MONEY, PRICES, AND CAPITAL: AN AUSTRIAN APPROACH TO MACROECONOMICS

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Austrians frequently lament the absence of an Austrian undergraduate money-macro curriculum, especially at the intermediate level. This is ironic in that a large body of work currently exists, both from "the masters" and more recent researchers, that provides the essential theoretical underpinnings and historical and empirical analysis from which to mount a coherent Austrian macro course suitable for second or third year students. Unfortunately, that literature generally presupposes significant background knowledge in Austrian economics and thus does not ordinarily serve as a suitable platform upon which to build an intermediate money-macro course. I shall suggest all the components for such a course are in hand save one: an intermediate macro text appropriate for classroom use.

Although undergraduate Austrian macro is taught at some institutions (e.g., Auburn University, Hillsdale College),[1] the great majority of Austrians who teach intermediate courses end up using mainstream texts supplemented by Austrian articles and excerpts. Thus, while the raw material for Austrian macro—qualified instructors, the theory, and empirical analysis—is available, the typical intermediate macro student, even when taught by an Austrian, tends not to receive a systematic exposure to Austrian macro.

But installing Austrian macro into college undergraduate courses requires a set of prerequisites if it is to succeed. The prevailing reliance on Keynesian macroeconomics, which still constitutes the principal mainstream approach, carries a significant and incorrigible disparity with Austrian macro. This suggests that attempts to graft Austrian analysis onto mainstream macro are not

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[1]I thank Roger Garrison (see http://www.auburn.edu/~garriro/ec6030x.htm) and Shawn Ritenour for providing their Austrian-oriented money-macro course syllabi.

likely to produce coherent results or to make sense to undergraduates. I overview the basic structure of current mainstream macro texts in section 2 to suggest that while mainstream texts have incorporated more "Austrian friendly" material, the Austrian-mainstream gulf remains unbreachable. The implication I draw from this is that the prevailing mainstream approach should be largely excised from any course that purports to center on Austrian macro. Sections 3 and 4 outline the central concepts and themes underpinning Austrian macro and offer some suggestions that speak to the general contours of an intermediate Austrian macro course. Finally, I discuss some issues in implementing the kinds of changes I call for.

An Overview of Current Mainstream Intermediate Macro

Keynesian macroeconomics still dominates at the undergraduate level. From introductory principles to intermediate level macroeconomics, most students are fed a steady diet of Keynesian economics that includes the Keynesian cross, IS-LM, and AD-AS models. The following admittedly incomplete commentary briefly identifies why Austrians are correct to recoil at this nearly exclusive focus:[2]

- Methodological Concerns: Keynesian Macroeconomics is based on a kind of aggregation that requires students to see its various aggregates as *non-reducible* interacting entities. Unlike Austrian money-macro, these aggregates are not treated as constructed composite byproducts of the flows generated by market level exchanges. Instead, they create theory and analysis unmoored from the underlying reality and causal processes of the market process.

- Presumption of Macro Failure: Keynesian models presume the central tendency of the system occurs below the "full employment" of labor due to chronic and pervasive aggregate demand insufficiency. Coordinating endogenous adjustment mechanisms, via prices, wage rates, real balance effects, or interest rates, are asserted to be ineffectual or simply ruled out *ex ante*. Say's Law, even in the crude (and incorrect) sense of "supply creating its own demand," does not apply.[3] As Hayek (1978, p. 286) notes, "The

[2]My comments refer to the treatment of Keynesian macro as it is presented in *undergraduate* texts and thus do not necessarily apply equally to all aggregative or Keynesian models. Space limitations prevent citing even a sampling of the critical literature on Keynes and the Keynesians, although it would be seriously remiss not to mention Hazlitt (1959).

[3]The mischaracterization of Say's Law goes back to Keynes (1936). In quoting from J.S. Mill, Keynes (p. 18) conveniently leaves out Mill's crucial qualifying conditions. Mill understood Say's Law as an equilibrium condition whereby the excess demands functions in all markets equal zero. That is, Say's Law requires that all goods are produced in the correct proportions. See Mill's chapter "Of Excess Supply of Commodities" (1848, book III, chap. XIV, sect. 2).

assumption that all goods and factors are available in excess supply makes the whole price system redundant, undetermined, and unintelligible."

- Saving as a Social Disease:[4] Keynesian texts take their cue from Keynes by treating saving as hoarding, not as loanable funds; an increase in saving, therefore, necessarily induces a reduction in aggregate demand and output. Saving is a determined by aggregate income but has no causal significance in determining the size of the capital stock. Pre-Keynesian economists generally understood saving to include currency holdings (i.e., hoards) and funds for capital accumulation.[5]

- Institutional Detail: Policy making entities in Keynesian macroeconomics are badly underdetermined. The implicit (though generally unarticulated) determination of the money stock occurs through a central bank that in the income-expenditure model accommodates fiscal policy to keep short and long run interest rates constant, hence making the money supply perfectly elastic at the prevailing interest rate. Fiscal policy revolves around benign agents who simply tax and spend to ensure that aggregate demand is sufficient. Public choice issues do not arise.

- Policy Bias: Keynesian models produce a bias against the market economy and a bias *for* fiscal and monetary activism. The presumption of inherent and chronic business fluctuations, the implicit claim that the price system does not work reliably or in a timely fashion to coordinate disappointed individual plans, and a belief in the unerring efficacy of macro policies promote a bias that full employment, as Garrison (2001) puts it, is reached by design or by accident.

When we look to current intermediate macro texts, such as Mankiw's (2004) "New Keynesian" text, we still find Keynesian macroeconomics in full exposure. But years of reflection and criticism have tempered the starkness of the earlier Keynesianism, and so we now see, for example, short run Keynesian

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[4]Keynes's bias against saving goes beyond his economic argument, as seen in the following excerpt from a 1928 lecture: "The love of money as a possession . . . will be recognized for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease" (Keynes 1972, p. 329). In *The General Theory* these sentiments are expressed as the "fetish of liquidity"–an "ongoing and excessive disposition" to hoard money (1936, p. 144).

[5]In Keynes's formulation of the investment multiplier, a permanent exogenous increase in investment expenditure proceeds in the absence of any prior real saving. According to Keynes, the required increase in savings is derivative from the process of income expansion induced by the change in investment and only equals the increase in investment in an *ex post* sense at the new aggregate equilibrium position. The hidden assumption here is that bank credit is perfectly elastic at the prevailing interest rate, which allows Keynes to retain the fiction that even bank deposit balances, in addition to currency holdings, do not constitute savings.

vs. long run quantity theory models, short and long run aggregate supply schedules, and so on. Prices and wages are not so evidently pre-determined as subject now to fits of sluggishness arising from "menu costs." "Efficiency wages" are invoked to claim that ongoing involuntary unemployment actually reflects optimizing labor market behavior. Interest rate determination using the loanable funds model is presented in the long run (so-called) "Classical model," although it is replaced with Keynesian liquidity preference in the hard core theory chapters. The activist policy hubris so characteristic of early Keynesian macroeconomics is now toned down in recognition of the downside effects of discretionary policy in an uncertain world and the advantages of policy rules. All the same, however, aggregate demand management still dominates. Importantly, the long run tendency of the economy is now generally seen as following a full employment path, suggesting that unexplained market forces, though strangely absent in the analysis of the short run, are assumed to exert equilibrating tendencies in the long run.

Usually a simple IS-LM model is hoisted into place to serve as a first approximation of a short run model; however, it often takes a backseat now to a more super-aggregated demand (AD) and aggregate supply (AS) model. The AD function, derived from parameterizing the price level in the money supply function underpinning LM, allows for a quick and simple way to plug policy variables into the model. The model is completed by producing an upward sloping short run AS function using either the Phillips curve relation (or in some cases a "Lucas supply schedule," as discussed below), while a vertical long run AS function is still defined with respect to full labor employment output derived from a fixed coefficient long run production function based on homogeneous capital and labor inputs.

Into this mix it is relatively simple to insert an expectations function into the aggregate supply schedule. For example, starting at a full employment position, the upward sloping "Lucas supply schedule" arises from a misperceptions model based on the "Island Paradigm" in which a monetary expansion lures suppliers into substituting more production for less leisure if their local selling prices appear to rise relative to prices in general. The fact, unbeknownst to individual suppliers, that all prices are in fact rising only generates a temporary increase in output; once the true movement in all prices becomes apparent, suppliers return to their original labor-leisure mix but at higher prices, which causes the aggregate supply schedule to shift upward. This brings the system back to long run equilibrium at full employment, a result of the model consistent with long run money neutrality.

It is worth noting that the various modern macro conceptions of the short and long runs are often left ambiguous. In some cases, the distinction appears to be based on an indefinite period of calendar time that refers to analytical interrelationships embedded in the model; in other cases, the relevance of the distinction seems to be denied.[6] Thus, in new classical models we may speak

[6]In a generalized IS-LM model, short run equilibrium only requires clearing in the goods and money markets. For Keynes and the Keynesians this equilibrium is compatible

of an "analytical short run," perhaps modeled as a Walrasian temporary equilibrium, and an "analytical long run," that refers to a steady state and perfect foresight equilibrium. The absence of any designation regarding the passage of calendar time, however, allows the model to essentially abstract from real agents and ignore the processes in play under uncertainty, including the role (and, indeed, the very rationale) of money, expectations, and the ongoing allocative, production, and consumption decisions agents make through calendar time. Common to all of these conceptions about analytical and calendar time is the absence in these models of capital and its structure, a deficiency addressed below.

Reservations notwithstanding, the sorts of changes now seen in mainstream intermediate macro texts are on balance changes for the better, an achievement of arguably modest proportions given the starting point. At the same time, though, these texts fail to incorporate ideas important for Austrians. What are those ideas and are they compatible with current texts? If not, what in mainstream texts would have to go? What might remain? It is to these questions I now turn.

Austrian Money-Macro: the Integration of Money, Capital and Market Theory

The theoretical foundations of Austrian money-macro, despite ongoing and important within-school differences, may be summarized by a set of ideas related to subjectivism, money, the price system, capital, time, market process, and institutions. These form a set of internally consistent ideas that provides a coherent approach to mounting a fully developed treatment of an undergraduate course in Austrian money-macroeconomics.

Subjectivism

Austrian economics insists on a subjectivist treatment of economic action, a claim holding that individuals (not aggregates) act on the basis of their own perceptions of reality. Such actions, as Mises (1966) reminds us, are understood to occur within a context of uncertainty about the future. Agents, despite such uncertainty, are active learners and creators of knowledge and, consequently, have the capacity to adapt to current and future situations. Austrian subjectivism maintains that market level aggregates relevant for money-macro analysis are constructed byproducts originating from

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with involuntary unemployment not only in the short run, but also in the long run. If nothing else, this renders the conception of an *analytical* long run quite irrelevant, as seen in Keynes's referring to the path of the such a system as one of "shifting equilibrium" (1936, p. 293); recent expressions along these lines, typical of Post-Keynesian macro, see the long run only as an open-ended sequence of (underemployment equilibrium) short runs. The Post-Keynesians use calendar time and uncertainty in ways that ensure the system's self-corrective forces, especially with respect to unemployment, never do solve macro maladies.

the market activity of interacting agents. Such aggregates have no independent existence apart from the actions of individuals generating them and do not *per se* interact with each other.

Money, Time, and Expectations

Money, time and expectations are essential for Austrian macro. Without money we cannot speak of a system of interconnected actions operating through monetary prices and through calendar time in which individuals must necessarily base actions today on a future that is sometimes less and sometimes more uncertain. For Austrians, media of exchange emerge from the very process of the market.[7] Thus, at a fundamental level of analysis money is already integral to the Austrian analytical framework of the market process. The essential function of money as a commonly accepted *intertemporal* medium of exchange implies that money also provides services as a common denominator for appraising value and as a store of value, attributes that reflect money's role as an indispensable mental tool of calculation for all economic action (Mises 1966, chap. XI–XII).

The use of money implies recognition of the passage of calendar time in that individuals sell goods for money that is then held until a subsequent monetary exchange is made. Unlike early Arrow-Debreu general equilibrium models where all exchange is simultaneous (or all forward markets are reducible to equilibrium spot exchanges), the fact that action takes place in the passage of time implies the necessity of seeing exchange as a sequential process and hence one where money is held for some positive interval of time.

Because all action occurs within the passage of calendar time, expectations are inseparable from money-macro analysis.[8] Although Austrians approach the question of expectations in different ways, there is general agreement that the expectations of agents cannot be ignored, assumed exogenous, or modeled as statistical algorithms. Austrians argue that expectations are generally "sensible" but not "rational" (in Lucas' sense),[9] exogenous, or inherently subject to fits of irrationality (as in Keynes);[10] rather, expectations are seen as adaptive in expressing the creative capacities of agents and in their learning and appraising the relevant external environment.[11]

Austrians, following Mises (1966, chap. XVII), assign to money a "driving force" of its own in generating real systemic effects arising from changes in the supply or demand for money. This secures the distinctive Misesian insight of rejecting the notion that "changes in the purchasing power of money occur

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[7]See Menger (1950, chap. VIII, sect. 1; 1890; 1963, bk. 3, chap. 2) and Mises (1966, pp. 405-08).

[8]From Capra's *The Tao of Physics* we read that the future is not so much something that lies ahead of you as something that overtakes you from the rear.

[9]See Garrison (2001, chap. 2) and Butos (1997).

[10]Keynes (1936, chap. 12). Also see Butos and Koppl (1997).

[11]See, for example, Butos and Koppl (1993).

at the same time and to the same extent with regard to all commodities and services" (p. 416).[12] Mises's (1971) denial of money neutrality provides the starting point for the integration of value and monetary theory and the Austrian theory of the business cycle. As noted below, credit expansion that lowers market interest rates below their equilibrium (or "natural") levels generates nonsustainable changes in output, relative prices, and resource allocation that principally affect the capital structure but also consumption expenditures.[13]

Price System

Austrians emphasize the unitary character of the (monetary) price system and its uniqueness in generating, as an unintended byproduct of the interactions among market participants, a constellation of money prices. It is through market interactions that individual knowledge is transformed into market knowledge in the form of monetary prices; in turn, because prices constitute useful knowledge for individuals, they also are "inputs" for agents, providing an inducement for changes in agents' behavior. Prices are emergent phenomena, created anew as individuals, driven by their separate purposes, interact in markets.[14] Prices, in making economic calculation possible, enable agents to rationally conduct their affairs and to calculate monetary profit and loss; at the same time, prices enable individuals to economize on what they have to know because monetary prices summarize information relevant to them in an easy and accessible form.[15]

A monetary pricing system is also important because it endogenizes change by promoting the generation and discovery of new preferences and new knowledge by agents. When the price of air travel falls, for example, we have an incentive to travel more and in so doing to discover or learn of preferences that did not exist or were latent. Or, when the price of an essential input rises, an added incentive now exists for rethinking how to produce an output, perhaps leading to a technological or production innovation that effectively alters relevant resource constraints. Following the work of Kirzner (1985, chap. 3), prices are seen as disequilibria phenomena that put into motion the entrepreneurial process of discovery.

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[12]The Austrian rejection of money neutrality applies to the *neo*classical dichotomization of value and monetary theory (although not to the *general* connection between changes in the quantity of money and its purchasing power). Classical theory is ordinarily claimed to support the monetary-value theory dichotomy. This is completely unfounded: the pre-marginalists had a unified labor (or cost) theory of money and value. The so-called "classical dichotomy" was really of neoclassical making. See Mason (1996).

[13]Austrians are divided in identifying the appropriate institutional setting that would avoid such monetary disturbances, with some favoring a 100 percent reserve gold standard and others a free banking system.

[14]See Butos and McQuade (2002).

[15]See Mises (1966, chaps. XI-XIII), and Hayek (1948, chaps. II and IV).

Austrians take seriously the notion that monetary prices cannot be created in any other way other than by the actual market process producing them. The market process neither unfolds deterministically before our eyes nor is it chaotic or arbitrary. Rather, within a framework of property rights and enforceable contracts, the process generates its own path from one moment to the next. The theory of the market process argues that interventions designed to "correct" market prices produce outcomes that are unsustainable, undesirable, often rationalizing further interventions.[16]

Capital and Time

Production is time-dimensioned and forward-looking, comprising a structure of complementary inputs, including both original and produced factors, that produce goods-in-process or a flow of intermediate goods (Mises 1966, chap. XVIII; Hayek 1935; Rothbard 1962, chaps. 5–7). Because the production structure reflects the intertemporal plans of entrepreneurs in marshalling complementary factors of production, analysis of it must take account of uncertainty and entrepreneurial expectations.[17] The intertemporality of the capital structure is seen by Austrians as interest rate constrained in terms of the degree to which production processes may be profitably roundabout.

This capital structure is a sub-order in the catallaxy and reflects perhaps the most salient feature of a market economy after the price system itself. Most economic activity and the execution of time-dimensioned plans that comprise the daily agitation of the market occur principally within this capital structure. The capital structure reflects ongoing decisions by entrepreneurs in response to changes in technology, resource constraints, market rates of interest, and consumer preferences. When we speak of the stability of the market economy or its responsiveness to change, it is really of the capital structure to which we must turn to consider such matters. Thus, when considering the market process, including the effects of interventionist policies, we must recognize the contingency of the analysis to changes wrought on the capital structure.

Equilibrium, Coordination, and Process

Austrians use a variety of equilibrium concepts in their economics. However, most agree that as a pedagogical heuristic for undergraduates, the use of equilibrium has a useful role to play in explaining how markets work.

Equilibrium, as used here, is a model-dependent concept in which all perceived utility enhancing exchanges have been made such that agents' plans would be achieved.[18] The equilibrium concept as such, however, does not provide an explanation of how this all happens. Austrians recognize the market

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[16]See Ikeda (1997) on the dynamics of interventionism.

[17]See Lewin (1999).

[18]Salerno (1994, esp. pp. 97–103) develops an equilibrium (market clearing) conception that sees each trading period's prices as outcomes based on the underlying data of the market, including agents' appraisement of future states.

as a dynamic, ongoing, and open-ended process that has the capacity to be coordinating (or equilibrating). If we wish to understand how markets work, our analytical models should study market mechanisms that bear on the coordinating and adaptive properties of the economy. This perspective has been successfully engaged by Austrians, especially Mises and Kirzner, in developing an entrepreneurial theory of the market process.

Institutions

From its early beginnings, the Austrian School has sought to develop and apply theory to the actual world we live in and to the actions of real people. There is, for example, little in the way of homo oeconomicus or "representative" agents and firms, bedrock assumptions of neoclassical economics, that is essential for Austrian theory.[19] These sensibilities result in Austrians taking seriously the critical role of the institutional framework in analyzing economic systems. In the context of money-macro analysis, this pertains to the specification of policy regimes, including laissez-faire monetary systems, central banking, exchange rate, and balance of payments systems, and fiscal regimes. The way in which the market operates and the outcomes it produces in terms of the use and generation of market knowledge are dependent on the overall institutional setting in which these processes occur. The fertility, for example, of applying the theory of Big Players to the functioning of financial markets (Koppl and Yeager 1996) is a benefit of taking institutions seriously.[20]

Austrian Macro Normalcy and Business Cycles

As noted above, Austrians are not bound to neoclassical conceptions of equilibrium. For example, Mises's notion of the "evenly rotating economy" was meant to serve as a "makeshift" in which change in the data does not occur, thereby providing an analytical benchmark (and nothing more) for investigating an entrepreneurial economy in which change does occur. Mises was not interested in equilibrium as such, but in the ever present and ceaseless change characteristic of the real world. To this end he argued for "sequence analysis"[21] as an analytical method appropriate for the tasks at hand. Hayek, too, came to see the inadequacy of the conventional neoclassical conception of

[19]Beginning with Menger's *Principles*, Austrians have been sensitive, for example, to the economically relevant contexts regarding knowledge in which real people function. Such concerns, which suffuse much of Austrian economics, have been made all the more prominent, especially among contemporary Austrians since Hayek's knowledge papers of 1937 and 1945, reprinted in Hayek (1948).

[20]More generally, the decisive importance of institutions carries with it the sobering notion for Austrians that long term solutions to macroeconomic problems, such as business cycles, must be addressed finally at the institutional level.

[21]See Mises (1978).

equilibrium. His 1937 paper on "Economics and Knowledge," in which the notion of the "plan" first appears, reflects his recognition of the complexities of the equilibrium concept and the inadequacy of the neoclassical approach. The development of Hayek's own understanding would lead to his important distinction between two very different kinds of problems: those of equilibrium of a "single mind," what he referred to as the logic of choice, versus those involved with coordinating the plans of many individuals.[22] The emphasis in Austrian economics of sequence analysis provides an intuitively appealing step-by-step approach for examining cause and effect relationships. And the idea of plan coordination gives scope for examining the full range of discoordinating sequences in markets, especially with respect to the capital structure.[23]

Perhaps the preeminent (though, sadly, generally underappreciated) contribution of Austrian money-macroeconomics is its theory of the business cycle. Modern money-macroeconomics, buckling under the weight of the Keynesian avalanche and other macroeconomic enthusiasms, essentially buried the Wicksell-Mises-Hayek cycle theory. Although originally put forth as a theoretical explanation to explain the disproportionate fluctuations in capital-goods producing sectors associated with standard nineteenth century business cycles, it has been developed and reinvigorated in recent decades to provide a general theory of unsustainable expansions. Austrian business cycle theory is simply too important not to form a central component of a new Austrian money-macroeconomics.

Several contemporary Austrians (for example, Garrison 2001, Horwitz 2000) have suggested that Yeager's monetary disequilibrium theory complements the Austrian theory by providing an explanation of the forces in play during the recession phase of the cycle.[24] Although Yeager famously criticized the Austrian theory of the business cycle, his own contributions to monetary economics should not be ignored by contemporary Austrians. Yeager's insight that money is not traded on a market of its own is of signal importance to monetary theory, while his development of monetary disequilibrium theory appears complementary to Austrian business cycle analysis.[25]

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[22]See Hayek (1948), p. 35.

[23]The Austrian approach is compatible with a notion of coordination that sees the system operating with a "corridor of activity," a phrase first suggested by Leijohhufvud in the 1960s. This helps to see the system as more realistically functioning within certain bounds in response to the normal kind of agitation observed in real economies.

[24]The robustness of this complementarity is promising and less controversial than O'Driscoll's (1977) claim that the Austrian theory of the business cycle and Keynes's theory of the slump are complementary, a point that has fallen out of favor with most contemporary Austrians. Garrison (2001, p. 18), for example, refers to Keynes's macro as a "spur" while Butos and Koppl (1997) claim that Hayek, not Keynes, actually had the more general theory.

[25]See Yeager (1998).

Contemporary Austrian work in economic history and empirical analyses germane to business cycles has become increasingly important. Rothbard's *America's Great Depression* (1963) initiated the post-World War II Austrian literature in this area. More recently, several empirical and econometric studies have appeared that subject the Austrian theory to standard statistical testing. These have provided corroborative evidence that the Austrian theory has strong empirical grounding; hopefully others will follow. But as demonstrated by Rothbard's work and others' that preceded him, such as Benjamin Anderson's (1949) classic book, the playing field here is wide open and can easily accommodate a variety of empirical approaches including case studies, "thick history," and hardcore econometrics.

The relevance and importance of this empirical work cannot, I believe, be overestimated. For one thing, it helps to keep the theory grounded in the real world and tied into real world events. Second, an explicit empirical direction provides research questions for both scholars and students, including most emphatically advanced undergraduate college students.

You Can't Get There From Here

I suggest that the elements discussed in sections above constitute the outlines and core components of a coherent and viable intermediate undergraduate course in Austrian macro. Many of these elements are distinctive to Austrian economics and can be considered, notwithstanding various within-school differences, as an integrated body of ideas. All the same, it seems accurate and useful to identify the principal fault line distinguishing Austrian money-macroeconomics from its contemporary rivals as centering on its capital theory. Austrian macro, as Garrison (2001) reminds us, is *capital-based* macroeconomics and it is that organizing theme that brings into focus distinctive Austrian macroeconomic insights relevant to undergraduate instruction.

But if that is true, it is also the case that the Austrian treatment of the role and significance of monetary prices in animating the market process is essential for elucidating a systemic capital-based market process. Without money it is inconceivable to imagine a sufficiently complex economy that would exhibit the kinds of characteristics we observe in the real world, including cyclical phenomena. In addition, entrepreneurs must rely on monetary prices to calculate alternative configurations of resource use and the associated prospective net income streams those configurations entail. In the absence of monetary prices, calculation would not be possible and the resulting capital structure would be random or irrational.[26]

A well-developed theoretical framework suitable for a robust rendering of Austrian macroeconomics is available. So, too, is a huge and increasingly expanding body of historical and empirical work. But the vehicle suitable for conveying it to a typical intermediate undergraduate audience is not. The

[26]I thank Joseph Salerno for suggesting this point.

seminal work of a long tradition of Austrian money-macroeconomics has been revived and, as importantly, augmented by an increasingly impressive inventory of contemporary contributions. The great books and papers of Mises, Hayek, Rothbard, Kirzner, and others are still studied and discussed, providing inspiration for modern day Austrians to extend the insights of their forerunners. Yet, both the old texts and the work of contemporary Austrians do not, in general, effectively serve the interests and backgrounds of college sophomores and juniors. At more advanced levels of instruction and training, the extant Austrian literature presents no such concerns. Unfortunately, however, that literature does not seem well-suited for providing the principal basis for a standard undergraduate course in Austrian money-macroeconomics.

It is not difficult to imagine an undergraduate macro course based on a *comparative* approach that highlighted the major modern macro schools, including Austrian money-macro. I wish to argue that this approach can conveniently include the principal Walrasian-Keynesian macro schools of the modern period, but not Austrian money-macroeconomics. Intermediate macro texts since Ackley (1961) have deployed, as noted earlier, various income expenditure models augmented with AD/AS analysis, rational expectations, and so on. The underlying theory succeeded (or, in certain instances, with some modification) in accommodating the changing mainstream landscape of post-World War II macroeconomics in all its forms, including hydraulic, neo-, and new-Keynesianism, monetarism, new classical macro, and real business cycle analysis. By extension, would it make sense, even in simply pedagogic terms, to tack on Austrian money-macro to the usual macro schools? Why not devote a unit or section of a standard macro course to Austrian money-macro?

I believe, however, most Austrians would argue that the theoretical differences between Austrian and mainstream macro are sufficiently large to make coherent transitions across schools awkward and problematic. But even if that were disputed, from a pedagogic standpoint it is not clear how effectively most students could manage such theoretical diversity over the span of a semester. Finally, if an instructor believes that an Austrian approach is, in fact, more useful to students or simply better, why should that preferred approach be relegated to second class status? The "right answer" here seems to be that the only remaining option for Austrians is to offer a macroeconomics course that is principally Austrian. This would not necessarily preclude some "contrast and comparisons" among different kinds of macro or addressing particular aspects of different schools of macro.[27] It seems to me that there is room for a modified and constricted comparative approach, but it would have to be

[27]Selective use of Snowden and Vane's (2005) comparative-based *Modern Macroeconomics* could fit the bill here.

a selective comparative analysis with Austrian money-macroeconomics at its center.[28]

But all of this is for naught unless a textbook is available whose focus is exclusively or at least predominantly Austrian. At the same time, the swath of Austrian money-macro (including fellow travelers such as Hutt, Yeager, et al.) is broad enough to encourage flexible instruction. Moreover, the body of historical and empirical work that is now available is easily sufficient to ensure a co-joining of the theory and its application to the real world.

Conclusions

The absence of virtually any Austrian economics presence in most contemporary undergraduate curricula (notwithstanding notable exceptions such as Auburn University, Hillsdale College, and George Mason University) reflects back on Austrian economists as much as it does on the indifference (and worse) toward Austrian economics by most of the profession. While some of this neglect has already been hurdled by the new edition of *The Economic Way of Thinking* by the late Paul Heyne, Peter Boettke, and David Prychitko, that book is appropriate for a one semester Principles course. As such, it does not address the needs of post-Principles students and instructors. I have suggested that this can be remedied if Austrians provide an instructional vehicle—an intermediate level text—suitable for presenting Austrian macro in a systematic way to undergraduate students.[29] With few exceptions, Austrian economics is simply unavailable to students at most colleges. If we believe these ideas are worth our professional attention, should we not take some obvious steps to ensure their undergraduate dissemination?

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[28]It perhaps bears stating that the objective is not to pound Austrian economics into our undergraduates but to instruct them in what we take as good economic science. The particular implication I wish to draw in the present context is that any Austrian course should for the sake of good science be receptive to other good ideas.

[29]Roger Garrison (2001) and Steve Horwitz (2000) offer excellent treatments of Austrian money-macro, and it is surely the case that their work would be prominently displayed in any solid undergraduate Austrian money-macro course. These books, however, seem better suited as texts for advanced undergraduates as opposed to the standard intermediate level course I have in mind.

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