "Editor's Introduction." In Hayek 1984. Pp. vii–xi.
- Mises, Ludwig von. [1920] 1990. *Economic Calculation in the Socialist Commonwealth*. Auburn, Ala.: Ludwig von Mises Institute.
- . 1966. *Human Action*. New Haven, Conn.: Yale University Press.
- Salerno, J.T. 1994. "Reply to Leland B. Yeager on 'Mises and Hayek on Calculation and Knowledge.'" *Review of Austrian Economics* 7, no. 2:111–25.
- Steedman, I. 1994. "On The Pure Theory of *Capital* by F.A. Hayek." In Colonna, Hagemann, and Hamouda 1994b. Pp. 3–25.
- Witt, U. 1997. "The Hayekian Puzzle: Spontaneous Order and the Business Cycle." *Scottish Journal of Political Economy* 44, no. 1 (February): 45–58.
- Zappia, C. 1996. "The Notion of Private Information in a Modern Perspective." *European Journal of the History of Economic Thought* 3, no. 1 (Spring): 105–31.