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THE ROLE OF IDEAL TYPES IN AUSTRIAN BUSINESS CYCLE THEORY

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The Role of Ideal Types in Austrian Business Cycle Theory

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I. Introduction

The Austrian theory of the business cycle (henceforth ABC) frequently has been a target for critics of Austrian economics. In particular, a number of economists who are generally appreciative of other Austrian themes have singled out ABC as being, in one such critic's words, an "embarrassing excrescence" marring the otherwise generally sound body of modern Austrian thought.¹ Despite such criticisms, many Austrian economists persist in forwarding ABC as the best available, or perhaps even the only valid, explanation for the cycles of boom and bust regularly occurring in most modern, national economies.

This sharp divergence of evaluations of ABC existing among a group of economists that, from the vantage of the economic profession as a whole, are largely in the same camp, suggests that the source of the disagreement may be some ambiguity in the most common expositions of the theory. In this paper we argue for this view and claim that the chief culprit at work is the failure, on the part of both supporters and critics of ABC, to recognize that the theory is constructed using a variety of ideal types and that, crucially for our thesis, the ideal types from which ABC is built vary significantly in terms of the contingency of their applicability.² We will discover that although some of the underpinnings of ABC are universally true of all human action,³ other

¹ This particularly colourful characterization of ABC is from Yeager (1986, p. 378). For similar views by "Austrian friendly" economists, see, e.g., Cowen (1998) and Tullock (1988). Other critics include Lucas (1981) and Krugman (1998).

² We are deeply indebted to Alfred Schutz's explication of the theory of ideal types in our work here. See Schutz (1967 [1932]).

³ Upon encountering the above framework for examining ABC, some Austrians may immediately object that it is a serious error to employ the method of ideal type analysis to the theories of praxeological economics. What's more, they can cite the originator of ABC, Mises himself, in defense of their position:

Ideal types are specific notions employed in historical research and in the representation of its results. They are concepts of understanding. As such they are entirely different from praxeological categories and concepts and from the concepts of the natural sciences.... (1996, pp. 59-60) Mises was on firm ground in rejecting the classification of praxeological categories and concepts as particular species within the genus "ideal types" if that genus is defined as it was when ideal type theory initially was presented by Max Weber. However, Alfred Schutz, a disciple of both Weber and Mises, articulated a more refined version of Weber's ideas that he regarded as addressing Mises' objection to including praxeological constructs among the examples of ideal types.

But in Weber's later thought, "ideal types are constructed by postulating certain motives as fixed and invariant within the range of variation of the actual self-interpretation in which the Ego interprets its own acts.... Both empirical and eidetic ideal types may be constructed. By empirical, we mean 'derived from the senses,' and by eidetic we mean 'derived from essential insight'" (Schutz, 1967 [1932], p. 243-245). Schutz contends that the theorems of praxeology (*eidetic types* in his terminology) are universal in that they operate at the highest possible level of abstraction available to the social theorist, that of *homo agens*.

conditions that it assumes arise only in particular institutional settings, which may or may not be present at any time or place. In turn, the scope of the theory then becomes clear: An Austrian-type business cycle is neither the only plausible explanation for every macroeconomic downturn, nor even the necessary outcome of every central bank credit expansion. Rather, ABC provides a possible account of specific historical episodes, albeit one that is, in the typical circumstances found in many recent, industrialized nations, quite widely applicable.⁴

The amount of illumination that ABC can cast upon any particular historical happening varies directly with how nearly the specific circumstances of the time in question approach the idealized state of affairs assumed in constructing the various ideal types it incorporates. Only a theory constructed with completely general ideal types could apply in every single historical instance. Since several of the building blocks essential to ABC are not completely general constructs, it follows that there may be economic downturns for which some other theory provides a better explanation, and that there can be instances of a central bank credit expansion that will not produce an Austrian-type cycle. Nevertheless, because financial institutions and policies in the most developed countries since the 19th century have largely matched the contingent idealizations employed in the Austrian theory, we believe that ABC is crucial in understanding many, or even most, of the modern cycles in the modern, industrialized world.

We hope to demonstrate that clarifying the various degrees of generality characterizing the ideal types from which ABC is constructed adequately fortifies the theory against much of the criticism to which it has been subjected. Additionally, we will attempt to show that the first proponent of Austrian business cycle theory, Ludwig von Mises, himself understood that the relevance of his theory to specific historical episodes depended upon how closely the circumstances from which they arose, and the behavior of the actors in those circumstances, mirrored the abstract conditions underlying the conception of the various non-praxeological ideal types embedded in the theory, even though he never explicitly stated as much.

Our discussion here owes much to Machlup (1978 [1936]), a paper that, if it only had been read more widely by the participants in this debate, might have resolved it long ago. Machlup explicitly shows how the degree of anonymity of an ideal types employed in some economic prediction correlates with the reliability of the prediction. He asks us to consider three statements by an economist:

Statement (1): “If, because of an abundant crop, the output of wheat is much increased, the price of wheat will fall.”

Statement (2): “If, because of increased wage-rates and decreased interest rates, capital becomes relatively cheaper than labor, new labor-saving devices will be invented.”

⁴ Horwitz (2000, p. 121) makes a similar point in his discussion of inflation: “Rather than seeing the traditional Austrian [business cycle] story as a necessary consequence of inflation, or indeed the only sort of systematic set of consequences that will follow inflation, we can see it as one, perhaps the most likely, of a number of kinds of intertemporal discoordination that are induced by inflation.”

Statement (3): “If, because of heavy withdrawals of foreign deposits, the banks are in danger of insolvency, the Central Bank Authorities will extend the necessary credit.”

(Machlup 1978 [1936], p. 64)

As we move from statement (1) to statement (3), the reliability of the statements declines, because:

[T]he causal relations such as stated in (2) and (3) are derived from types of human conduct of a lesser generality or anonymity. To make a statement about the actions of bank authorities (such as (3)) calls for reasoning in a stratum of behavior conceptions of much less anonymous types of actors. We have to know or imagine the acting persons much more intimately.

(Machlup 1978 [1936], p. 68)

It is this exact mixing of degrees of anonymity in ideal types that we assign the chief blame in the confusion over the status of ABC; indeed, Machlup warned of this problem: “The mingling of assumptions of different degrees of validity . . . is acceptable only if the assumptions are fully stated” (1978 [1936], p. 68). This essay will, in essence, represent an elaboration of how Machlup’s sketch applies to ABC.

II. Justifying the Use of an Ideal Type

If we are not involved in the theoretical analysis of action per se, but instead are attempting to explain particular past events, then we must justify the application of any particular ideal type to those episodes. What, then, sanctions the use of an ideal type as an explanatory device with which to comprehend certain events? Weber holds that ideal types ought to have two sorts of adequacy: explanatory adequacy (or, as Weber put it, adequacy on the level of meaning [Schutz, 1967 (1932), p. 225]) and causal adequacy. Explanatory adequacy means that we can comprehend why, if an actor or an action closely conforms to the ideal type in question, the phenomenon we actually observe is a comprehensible result of the “machinery” of that type. Causal adequacy means that we can find cases in the real world that proceed roughly as our ideal type says they should; in other words, our type is not only plausible, but it also helps describe various actual social goings-on. Demonstrating causal adequacy might involve the use of historical narrative, statistical studies, and other empirical work.

We can classify critics of ABC by employing Weber’s two types of adequacy. The first group would contain those who say ABC is *theoretically* unsound, i.e., that it lacks explanatory adequacy. For example, such a critic might contend, “No real businessman would act as Austrian business cycle theory contends he would.” The second category would include those who claim that ABC is, empirically speaking, irrelevant, because it lacks causal adequacy. The second type

of critic might say, “I grant that Austrian business cycle theory is *logically* sound, but we never see any *real* cycles that are explained by it.”

In this paper, we will address primarily the first group of critics, who claim that ABC is not a plausible theory of market participants’ actions, so that as an ideal type it lacks explanatory adequacy. Callahan and Garrison (2003) attempt to deal with the second group of critics, at least to some extent, by demonstrating that the boom-and-bust cycle of the late 1990s was very much an Austrian-type cycle. (We say “to some extent” because showing that ABC helps explain a single cycle does not, of course, defend it against charges that it is not broadly relevant.) Others have made similar efforts for other business cycles, for example, Rothbard (2000 [1963]).

III. Ideal Types Employed in the Construction of the Austrian Business Cycle

ABC, as we understand it, relies on several praxeological ideal types, including:

- * All action is spurred on by a desire to bring about future conditions that seem pleasing and to avoid those that do not.
- * Interest is, first and foremost, a manifestation of time preference; i.e, actors, all other things being equal, prefer a satisfaction sooner rather than later.
- * Economic goods can be divided into consumption, or first-order goods, and higher-order goods.
- * Value flows from consumption goods to the higher-order goods that produce them. Another way to look at this is that something is a higher-order good if and only if it is a part of someone’s plan to produce a consumption good.
- * One higher-order good can be a complement for another, so that each of them must be available for certain production plans to proceed as envisioned.
- * Capital goods are heterogeneous, meaning that various capital goods are not perfect substitutes for each other, and such more-or-less specific goods require time both to create and to re-deploy.

Such types, unless their very construction is plagued by errors in praxeological reasoning, are always adequate both explanatorily and causally, because they operate at the very high level of abstraction of *homo agens* or at least the “money user” of catallactics. If our reasoning is sound, the type we postulate will necessarily lead to the sorts of actions it hopes to explain.⁵ And because praxeological types are based on the postulates that create the practical world of action,

⁵ We mean this very broadly. For example, a perceived benefit to be gained by greater availability of water in a community will, all other considerations set aside, lead to some sort of effort to increase its availability. This does not imply praxeology has any power to predict what form those efforts will take, other than that they will be the ones that appear to offer the greatest benefit at the least cost.

they will be empirically applicable to any events in which human action is present. However, as soon as we consider ideal types on lower levels of abstraction than that of pure praxeological types, we find that we can conceive of types that are explanatorily sound, but that have no applicability to the world in which we live. For instance, Mises briefly explored the nature of an economy in which the disutility of labor was absent (1996 [1966], p. 131]). Such a construct, while possessing explanatory adequacy, lacks causal adequacy, because it has no applicability to the world in which we actually live. (Mises recognized this: He examined a catallaxy without disutility of labor only to demonstrate that praxeology can explore modes of action that are purely theoretical.) Whenever we descend in degree of abstraction from praxeological types into more concrete types, the question of causal adequacy will arise and should be addressed by the theorist employing the type(s) in question.

We will not venture, in any depth, into ABC's employment of purely praxeological types, since the reliance of ABC on such types has been adequately explored in the foundational work by Mises and Hayek. However, we suggest that ABC, besides being constructed from these highly abstract praxeological types, is also built from ideal types of lower levels of abstraction, whose use has been overlooked by many advocates and critics of the theory.

Among such types are:

- * The creation of a Ponzi scheme.
- * A "mania" in some particular market
- * A central bank credit expansion mainly flowing into capital markets.
- * Savvy investors.
- * Naïve investors.
- * The prisoner's dilemma.
- * The presence of a Big Player in the interest-rate market.

The above types, unlike praxeological ones, are not universal. We can conceive of human action taking place without the existence of any individuals or individual actions conforming to them. And yet, if they are often present in the social world in which we actually live, ABC will have broad, even if not universal, applicability.

A brief outline of Austrian business cycle theory runs as follows. The central bank can temporarily create an investment boom by forcing interest rates down below the rate that reflects the underlying time preferences of savers and borrowers. It "papers over" the shortage of loanable funds that would otherwise emerge due to the non-market interest rate by creating money through open market operations. In the canonical version of the ABC, the newly created

money flows first into capital markets because it is assumed that the actors selling bonds to the central banks are active players in those markets. When the new funds make their way into the hands of those desiring to increase their level of investment beyond what it had been prior to the credit expansion, it therefore increases their demand for capital goods.

An increase in the quantity of money in an economy does not increase that economy's productive capacity. The excess supply of money does not call new goods into existence from nothing. Any increase it prompts in the production of some goods must eventually come at the expense of the production of others. More specifically, if in an Austrian cycle more capital goods are produced in certain industries as an initial response to the credit expansion, then that increase must come at the expense of a decrease in the production of either consumer goods, other capital goods, or both. Unlike Keynesian and other models where consumption and investment are assumed to move together, the key insight in the ABC is that they are in competition for resources. Inflation can, as Garrison (2001) argues, enable both to expand at the same time for the very short run of the start of the business cycle, but the fact that consumption and investment compete with each other over time is part of the process that turns the inflation-generated boom into the bust.

The central bank may be able to initially direct the new money toward capital markets, but in a market economy there is no way it can prevent that money, over time, from flowing into the hands of those who wish to demand more consumer goods. Sooner or later, the demands for the complementary investment goods needed to complete projects initiated during the credit expansion, and for additional consumer goods demanded by consumption-oriented actors, tug at the structure of production from opposite ends (Garrison, 2001). With the same resources to go around, attempting to expand both consumption and investment is unsustainable. Like over-stretched taffy, the structure comes to contain gaps, places where certain capital goods were expected to be available, but in fact are not, at least not at the price at which businesses had planned to acquire them.⁶ Entrepreneurs find that they are not able to complete all of the production plans they had launched subsequent to the influx of new money, since some capital goods necessary to the completion of their plans either do not exist or are more scarce (and therefore more expensive) than their initial plans had envisioned.

To see the relevance of the particular ideal types the theory makes use of, suppose that instead of the excess supply of money first finding its way into the hands of producers, it flowed first to consumers. Rather than a story that starts with increased expenditures on higher-order goods and the resulting failure of the plans based on them due to the scarcity of complementary investment goods, we would tell a story that begins with an increase in consumer spending, leading to a sequence of events different from an Austrian cycle. Roger Garrison (2001, pp. 75–76) briefly explores this alternative scenario where the excess money supply “makes its initial appearance as transfer payments to consumers.” The result would be an expansion of investment goods closer to consumption, setting off a cyclical process with some interesting variations from the traditional Austrian cycle. Garrison justifies the traditional version by arguing that “lending money into existence . . . accords with much historical experience.” We might also note that the

⁶ See Callahan and Garrison (2003) for a description of how such gaps occurred during an actual cycle.

ideal type of a credit-based influx of new funds meets Weber's notion of "explanatory adequacy" in that there is interest to be earned from such lending, and not from pure transfer payments. It seems understandable that both central banks and financial intermediaries would prefer the former to the latter. It is clear that the adequacy of the ideal types embedded in the theory is a crucial question to be addressed.

In the sections to follow, we address the role played by several of the specific non-praxeological ideal types in the Austrian Business Cycle Theory. We attempt to show how each has been misunderstood by critics and how clarifying the nature of the ideal-typical construct can serve to clear up that confusion.

IV. Rational Expectations and Austrian Business Cycle Theory

The importance of the adequacy of ABC's ideal types becomes clear in reading criticisms of the theory. As we read those critics of ABC who seem to understand the theory well, their primary theoretical complaint is that it is unrealistic to expect that entrepreneurs will increase capital spending in response to a reduction of interest rates by the central bank.⁷ Most entrepreneurs are not fools, such critics note. Soon enough, entrepreneurs will learn that additional capital expenditures undertaken because of a central bank credit expansion will not be profitable in the long run. As Tullock (1988) puts it:

The second nit has to do with Rothbard's⁸ apparent belief that business people never learn. One would think that business people might be misled in the first couple of runs of the Rothbard [Austrian] cycle and not anticipate that the low interest rate will later be raised. That they would continue unable to figure this out, however, seems unlikely.

We will attempt to demonstrate that once the various ideal types employed in constructing ABC are made explicit and carefully analyzed, then criticism such as Tullock's will prove to be unfounded.

In particular, we can clarify some of this misunderstanding by contrasting the ABC with standard rational expectations approaches. As Tyler Cowen notes in his examination of ABC: "The older Austrian theories never explicitly spell out their expectational assumptions, and for this reason these theories are hard to evaluate" (2000, p. 91). That is not true of the rational expectations school of macroeconomics, whose adherents certainly have explicitly spelled out their expectational assumptions; however, those expectations strike us as highly unrealistic, and, moreover, unrealistic in a way that vitiates their analysis. Per rational expectations theorists, ABC can be dismissed because it violates their central tenet, which is that economic actors have expectations that are "rational." This means that actors' expectations are the best-possible

⁷ There is also a history of ABC criticism on the part of those who clearly do not understand it. Those, for example, who view it as a theory of systemic over-investment, rather than as a theory of widespread malinvestment, but we will not address such obviously misguided criticism here.

⁸ Tullock decided to take a pamphlet of Murray Rothbard's as the canonical version of Austrian theory.

forecast of the future state of the economy, given the knowledge they have and the cost of acquiring better information. Their expectations may prove to be entirely unfounded, as events play out in ways that differ from their “best possible forecast.” The rational expectations hypothesis only holds that no one could have predicted those events more accurately, except by pure chance.

Although he is not offering a full-blown rational-expectations alternative, Tullock’s critique of ABC is typical of this approach. Within the traditional rational-expectations model, it is hard to imagine why investors would choose to bid up asset prices in response to easy credit if it is clear that many assets will later decline in price. Such models generally posit a single set of expectations prevailing throughout an economy. The model of island economies and inflation (Lucas 1972) is not really an exception here, because the actors it describes differ only in that their knowledge of the macroeconomy is limited by their locale, and other than their geographical location they are all identical. There is just one economic actor in such models, cloned as many times as is necessary to fully populate it. All producers and all consumers must respond in the same way to a credit expansion since they all share the same expectations.

Once we alter that assumption, a different picture emerges. Consistent with an Austrian emphasis on the fact that different people know different things and thus form their expectations differently (Hayek 1937), the ABC can be understood as assuming that actors have expectations that are to some degree heterogenous. The ABC can be understood as populated by two types of investors, *the savvy investors* and *the naïve investors*. Although such a picture still represents a gross simplification of the real world—investors actually exhibit a broad spectrum of naïveté and savvy—it suffices for our purposes and it significantly alters the outcome predicted in rational expectation models. As a first-cut at defining the two types, we could say that the savvy investor buys an asset when he has reason to believe that its price *will* increase, based on his estimate of the future state of the market. The naïve investor buys an asset when he sees that its price *has* increased. Of course, even on the part of the naïve investor, there is an expectation of future gains. However, his expectation is founded on the mere fact that the price of the asset in question recently has gone up, and his belief that whatever happened in the immediate past will continue happening indefinitely into the future. The idea that the form of past events will emerge, unaltered, again and again in the future has been very useful to the physical sciences. While not as successful in gauging the future course of customs, traditions, and moral practices as it is of purely physical happenings, it is still a good first hypothesis, to be abandoned only when events demonstrate that a period of cultural transformation is underway. But believing that recent trends in financial markets are a reliable indicator of future events is far more dubious and more dangerous to the believer.

Shiller (2003, pp. 96–97) presents the same basic division of investors as does this paper, although he refers to the two types as “smart money” and “ordinary investors.” (He also refers to the latter as “feedback traders.”) He points out that mainstream theoretical work offers models where the savvy investors actually amplify trends begun by feedback traders, “in anticipation of the price increases they will cause.” And he cites recent research presenting strong empirical evidence that the two types of investors that we posit correspond at least roughly to reality.

In a situation where savvy investors believe they can profit for a time from naïve investors' enthusiasm for some price trend, another ideal type may come into play, one which we will call *the Ponzi scheme*. In everyday usage, a Ponzi scheme is a scam, one where funds from later investors are funneled straight to earlier ones, creating the appearance that the scheme is highly profitable. Of course, as the scheme is bound to run out of investors at some point, it is inevitable both that it will crash, and that there will be more losers than winners when it does. We suggest that particular asset markets sometimes are closely analogous to a Ponzi scheme. Savvy investors recognize that some upward price trend for some asset cannot continue very far into the future. However, they believe the asset's price will keep rising in the near term, because it has captured the interest of naïve investors. They may be able to profit from the price rise if they are able to sell before the bubble bursts.

Meanwhile, naïve investors, entranced by the recent price rise of the asset in question, give little consideration to the long-term sustainability of such increases. Instead, noting that others have made profits by investing in the asset, they believe that such profits will continue indefinitely. They pay no heed to how many potential investors remain who have not yet invested in the trend, or to whether the productive activity standing behind the asset better meets some consumer demand than do alternative investments. Naïve investors pour money into the scheme based on the fact that others previously have done well by participating in it. As Shiller (2003, p. 94) says: "Real world stock-market speculative bubbles . . . resemble Ponzi schemes in the sense that some 'new era' story becomes attached to the bubble and acquires increasing plausibility and investor enthusiasm as the market continues to achieve high returns." As the term is typically used, one or more people deliberately create a Ponzi scheme, planning to ensnare naïve investors. But in our use of the Ponzi scheme as an ideal type, it is not necessary that anyone willfully initiate it. It is sufficient that a group of savvy investors recognizes that an unsustainable, rising trend in the price of some asset (or class of assets) is underway, and that they decide to participate in the bubble in the hopes of selling before naïve investors realize that it will burst. Whether or not a particular bubble was deliberately inflated is a question to be answered by historians investigating the events around its inception. The applicability of the above ideal types—the naïve investor, the savvy investor, and the Ponzi scheme—is well documented in the literature on the history of finance. When all are present, they compose the ideal type "financial market mania," employed frequently to explain booms and subsequent busts in particular asset or types of assets since at least the 19th-century publication of Mackay's *Extraordinary Popular Delusions & the Madness of Crowds*. Shiller (2000) is a prominent, recent advocate of mania theory, using it to explain the Internet boom of the late nineties.

Mackay (1980 [1841]) relates that many early investors in both the Mississippi Scheme and the South-Sea Bubble sold their shares near the height of the market. Meanwhile, it was often the people who were not normally speculators, but who, inspired by the mania surrounding these schemes, had scraped together their entire savings to invest in them, who bought as the bubble neared its height, and were ruined by the subsequent collapse.

Financial writer Andrew Tobias (1987, p. 87) reports: "A Washington D.C. investment club purchased 200 shares of stock at 18. 'Club sold all holdings at 12½... *due to decline in price*; it

intends to reinvest *when price moves up*.”⁹ As Tobias pointedly asks, “What kind of investment strategy is *that*?” (All italics in original.) A similar sort of “strategy” can be seen at work when many mutual fund investors buy the fund that went up the most the previous year.

Tobias (in Mackay, 1980 [1841], pp. xii–xiii) describes the “send-a-dime” chain letter that originated in Denver in 1935. During the course of this Ponzi scheme, “in Denver alone, postal volume swelled by some 160,000 pieces of mail a day. The craze spread across the country (and across the Atlantic), jumping in many places from a dime to five dollars and more.” But soon enough, the “AP reported ‘sad-faced men and women walked around in a daze . . . seeking vainly for someone to buy their chain letters.’ Everybody now had a letter to sell; no one was left to buy.” As Tobias notes, the “send-a-dime” chain letter was not a unique event: “Chain letters appear periodically. Just last year one rose to prominence—only this time at \$100 a crack. . . . Virtually everyone lost his money.” Shiller (2003, p. 94) notes: “A number of Ponzi schemes in Albania 1996–1997 were so large that total liabilities reached half a year’s GDP; their collapse brought on a period of anarchy and civil war in which 2000 people were killed . . .”

A thorough examination of the psychological basis of mania theory is beyond both the scope of this paper and our expertise. Nevertheless, the type seems plausible in its construction. The fact that manias occur in areas of social life besides financial markets, such as the witch mania during the sixteenth and seventeenth centuries (Mackay, 1980 [1841]), twentieth-century teen frenzies over Frank Sinatra, Elvis Presley, and the Beatles, the enthusiasm during the 1960s for hoola-hoops, the 1970s fad for pet rocks, and numerous other examples that the reader no doubt can supply, suggests that, indeed, people may become caught up in a trend simply because other people also are caught up in it. Shiller (2003, pp. 93–94) presents recent empirical work showing that the view of investor behavior relied on in mania theory, or what he refers to as “feedback models,” is realistic.

If the traditional rational expectations model were a close fit to reality, Ponzi schemes and manias would be extremely rare or non-existent. The fact that they have occurred frequently through history is evidence that, however useful the idea of rational expectations may be as a theoretical limiting case, it does not describe most real market participants particularly well.

It is worth noting, at this point, that some theorists, perhaps foremost among them Barkley Rosser,⁹ have posited the existence of “rational bubbles.” Rosser’s model, developed in collaboration with a number of co-authors, depicts situations in which “rational speculators” will piggy-back on “noise traders” and attempt to profit (for a time) during the inflationary phase of a bubble, even while planning to sell the market before the noise traders realize that the general rise in stock prices is coming to an end and a bear market is looming on the horizon. As such, this flavor of rational-expectations theory supports, rather than undermines, the vision of a typical Austrian business cycle that this paper attempts to convey.

When rational-expectations theorists ask proponents of Austrian business cycle theory, “What about expectations?” they mean *the* single set of expectations that their models posit to be

⁹ See Rosser et al., 1997, 1999, 2006.

uniformly held by everyone involved in a market, including potential investors who might enter it. Once we allow expectations to differ among investors, even in as simple a way as our dichotomy of savvy and naïve investors, the rational expectations objection to ABC evaporates. As long as the savvy investors feel they have a good chance of being able to sell to the naïve investors before the bubble bursts, it is rational, in the sense of being financially beneficial, for them to participate in its expansion. And the naïve investors, by the very definition of the type, have naïve rather than rational expectations about the future state of the bubble. If a rational expectations critic of ABC wishes to contend that the ideal type of the naïve investor has no applicability to our actual world, then he must explain the continuing occurrence of chain letters, Ponzi schemes, multi-level marketing plans, and state lotteries. In other words, is the ideal type of “the rationally expecting economic actor” causally adequate?

V. How Austrian Business Cycle Theory Complements Ponzi-Scheme and Mania Theories

However, the type “financial market mania” does not explain, by itself, why financial manias occur at certain times and places, but not at others. No one, to our knowledge, has presented convincing evidence that particular eras or regions have had especially high concentrations of greedy people willing to take advantage of others or gullible folks ready to be taken advantage of. If mania theory is to stand on its own as a complete explanation of booms, then, since manias occurred in the U.S. in the 1920s, the 1960s, and the 1990s, but not during other recent decades, we would have to be convinced that the mania decades were characterized by peaks of greed and gullibility that subsided during other times. The positing of differences in expectations that might make manias possible is only a necessary condition for manias; it is not a sufficient one.

It seems more realistic to assume that at any moment there are many more-or-less savvy investors and many more-or-less naïve investors in most markets. If mania theory were a complete explanation for booms, it would seem that asset bubbles should be more frequent than they are given the omnipresence of the two types. Here, the ideal type “central bank credit expansion” supplies a triggering mechanism that explains why manias occur when they do. The promoters realize that during a credit expansion, the new money flowing into the economy creates a temporary sense of increased wealth. They can capitalize on that illusion to generate enthusiasm for the class of assets they wish to promote. And we will note that the asset class that winds up being hyped often is, in fact, a truly breakthrough area in the economy. Although the dot com boom was an example of an Austrian-type cycle generated by central bank activity, the advent of the Internet itself was a change of major economic importance; it has altered dramatically the face of the world economy in a way that few, if any, envisioned just a decade ago. The “hype” is not in the notion that the “new thing” is important, for it often is. Rather, it is the suggestion that every single company entering the new field will turn out to be a source of endless riches. The housing market boom and bust of the 2000s, fueled by overly expansionary monetary policy starting in 2001, is yet another example of this pattern.

More generally, any true mania will have to have a source of funds that enables asset prices to diverge from fundamentals for an extended period of time. Even a Ponzi scheme can only last

for so long or spread to a limited number of people before being revealed, *unless there is a source of funds outside of the scheme itself that allows it to grow*. The same is true of other kinds of asset bubbles and manias. The source of those funds is often central-bank expansion directly, but can also be other, regulatory, manipulations of the banking system or interest rates. The ABC illustrates that typical manias and cycles require both the ideal types of investors with different expectations and the catalytic role of extra-market sources of funds. Without the ideal type constructs in question, theories of manias and cycles will be insufficient. And, to return to our central argument, evaluating the ABC requires that one understand the role played by these ideal types.

VI. The Actions of the Businessman During an Austrian Business Cycle

The types naïve investor and savvy investor can help to explain the actions of financial market participants during a credit expansion. But would the people who actually are managing businesses expand their operations during the boom? Surely, a critic of ABC might claim, enough of them are savvy investors, as demonstrated by their successfully maintaining a business, that we should not see widespread malinvestment by firms during a credit expansion. Here, the ideal type of the prisoner's dilemma is useful in answering such a complaint. Mises himself anticipated this application of the prisoner's dilemma to support ABC:

Of course, in order to continue production on the enlarged scale brought about by the expansion of credit, all entrepreneurs, those who did expand their activities no less than those who produce only within the limits in which they produced previously, need additional funds as the costs of production are now higher. (1996 [1966], pp. 553-554)

Carilli and Dempster (2001) formalize Mises' insight by explicitly using the prisoner's dilemma to explain why rational entrepreneurs might participate in a credit expansion. In the standard prisoner's dilemma story, two people are accused of committing a crime and imprisoned in separate cells. They are given the choice of confessing or not confessing. If neither confesses, both get relative light sentences because the evidence against them is weak. If one confesses and provides evidence on the other, that person gets a very light sentences (less than if neither confessed) while the other gets a very stiff sentence. If both confess, they get moderately stiff sentences, worse than if neither confess, but not as bad as being ratted out by the other. The "best" collective outcome is for neither to confess, but each individual prisoner sees it in his interest to confess no matter what the other one does. If the other confesses, the one in question is better off confessing and avoiding the really stiff sentence. If the other one does not confess, the better option is to confess and get the very light sentence. Each individual acting in his self-interest produces an outcome that is less than socially optimal.

In Carilli and Dempster's paper, the central bank plays the role of the "prison authorities." The "prisoners" are the entrepreneurs. The best net result for entrepreneurs considered as a whole indeed occurs, as rational-expectation theorists would have it, when none of them take advantage of the artificially low interest rates brought about by the credit expansion, the equivalent of both

prisoners not confessing. But for any individual entrepreneur, the worst result is when he fails to take advantage of the low rate while one or more of his competitors *do* take advantage of it. (This is equivalent to the box where one of the prisoners doesn't confess but his cohort does.) And the best result for each individual player is when he does take advantage of the credit expansion while his competitors don't. (The box where the prisoner does confess but his cohort doesn't.) Since no entrepreneur can count on all of his competitors to abstain from using the easy credit, his rational choice is to confess, in other words, to jump into the boom as quickly as possible. Putting Carilli and Dempster's argument in our terminology, the "irrational" behavior that the ABC seems to rest on is instead an assumption about the relevant ideal typical behavior that is in play. Viewing entrepreneurs as participants in a prisoner's dilemma game helps to provide the necessary explanatory adequacy.

VII. The Big Player and the Austrian Business Cycle

Another ideal type we suggest is important to the construction of ABC is that of the Big Player, as developed by Koppl, Yeager, and Butos (see especially Koppl 2002, but also Koppl and Mramor 2003, Koppl and Yeager 1996, and Butos and McQuade 2006). The Big Player is a single actor who can exert a major influence on the course of the economy, at least in the short term and who is immune to the forces of profit and loss. As Koppl and Yeager puts it, "A Big Player is anyone who habitually exercises discretionary power to influence the market while himself remaining wholly or largely immune from the discipline of profit and loss" (Koppl and Yeager, 1996, p. 368). Most often, but not necessarily, the Big Player will be a government official. It is also possible to envision, for instance, the manager of a very large investment fund fulfilling the type. The significance of the Big Player is that other economic actors, when active in the area where the Big Player exerts his influence, must orient their actions to the personal psychology of the Big Player. In markets without a Big Player, actors can use highly general ideal types in making their plans. They merely need to assume, for instance, that "wheat buyers" will purchase more wheat if the price drops. They need not consider the buyers on any level more concrete than as agents who wish to purchase a commodity as cheaply as possible. They do not concern themselves with the individual personality of wheat buyers, but only with their behavior in their functional role as purchasers of wheat.

But when a Big Player is active in a market, other participants must take into consideration his personality and his particular thoughts. They cannot treat him as a somewhat abstract ideal type, such as "a wheat buyer," but must attempt to understand him as an individual, albeit an individual ideal type. The problem Big Players create is that they increase the "epistemic burden" on market participants. In the world of the market, people already have to form expectations about the behavior of anonymous others, understand any natural processes that might be relevant, learn about competing products, etc.. The acts of interpretation and appraisal that markets involve already require significant knowledge. When a Big Player enters, that process becomes even more burdensome to the actor. The result will be resources devoted to figuring out the behavior of the Big Player that could better be used producing the product in question, as well as a greater likelihood of error given the difficulties in getting the Big Player right.

In the context of ABC, the Big Player is generally the head of the central bank of the country undergoing an Austrian cycle. If the central bank pursues a discretionary, rather than a rule-oriented, monetary policy, then the particular ideas of the chief central banker (and perhaps of other key central bank actors) must be taken into account by participants in the markets affected by central bank policy. As there are few, if any, financial markets *not* affected by central bank policy, this fact renders financial markets less predictable than they would be absent a Big Player. Thus, we see a mini-industry has developed that is devoted to divining what the current head of the American Federal Reserve is thinking about the economy, and we find actors in the financial markets awaiting his public pronouncements with bated breath. Trading volume will generally drop off considerably immediately prior to a speech by the chairman of the Fed, then surge as his opinion becomes known.

Cowen (1998, p. 94) contends that an investor who understood that an Austrian cycle was underway could simply short medium-term bonds, not only personally profiting but also dampening the boom. His criticism fails in two respects. First of all, an investor must be extremely cautious when taking part in any market where a Big Player is active. He may realize that the Big Player is starting a trend that cannot be continued indefinitely. However, he does not know how long the Big Player will attempt to continue his policy, nor how much capital he is willing to devote to it. And central bankers, with the power to create new money, have an almost unlimited power to commit resources to a policy goal. The fact that by doing so they drain value from the holdings of others, for instance from savings accounts or fixed annuities, the value of which declines due to inflation, does not alter this fact. Therefore, shorting the trend is extremely risky. One can be entirely correct in one's belief that an unsustainable boom is underway but go broke by misestimating how long that boom will continue.

However, even if we grant an investor extremely accurate insight into the future actions of the Big Player, he still would not be likely to act as Cowen says he would. Instead, he would attempt to profit from the boom so long as his insight told him the Big Player would act to sustain it—thereby contributing to the bubble. Only at the point where his insight indicated that the Big Player was prepared to reverse course and deflate the bubble would he short bonds. After all, if his insight into the behavior of the Big Player really *is* accurate, there is no reason for him to profit from it only when the bubble pops. He might as well profit as it is inflated as well. In fact, we believe that this is a good approximation of the behavior of the savvy investor during an Austrian-type cycle.

VIII. Conclusion

This paper has forwarded the notion that Austrian business cycle theory is a complex ideal type constructed from a number of other ideal types of varying degrees of abstraction. Once the types employed are made explicit and fully understood, we contend that a number of the controversies about the theory are largely dispelled. Furthermore, in the understanding of ABC presented here, ABC is an alternative to, rather than a contradiction of, other possible explanations of downturns. For instance, real business cycle theory, which models downturns as resulting from “external shocks,” seems a quite plausible account of the long decline occurring in the Western European

economy between roughly 200 and 700 CE, as first the invasion of the plague severely reduced the population of the region, after which the rise of Islam cut off trade routes to the East.

Therefore, in the view of ABC outlined in this paper, those who wish to contend that ABC explains a particular downturn, or who wish to contend that it applies to most downturns in recent economic history, still have a significant task before them: They must demonstrate that, for any particular downturn, the ideal types composing ABC are applicable. But it is only our historical understanding of the events in question that can guide us in applying ABC. As Mises put it:

Whether or not the employment of a definite ideal type is expedient and conducive to an adequate grasp of phenomena can only be decided by understanding. It is not the ideal type that determines the mode of understanding; it is the mode of understanding that requires the construction and use of corresponding ideal types. (1996 [1966], pp. 60-61)

Critics of ABC face the same task. They must show that the particular ideal types that the theory deploys are not relevant for the specific instances the theory purports to explain. Doing so first requires that the critics understand both that the theory is built on such ideal types and the role that these ideal types play in applying theory in general. These last two points have been missed in many critical discussions of ABC. We see this paper as a first step in filling that gap and we hope it prompts other proponents of ABC to frame the theory in these terms.

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