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# HAYEK'S EPISTEMIC THEORY OF INDUSTRIAL FLUCTUATIONS

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## Hayek's Epistemic Theory of Industrial Fluctuations

**Abstract:** It is generally accepted that F.A. Hayek gave up the business cycle as an object of theoretical investigation following the publication of 1941's *The Pure Theory of Capital*. The present paper aims to cast a shade of doubt upon this received view. Many of Hayek's philosophical writings bear important implications for the phenomena of the business cycle. Decisions taken on the basis of a "pretence" of knowledge impede the operation of the price system's belief-coordinating function and thereby contribute to episodes of economic disequilibrium. Moreover, this later account – which I call Hayek's *epistemic theory of industrial fluctuations* – implies certain aspects of his earlier explanation of the cycle. The two theories are logically connected in virtue of the role that ignorance and the limits of human knowledge play in each.

**JEL codes:** B2, B22, B29, B3, B31, B4, B41, E3, E31, E32

**Keywords:** Hayek, business cycle theory, spontaneous orders, pretence of knowledge, price system, economic equilibrium

### I. INTRODUCTION

Among the many things for which F.A. Hayek will long be remembered is the business cycle theory that he developed in the first two decades of his academic career. Hayek's theory of industrial fluctuations made his reputation as an economist and provided the basis from which he engaged Maynard Keynes in their famous debate of the early 1930s. It is generally accepted that Hayek essentially quit economic theory – and most definitely gave up the business cycle as an object of theoretical investigation – in favor of social and political philosophy following the publication of his last work in technical economics, 1941's *The Pure Theory of Capital*. The present paper aims to cast a shade of doubt upon this received view. Many of Hayek's philosophical writings bear important implications for economic phenomena, *especially* those of the business cycle. In particular, the conjunction of the price theory that Hayek developed in the 1940s and his later arguments concerning the methods appropriate to the investigation of

complex economic orders implies a broad, though by no means universal, explanation of economic-cyclical phenomena. Decisions taken on the basis of a “pretence” of knowledge<sup>1</sup> that the (usually, for Hayek, political) actor does not in fact possess impede the operation of the price system’s belief-coordinating function and thereby contribute to episodes of economic disequilibrium. Moreover, this later account – which, because of the central role it assigns to *beliefs*, I call Hayek’s *epistemic theory of industrial fluctuations* – implies certain aspects of his earlier explanation of the cycle and, thus, the two theories are related. More to the point, the two theories are logically connected in virtue of the role that ignorance and the limits of human knowledge play in each.<sup>2</sup>

## II. HAYEK’S EPISTEMIC THEORY OF INDUSTRIAL FLUCTUATIONS<sup>3</sup>

Hayek’s later theory of industrial fluctuations is *epistemic* in several interrelated respects. In the first place, the theory is built upon a conception of economic equilibrium as a condition of well-coordinated knowledge. That is, as Hayek argued in “Economics and Knowledge” ([1937] 1945), equilibrium exists to the extent that economically-relevant beliefs of individual market participants are mutually consistent and accurate with respect to the external facts. Though a *state* of equilibrium is a fiction, Hayek took it to be a fact verifiable by observation that a

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<sup>1</sup> Hayek’s 1974 Nobel Prize lecture is entitled “The Pretence of Knowledge” and it is the work in which he comes closest to plainly stating the theory of fluctuations sketched here. See O’Driscoll (1977, 140): Hayek “began a project on scientific methodology in the early 1940s, and he has moved further in this direction in his interests ever since. His Nobel Laureate lecture represents the culmination of this intellectual phase. Nowhere else has he more clearly spelled out his disagreement with macroeconomic thinking as fundamental and methodological.”

<sup>2</sup> The present paper is part of a broader project that aims to explicate Hayek’s fallibilist epistemology and its significance for his writings in a number of diverse disciplines. The thesis of this latter project is that the evolution of Hayek’s career is best explained in terms of his recognition of the severe limits of human cognitive capacities and of the implications of these limits for various fields of social-scientific and social-philosophical inquiry. The current essay attempts to explicate the ever-increasing role that considerations of human ignorance played in his thinking about the business cycle over an extended period of time. In an effort to keep the argument brief, I’ve opted to focus on the logic of Hayek’s epistemic theory of industrial fluctuations and to relegate the history of the development of the role of ignorance in Hayek’s thought to a separate paper. Thus, the reader will notice (but, hopefully, not be too distracted by the fact) that the very interesting historical aspects of the present argument are mostly ignored.

<sup>3</sup> The current essay explicates a mere sketch of an epistemic theory of industrial fluctuations. It is no part of the argument that Hayek *intended* to construct an epistemic theory of the cycle; indeed, it is not obvious that Hayek would have unhesitatingly approved of the present synthesis of the relevant aspects of his work. For this reason, the shortcomings of this synthesis, such as they undoubtedly are, should be attributed to the author rather than to Hayek. Witt (1997) also attempts to reconcile Hayek’s writings on spontaneous orders with the cycle problem. Witt’s argument is original and insightful, but though (as per the foregoing *caveat*) Hayek never put the relevant parts together, there is more textual evidence that supports the present interpretation as an exemplification of Hayek’s thought than there is evidence for Witt’s *sui generis* argument.

*tendency* for the relevant beliefs of economic agents to become better harmonized is operative under normal circumstances.<sup>4</sup> Thus, Hayek makes economic equilibrium a social-epistemological concept.<sup>5</sup> The solution to the economic problem is the answer to the question of the various means by which this tendency toward equilibrium may be either facilitated or inhibited (Hayek [1937] 1948, 50-51).

Hayek ([1945] 1948) answers this question to the effect that the operation of the tendency toward coordination of the relevant beliefs of market participants requires an epistemic device, a system of signals that conveys to economic agents the data they need to adjust their activities to the circumstances prevailing in the wider economic order. In Hayek's system, this epistemic device is a network of freely-adjusting prices.<sup>6</sup> Thus, Hayek's later theory of the cycle is epistemic in the sense of the central place it assigns to *beliefs*, their effective coordination, and the means by which this coordination is either promoted or prevented.

But the theory is epistemic in a further sense as well: it posits *human ignorance* as the root cause of the circumstances which, according to Hayek, most often hinder the belief-coordinating tendency of the price system in practice. Hayek's epistemic theory explains industrial fluctuations in terms of humans acting *on the basis of knowledge that they don't in fact possess* in such a way that interferes with the functioning of a freely-adjusting price system and which thus hampers the operation of the tendency toward economic equilibrium.<sup>7,8</sup> It is clear

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<sup>4</sup> "Experience shows us that something of this sort does happen, since the empirical observation that prices tend to correspond to costs was the beginning of our science" (Hayek [1937] 1948, 51).

<sup>5</sup> Hayek's epistemic conception of equilibrium is "subversive to conventional economics" (Vaughn, Forthcoming)

<sup>6</sup> Of course, knowledge of relevant prices is necessary but not sufficient for the adaptation of individual plans to changing circumstances. The operation of the tendency toward equilibrium also requires that market participants possess relevant scientific knowledge, knowledge of the given social- and legal-institutional context, as well as some knowledge of their fellow market participants and of other external circumstances (Hayek [1961] 2014). Also see Vaughn (1999).

For a mostly sympathetic critique of Hayek's theory of the "wisdom of prices," see Bronk (2013). I'm inclined to think that Bronk's criticisms of Hayek's account are a bit overstated. In particular, though it may require some supplementation, there's nothing in Hayek's epistemic treatment of the price system that is *inconsistent* with the possibility of the sorts of endogenous price distortions that Bronk highlights. Moreover, there's room to dispute the implication of Bronk's argument that the price system in the lead-up to the 2008 financial crisis was mostly undistorted by political considerations. The "Greenspan put" (Bronk 2013, 93) wasn't the only political factor that contributed to the crisis: the artificial incentivizing of home ownership via the U.S. Tax Code, the lowering of lending requirements mandated by the Community Reinvestment Act (and subsequent legislation), and the activities of Fannie Mae and Freddie Mac are all of the sort of interventions in the price system with which Hayek was concerned.

<sup>7</sup> "[I]t is not...the progress of science which threatens our civilisation, but scientific error, based usually on the presumption of knowledge which we do not possess" (Hayek [1970] 1978, 20).

<sup>8</sup> It is important to remember that a freely-adjusting price system is not necessarily an instantaneously-adjusting or even a rapidly-adjusting price system. The standard against which the operation of the price system in the real world

from Hayek's conceptions of both equilibrium and the price system that whatever encumbers the normal operation of the latter will, other things equal, retard the tendency toward the former. Hayek makes these concepts relevant to the problem of industrial fluctuations with the claim that the price system is frequently so adversely affected because certain decisions – often, but not necessarily, of an economic-political nature – which influence the structure of prices are made on the basis of false beliefs.

Hayek's explanation of how these false beliefs arise and come to be acted upon concerns the divide that separates the knowledge that effective political management of economic equilibrium requires and the knowledge that is actually available to policymakers, and, especially, the ignorance of policymakers with respect to their ignorance of this latter cleavage: economic policymakers don't know *that they don't know* how to effectively administer economic equilibrium. Indeed, quite to the contrary, the policymaker typically believes she can possess the knowledge both necessary and sufficient for effective political management of economic equilibrium—but she is wrong, or so Hayek argues.

According to Hayek ([1955] 1967, 18n), effective political control of the economy is predicated on predictive ability. However, only the most limited and, thus, least policy-relevant predictions are possible with respect to complex phenomena like those of the macroeconomy. Policy-relevant predictions require knowledge both of economic conditions and of the effects of policy machinations.<sup>9</sup> The latter kind of knowledge requires an adequate theory; the former requires sufficient data.<sup>10</sup> Hayek argues, however, that the policymaker possesses neither a theory adequate to the task nor the necessary empirical knowledge.

The theories relevant to economic equilibrium – in particular, the Walrasian theory of general equilibrium and the macroeconomic theory associated with the followers of Keynes – are, according to Hayek, meager policy tools. Hayek argues that the Walrasian explanation of

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is to be judged is not the perfectly competitive system of the economist's imagination, but an economic system *sans* such a mechanism (Hayek [1946] 1948; [1961] 2014; [1968] 1978, 184-186). The relevant question is not whether an unfettered price system can bring about a state of economic equilibrium – no system can – but whether the tendency toward the coordination of individuals' economic plans is more or less effective under a system of freely-adjusting prices than “what we could achieve by any other method” (Hayek [1968] 1978, 185).

<sup>9</sup> Hayek's epistemology treats all knowledge as of one of two kinds, namely, either theoretical, i.e., knowledge of general rules, or empirical, i.e., knowledge of “the particular circumstances of time and place,” which includes *tacit* knowledge or “knowledge *how*” as opposed to “knowledge *that*” (see Hayek [1945] 1948).

<sup>10</sup> By itself – in the absence of the relevant data – an accurate theory yields what Hayek calls “pattern predictions,” which, though they may permit the “cultivation” of the circumstances necessary for equilibrium, do not suffice for the kind of conscious and continuous administration of economic equilibrium to which policymakers often aspire (Hayek [1955] 1967, 18-19).

general equilibrium *explains* no such thing. The conditions which, for Hayek, *constitute* a state of equilibrium are the *assumptions* of general equilibrium theory (Hayek [1975] 1978, 25-26).<sup>11</sup> The problem that confronts the economic policymaker is how to engender (*inter alia*) a condition of “[c]omplete knowledge of the relevant factors on the part of all participants in the market” (Hayek [1946] 1948, 95). A theory that assumes the presence of this condition from the outset, as general equilibrium theory does, is of little instruction to the policymaker.

Moreover, the posit that Hayek attributes to the followers of Keynes<sup>12</sup> that “there exists a simple positive correlation between total employment and the size of the aggregate demand for goods and services[, and which] leads to the belief that we can permanently assure full employment by maintaining total money expenditure at an appropriate level” may at best, “only be approximate, but as it is the *only* one on which we have quantitative data, it is accepted as the only causal connection that counts” (Hayek [1975] 1978, 25; italics in the original). Thus, according to Hayek, the theoretical knowledge that effective political administration of economic equilibrium requires – if it exists at all – has not yet been discovered. The available theoretical knowledge is not relevant to the problem that confronts the economic policymaker and the relevant theoretical knowledge is not available.

But, whatever the theoretical understanding of policymakers with respect to the economy, the empirical data required is, according to Hayek ([1937] 1948; [1945] 1948), necessarily *subjective*, i.e., dispersed across and fragmented within the minds of all of the individual market participants, each of whom acquires via the price system such knowledge as is necessary to adapt her particular economic plan to changes in economic circumstances. That is, provided the price structure is not manipulated (directly or indirectly), the knowledge relevant to the effective operation of the tendency toward equilibrium *is* available to individual market participants. However, the dispersed and fragmented knowledge of the latter cannot be conveyed in an easily-

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<sup>11</sup> “Hayek believed that his contemporaries were not always in touch with the ‘fictions’ and limitations inherent in general equilibrium theory and were prone to confuse statements about equilibrium with the theory of the approach to equilibrium” (O’Driscoll 1977, 19). Also see Zappia (1999).

<sup>12</sup> Whether this posit can also be attributed to Keynes himself is at least doubtful. Indeed, there are many respects in which Keynes’ conception of economic phenomena as complex is remarkably similar to Hayek’s. See Hoover (2006, 92): “Keynes’s vision of the economy is that it is complex and our knowledge of it is bound to be incomplete and frequently qualitative only...Keynes would have [been skeptical of] the ‘Keynesian’ efforts to use macroeconometric models to ‘fine-tune’ the economy.”

digestible form to – much less comprehended by – a committee of policymakers.<sup>13</sup> That is, it is not possible to measure the dis-coordination prevailing with respect to people’s beliefs relative both to each other and to external circumstances. Of course, knowledge of this sort is required if economic management is to be effective: if the policymaker is to craft policy so as to effectively engender a state of economic equilibrium, she must know the extent to which existing beliefs are both uncoordinated and inaccurate. However, it is not merely that the knowledge necessary to consciously manage economic equilibrium cannot be communicated to policymakers, as Hayek ([1968] 1978) emphasizes in “Competition as a Discovery Procedure,” much of the relevant knowledge is created by the very competitive process that deliberate economic administration (at least partially) displaces.<sup>14</sup> Thus, in part because such empirical knowledge as does exist and is relevant to the problem cannot be communicated, and in part because much of the relevant knowledge does not exist in the absence of the competitive process, the policymaker is ignorant of the empirical knowledge that effective political administration of economic equilibrium requires.

More importantly, the policymaker is also ignorant of this latter ignorance.<sup>15</sup> That is, the policymaker is convinced that she possesses an adequate theory and can acquire the relevant data. The source of this (according to Hayek, misplaced) optimism is the prevailing opinion regarding scientific method (Hayek [1975] 1978, 30). The “scientistic” methodology that holds sway over many macroeconomists, their political advisees, and a large swath of the latter’s public constituency, treats “as important [that] which happens to be accessible to measurement” (Hayek [1975] 1978, 24). Scientism reifies the techniques of quantitative measurement of the

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<sup>13</sup> “[O]ur modern economic system...rests on the use of knowledge (and of skills in obtaining relevant information) which no one possesses in its entirety...Certainly, we ought not to succumb to the false belief, or delusion, that we can replace it with a different kind of order, which presupposes that all this knowledge can be concentrated in a central brain, or group of brains of any practicable size” (Hayek [1970] 1978, 13).

<sup>14</sup> “[W]herever competition can be rationally justified, it is on the ground that we do *not* know in advance the facts that determine the actions of competitors...[C]ompetition is valuable *only* because, and so far as, its results are unpredictable and on the whole different from those anyone has, or could have, deliberately aimed at” (Hayek [1968] 1978, 179-180; italics in the original).

<sup>15</sup> The policymaker’s ignorance of the relevant theoretical and empirical considerations is typically denied by those “who have hoped that our increasing power of prediction and control, generally regarded as the characteristic result of scientific advance, applied to the processes of society, would soon enable us to mould society entirely to our liking” (Hayek [1975] 1978, 30). Moreover, the attitude of the public toward these same possibilities exacerbates the politician’s penchant for denying her manifest ignorance: “so long as the public expects more there will always be some who will pretend, and perhaps honestly believe, that they can do more to meet popular demands than is really in their power” (Hayek [1975] 1978, 31).



physical sciences to the level of exemplars for all other fields to follow.<sup>16</sup> The methods of these disciplines are to be applied in all areas of scientific inquiry without consideration of their aptness for the investigation of non-physical phenomena.

The aforementioned macroeconomic theory of Keynes' followers makes the economically-relevant variables those that just happen to be measurable. The policymaker is convinced by the conjunction of scientism and macroeconomic theory that the understanding required to make management of equilibrium effective is within her cognitive grasp. What's more, the scientific attitude persuades the policymaker that she can also possess the necessary empirical knowledge. That is, in virtue of both its quantitative nature and its very successful application in the sciences of less complex phenomena, the statistical method appears the quintessence of scientific virtue. However, statistical data ignore precisely the information that effective countercyclical policymaking requires. "[i]nformation about aggregates or statistical collectives is of little use for deciding what particular people should do at particular moments which is what they would have to be told by the central authority. The statistician, in order to arrive at his aggregates, must largely abstract from those very details which will decide what particular individuals ought to do." (Hayek [1961] 2014).<sup>17</sup> The empirical data that is available to the policymaker is not relevant to the task of the political administration of economic equilibrium.

In short, blinded by a false methodology, the economic policymaker is led into a "pretence of knowledge" upon which she acts, unawares – indeed, convinced otherwise – of the irrelevance and inadequacy of her epistemic position. Policymakers are misled into the false belief that they possess both the theoretical and empirical knowledge required of effective macroeconomic management by the combination of a methodology that accords special status to measurable parameters, a theory that makes the relevant parameters those that just happened to

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<sup>16</sup> According to Hayek, who is usually credited with having coined the term, scientism is "an attitude which is decidedly unscientific in the true sense of the word, since it involves a mechanical and uncritical application of habits of thought to fields different from those in which they have been formed. The scientific as distinguished from the scientific view is not an unprejudiced but a very prejudiced approach which, before it has considered its subject, claims to know what is the most appropriate way of investigating it." (Hayek 1942, 269).

<sup>17</sup> "[T]he chief guidance which prices offer is...*what to do*" (Hayek [1968] 1978, 187; italics in the original). Hayek long argued against the causal import of economic aggregates. In his original review of Keynes' *Treatise of Money*, Hayek ([1931] 1995, 128) argued that "Mr. Keynes's aggregates conceal the most fundamental mechanisms of change." His view remained unchanged 35 years later: "the artificial simplification necessary for macro-theory...tends to conceal nearly all that really matters" (Hayek [1966] 1978, 289, also 285-286). On Hayek's attitude toward aggregation, see Repapis (2011, 706-707).

be measurable, and the statistical techniques for the analysis of the aggregative variables in which the latter theory trucks.

What's more, when policymakers pretend to possess the relevant economic knowledge and make policy on the basis of this pretence, their decisions typically impede, either directly or indirectly, the price system's knowledge-coordinating function.<sup>18</sup> It suffices to hamper the operation of the tendency toward equilibrium for those in a position to do so to intervene in a way that fetters the adjustment of the price system to changes in economic circumstances on the basis of knowledge that they don't in fact possess. Such is Hayek's epistemic theory of industrial fluctuations.

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It is generally believed that Hayek's epistemic treatments of both economic equilibrium and the price system are artifacts of his engagement in the English-language socialist calculation debate of the mid-1930s.<sup>19</sup> However, O'Driscoll (1977, 102) has argued persuasively that these conceptions are "interconnected" with Hayek's then-ongoing work on the business cycle.<sup>20</sup> In

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<sup>18</sup> "[I]n the social fields the erroneous belief that the exercise of some power would have beneficial consequences is likely to lead to a new power to coerce other men being conferred on some authority. Even if such power is not in itself bad, its exercise is likely to impede the functioning of those spontaneous ordering forces by which...man is in fact assisted in the pursuit of his aims" (Hayek [1975] 1978, 34).

<sup>19</sup> See Caldwell (1988) and (2004).

<sup>20</sup> If his foreword to O'Driscoll's book is to be believed, Hayek (1977) himself was persuaded by O'Driscoll's interpretation of his work on equilibrium and prices and their relation to his early explanation of the cycle. It seems clear that these epistemic considerations did not emerge in "Economics and Knowledge" *ex nihilo* and are indeed connected with the development of the early cycle theory. Hayek's ([1933] 1939) essay "Price Expectations, Monetary Disturbances, and Malinvestments" ([1933] 1939) both is part of the early project and emphasizes the relevant epistemic considerations:

[E]xpectations existing at a particular moment will to a large extent be based on prices existing at that moment and...we can conceive of constellations of such prices which will create expectations inevitably doomed to disappointment, and of other constellations which do not bear the germ of such disappointments and which create expectations which—at least if there are no unforeseen changes in external circumstances—may be in harmony with the actual course of events. This consideration appears to me to provide a useful starting point for further developments of the theory of industrial fluctuations (Hayek [1933] 1939, 140-141).

As O'Driscoll (1977, 102) puts the point, "Hayek's [early business cycle] theory is about the inconsistency of plans...This point should have received wider recognition, especially after Hayek's work on the role of prices in communicating information for the coordination of economic activity. In fact, it was in [the just-cited "Price Expectations"] lecture delivered in 1933 on cyclical fluctuations that Hayek first presented the thesis of his later 'Economics and Knowledge'." On this point, also see Foss (1995), Zappia (1999), and Repapis (2011). Indeed, there

any case, it is not necessary to read Hayek's epistemic conceptions of equilibrium and the price system as aspects or consequences of his business cycle work in order to appreciate the extent to which considerations of the limits of human cognition connect the early account with Hayek's later epistemic theory of industrial fluctuations.

Hayek's early account explains economic disequilibrium in terms of the discombobulating effect that credit expansion has on the delicate links between consumption and production decisions. Credit expansion – a supply of bank loans that exceeds the supply of voluntary savings or, in Hayek's technical verbiage, a rate of interest on loans below the “natural” rate of interest that would equilibrate the demand for loans with the supply of voluntary savings – prevents the re-adjustment of the economy to changes in the economic data.<sup>21</sup>

Importantly for our purposes, considerations of the limits of human knowledge enter into the early theory in ways that are markedly similar to the roles they play in the later, more purely epistemic, account. In particular, epistemic concerns figure in both as *motives for* and *causal factors in* Hayek's explanation.

We've already seen that the later theory was driven primarily by Hayek's contention of the inadequacy of the epistemic devices available to the economic policymaker. This same kind of concern was a central motivation for the development of his earlier theory of fluctuations. Hayek's early business cycle arguments were directed against a pretence of knowledge of the requirements of adequate countercyclical monetary policy, in particular, the then-popular belief that the stabilization of the general level of prices is both necessary and sufficient to ensure equilibrium, and that knowledge of the value of some price index (together with the capacity for its indirect control via monetary policy) sufficed for the purposes of political administration.<sup>22</sup> As

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is some reason to believe that Hayek's conception of the epistemic function of the price system originated even earlier than 1933: see Hayek ([1928] 1984) and Repapis (2011, 704 and 711-712).

<sup>21</sup> There's no need to recapitulate Hayek's early account at length in the present context. This ground is well covered elsewhere. Hayek's original writings on the cycle have been anthologized in (2012a and 2012b). Vital sources in the extensive secondary literature include O'Driscoll (1977), Haberler (1986), Steele (1992), Cottrell (1994), Colonna and Hageman (1994), Garrison (2000), and Klausinger (2012a and 2012b).

<sup>22</sup> See White (1999a, 110):

Hayek's early work, up to and including *Prices and Production*, aimed at providing a theoretically well-grounded critique of the dominant monetary policy prescription of the day...The error of the price-stabilization program was not just an abstract theoretical issue. Hayek believed that the program was inspiring the Bank of England and the U.S. Federal Reserve System between 1925 and 1929 in a harmful and ultimately futile joint effort at monetary expansion to prevent the fall in prices that should have accompanied the outflow of gold from Britain and the rapid growth of real output in the U.S. economy. Hayek subsequently considered the deep crisis of 1929-32 to have been the inevitable reaction.

early as 1925, Hayek wrote that such a method “seeks to solve the problem under discussion in what is certainly too simple a fashion” ([1925] 1984, 18). Three years later, Hayek wrote that any attempt to stabilize the general price level as indicated by some index brings about erroneous signals that undermine the price system: such “monetary influences...hinder the establishment of the natural price structure” ([1928] 1984, 102).<sup>23</sup>

In the 1925 paper, Hayek also considered the suggestion that “cycle barometers” might supply the knowledge necessary for effective countercyclical policy; but, though he considered them to be better tools than price statistics, concluded that “the economic situation is not revealed by the movement of any one of the factors that they take as their indicator[.]” ([1925] 1984, 20). Hayek was arguing very early in his academic career that the empirical data available to the economic policymaker are not relevant to the task the latter confronts in the practice of administering economic equilibrium.

In the last lecture of *Prices and Production*, his early business cycle *magnum opus*, Hayek ([1931, 1935] 2008) offers further arguments against the belief that stability in the general level of prices is both necessary and sufficient for economic equilibrium. Hayek’s theoretical considerations instead support the view that, in order to neutralize the effects of money on prices, the “stream” of the circulating medium (i.e., the stock of money multiplied by the velocity of circulation) should not vary. However, in his characteristic fashion, Hayek ([1931, 1935] 2008, 292) emphasizes the “enormous” practical difficulties confronting such a policy, “difficulties which monetary reformers are always so inclined to underrate.” Strict monetary neutrality requires the establishment of all of the conditions that the theory says are necessary, but it is “very probable that this is practically impossible” (Hayek [1931, 1935] 2008, 303). In particular,

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<sup>23</sup> Hayek ([1976] 1978) came around to the price-level stabilization argument, albeit with a typically idiosyncratic twist. In particular, “[h]e advocated allowing private firms to issue fiat-type monies chiefly on the grounds that a system of competitive issuers would more effectively achieve price-level stability than would a central bank” (White 1999a, 117). In other words, Hayek came to believe that the price level might be an effective tool for the maintenance of economic order in the context of competitive issuers of money, where individual users of money would be free to search for the issuers of the most reliable circulating medium, but that it remained an inadequate tool when wielded by a central authority with a monopoly on the issuance of money. This said, as White (1999a, 117) points out, Hayek discussed price-level stabilization as perhaps the most *practicable* policy norm as early as ([1933] 1984), though, for the reasons emphasized elsewhere in his early business cycle work, it was neither necessary nor sufficient to preserve an economy in equilibrium. In any case, though Hayek modified his view regarding stabilization schemes, it is important for our purposes to note that he apparently did so for *epistemic* reasons: Hayek ([1976] 1978, 73) came to believe that his proposal for the issuance of fiat monies by private firms would facilitate “foresight, calculation, and accounting.”

securing a constant flow of the money stream requires complete price and wage flexibility, and, relatedly, correct foresight with respect to future price fluctuations. Such “frictions” obstruct the smooth and rapid adaptation of the price system to changes in the economic data that is assumed by general equilibrium theory (upon which, despite his later resistance to general equilibrium theorizing, Hayek’s early account of the cycle is based) and which is necessary for the effectiveness of monetary neutrality. If the conditions required for the perfect adaptation of the price system to changed circumstances are not secured, the ideal of monetary neutrality “could not be realized by any kind of monetary policy” (Hayek [1931, 1935] 2008, 304).<sup>24</sup> Monetary neutrality provides no actionable criterion of rational policy. Thus, Hayek’s early theory of the cycle is driven by the same sort of concern that motivates his later account: his belief in the inadequacy of the knowledge available to policymakers in the form of price statistics and “cycle barometers,” and, conversely, of the inaccessibility of the relevant knowledge that monetary neutrality requires.

But, more than this, as does Hayek’s epistemic theory of fluctuations, his early account assigns ignorance a causal role with respect to the cycle. Hayek’s technical-economic explanation attributes industrial fluctuations to *a particular kind of action in the economy on the basis of knowledge that the actor does not possess*:

(t)he situation in which the money rate of interest [on loans] is below the natural rate need not...originate in a *deliberate lowering* of the rate of interest by the banks. The same effect is obviously produced by an improvement in the expectations of profit or a diminution in the rate of saving, which may drive the ‘natural rate’ (at which the demand for, and the supply of, savings are equal) above its previous level; while the banks refrain from raising their rate of interest to a proportionate extent, but continue to lend at the previous rate, and thus enable a greater demand for loans to be satisfied than would be possible by the exclusive use of the available supply of savings (Hayek [1933] 2008, 78; italics in the original).

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<sup>24</sup> “[N]eutrality of money was a policy goal in a world in which these assumptions did not and could not apply” (O’Driscoll 1977, 55).

The latter case is important, not because it is the only way in which the cycle can manifest on Hayek's early theory, but due to the fact that it is "probably the commonest in practice, [and] to the fact that it *must inevitably recur* under the existing credit organization" (Hayek [1933] 2008, 78; italics in the original).

The purportedly inevitable recurrence of this case is a consequence of bankers' ignorance of the data necessary to ensure monetary neutrality.<sup>25</sup> Hayek argues that it is *impossible* for bankers to know whether they are at any time creating additional credit or lending on the basis of voluntary savings: "(a)s credit created on the basis of additional deposits does not normally appear in the accounts of the same bank that granted the credit, it is fundamentally impossible to distinguish, in individual cases, between" deposits based on savings and those that result from the granting of credit by other banks.<sup>26</sup> With respect to any particular loan, the lending institution is typically not where the loaned funds are ultimately deposited (because the loan recipient either deposits the funds in another bank or spends the money with a merchant who deposits the funds in another bank) and, because incoming deposits don't arrive marked either "savings-based" or "credit-based," it is impossible for bankers at the depository institution to know whether they are receiving (and subsequently lending on the basis of) savings or credit (Hayek [1933] 2008, 87).<sup>27</sup> "[T]his consideration rules out, *a priori*, the possibility of bankers limiting the amount of credit granted by them to the amount of 'real' accumulated deposits" (Hayek [1933] 2008, 87).

### III. CONCLUDING REMARKS

Thus it is that, despite the differences in the theoretical frameworks in which they're explicated (in particular, the absence in the later epistemic theory of the Walrasian conception of equilibrium), Hayek's explanations of industrial fluctuations are closely related. Both accounts

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<sup>25</sup> White (1999b) argues that the alleged inevitability of this case is highly dubious. Be this as it may, we are not interested here in the factual correctness of Hayek's argument, but in the central role he assigns to human ignorance.

<sup>26</sup> Also see Hayek ([1929] 1984, 192).

<sup>27</sup> Technically, this purportedly inevitable recurrence of credit creation is a consequence of ignorance *plus* the profit motive. That is, bankers are incentivized by profit considerations to push lending at least to the limits of their reserves (Hayek [1933] 2008, 87-94). However, the ignorance of bankers is the more fundamental point: if Hayek's argument is sound, then with or without the profit motive – i.e., even in a world in which bankers are motivated entirely by unadulterated altruism – so long as the currency is elastic, it is impossible for epistemic reasons to realize equilibrium between voluntary savings and the demand for loans (Hayek [1933] 2008, 80). Witt (1997, 48) argues that, for Hayek, "credit expansion is a matter of competitive necessity." I think it's closer to the truth to say that Hayek makes credit expansion a matter of competitive *convenience*, but of *epistemic* necessity.

are driven by concern for the consequences of the inadequacies of human cognition, i.e., the inaccessibility to human minds of particular items of relevant knowledge. What's more, both accounts make a cause of the cycle human action under a veil of ignorance of the knowledge required to make such action effective. Hayek's early account makes it the case that the economy cannot re-equilibrate because of credit expansion, which (it is alleged) inevitably recurs because, where the money supply is elastic, bankers are ignorant of the considerations that would equilibrate lending with voluntary saving. Hayek's later epistemic theory makes any kind of interference with the price system a sufficient cause of episodes of disequilibrium. He adds to this theory an empirical claim of regular price interference, which he attributes to the ignorance of policymakers with respect to their own ignorance: policymakers interfere, directly or indirectly, with the price system because they mistakenly believe they possess the knowledge required to do so effectively.

In both cases, it is ignorance that contributes to economic disequilibrium; indeed, *it is an implication of the later epistemic theory that the actions of bankers under a veil of ignorance of the relevant considerations posited by the earlier account impedes the tendency toward equilibrium*; however, it is not a consequence of the earlier theory that price interference as posited by the later account will necessarily impede the tendency toward equilibrium. This is to say that the later account is a more general explanation of fluctuations that includes the earlier account as a particular instance.

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