

GARRISON AND THE “KEYNES PROBLEM”

WILLIAM N. BUTOS

Roger Garrison's *Time and Money: The Macroeconomics of Capital Structure* is a landmark addition to Austrian monetary-macroeconomics. It provides an explicit analytical framework that captures essential aspects of different approaches to macroeconomics: capital-based (Austrian), labor-based (Keynesian), and money-based (monetarist). These constitute alternative approaches to macroeconomics that form the basis for the relentless comparative analysis Garrison pursues. With the aid of straightforward graphical constructions, including the production possibility frontier (PPF), the loanable funds market, and Hayekian (1935) “triangles,” Garrison brings analytical distinctions between Austrian, Keynesian, and monetarist monetary-economics into sharp relief. This alone makes *Time and Money* a highly attractive alternative to advanced undergraduate- and graduate-level macro texts, but it is the underlying conceptual acuity and explanatory insights in *Time and Money*—what is going on behind the graphs—that elevate the book to something special. In the end, *Time and Money*, despite its outreach to other macroeconomic frameworks, can be seen as an argument for rehabilitating the capital-based approach of the Austrians and reintroducing it into a reformulated modern macroeconomics. Happily, Garrison's approach is a methodologically minimalist one, allowing him to concentrate on the economics (which he does very well) while avoiding the prescriptivism and isolation that sometimes follow from methodological filters. In any case, Garrison's approach is clearly informed by subjectivist insights, and on that score should hold substantial appeal for Austrians.

In Garrison's vision, this new macroeconomics has at center stage the intertemporal structure of capital, but it contains ample scope for the monetary disequilibrium approach as a theory of the recession phase of the business

WILLIAM N. BUTOS is professor of economics at Trinity College. He would like to thank Thomas McQuade for comments and discussion on an earlier draft of the paper. The usual caveat applies.

cycle (or, in general, for situations of an excess demand for money).¹ Conventional “non-misperceptions” variants of monetarism—in which real balance effects, standard quantity theory results, and transitory departures in real output from the PPF all figure prominently—are found to be compatible with the more foundational capital-based macroeconomics according to Garrison. He dispatches the rational expectations-based approach of new classical macroeconomics because it presumes there is no macroeconomic problem to be solved in a world of “equilibrium always.”

Garrison’s even-handed and nondogmatic treatment of alternative macroeconomic theories holds that the potential gains from intellectual exchange in certain instances may well be substantial. But even if this sentiment, as charming as it might be, is excessively sanguine, Garrison’s real aim—or so it seems to me—is not so much to somehow integrate Austrian macro with other approaches as it is to chisel out an identifiable and meaningful role distinct from other kinds of macro. *Time and Money* “works” on several levels, but clearly one of its real contributions is its demonstration that capital-based (that is, Austrian) macroeconomics has the capacity to analyze questions not only in ways unavailable to other approaches, but also in ways that avoid the mistakes of alternative approaches. The analytical innovation that Garrison employs is the critically important role of the intertemporal structure of capital in explaining episodes of sustainable and unsustainable economic activity.

THE “KEYNES PROBLEM”

But what about Keynes and the Keynesians? Where do they stand in all of this? Essentially, although Garrison only intimates this, the thrust of his argument suggests that the development of labor-based macroeconomics since the 1930s is either irrelevant or redundant to the new vision; that Keynesian macroeconomics was not simply a diversion but a “spur” (p. 18).² This carries some irony because *Time and Money* sees the economics of Keynes as the key intersection in the development of macroeconomics, and in important ways the book is finally an analysis played out between Keynes and the Austrians, with monetary disequilibrium macro playing a relevant, but hardly decisive, role in the main plot line. As Hicks observed, the sparring between Hayek and Keynes was “quite a drama.” *Time and Money* ushers this drama into the

¹See Horwitz (2000).

²Garrison does not address the place or significance of post-Keynesian economics. The Lachmann-Shackle connection suggests to some Austrians that increased dialogue with post-Keynesians would be fruitful. It seems, though, that most Austrians (including Garrison) view such prospects differently. See, for example, the essays by White and Rizzo in Caldwell and Boehm (1992), Garrison (1986), and Butois and Koppl (1997).

twenty-first century and provides a framework—its interconnected six-quadrant graphical setup—that helps to identify in what ways modern varieties of macroeconomics may be compared and in some cases even reconciled.

The "Keynes Problem," the question of how to "handle" Keynes, is one of the great and ever-present issues in macroeconomics. In the main, the diverse approaches found in contemporary macroeconomics, aside from Austrian macro which Garrison notes as predating the Keynesian onslaught, are either elaborations of Keynes's ideas or reactions to him or his interpreters. Beginning with Hicks, the immensely adaptable fields of "Keynesmania" have given sustenance to generations of macroeconomists facile enough to extract some hitherto undetected insight or set of ideas lurking in, between, or off the pages of *The General Theory*. In no small measure, the resulting mélange is probably as much a testament to the resourcefulness of economists as to the sometimes obscure and hence problematic character of Keynes's writings and thinking. If so, trying to settle on "what Keynes really meant" may be less important to the future of macroeconomics than the problem of reconfiguring Keynes in ways that illuminate fundamental issues in macro and distinctions between alternative approaches. In what follows, I will discuss two aspects of the "Keynes Problem," in particular, questions centering on his "social vision" and his treatment of expectations, as a means for examining Garrison's analysis of Keynes. I suggest that *Time and Money* achieves better success in negotiating the former than the latter question.

The organizing interpretative principle Garrison wisely adopts for the "Keynes Problem" is Allan Meltzer's (1988), which sees Keynes as primarily concerned with the economics of secular slumps and only secondarily with cyclical problems. With this sensible and straightforward expedient, Garrison is able to relocate salient features of Keynes's economics in ways that highlight its distinctive analytical features and, consequently, its points of departure from other approaches.

In this view, volatile investment activity in capitalist investment markets and the cyclical fluctuations it induces result in Keynes's "full employment" only as a transitory outcome at the cyclical peak. The circumstances that generate that outcome are merely fortuitous and cannot reliably ensure or maintain that result; it is, as Garrison astutely puts it, full employment "by accident" (p. 131). Moreover, Keynes was not especially sanguine about the prospects of either conventional fiscal or monetary policies to maintain the peak or prevent the downturn, notwithstanding the availability of these instruments to policymakers and Keynes's presumption in his closed economy setup that the nominal quantity of money was a policy determined (exogenous) variable. This helps to explain the virtual absence of countercyclical policy discussions and recommendations in *The General Theory* of the kind that have formed the policy backbone of standard textbook treatments of

Keynesian macro. Keynes's lack of emphasis on countercyclical policies did not originate in *The General Theory*, but emerged earlier in his thinking. Thus, in his Harris Foundation lectures, given in Chicago in 1931, Keynes argues that the "causes of the world slump," which he traces "wholly to the breakdown of investment" (Keynes 1973, p. 358), cannot be easily reversed. The attempts of central bankers to "restore confidence" (as a means to induce lower interest rates) is not a reliable tool because the "turning-point may come in part from some chance and unpredictable event" and because "the restoration of confidence must be based . . . on a real improvement in fundamentals" that can break "the vicious circle" (pp. 363-64). Central bank intervention that reduces the long-term rate of interest can increase certain kinds of investment (Keynes claims housing, public utilities, and transportation, but not manufacturing, are interest-rate sensitive), but in the main "a small change in the rate of interest may not be sufficient. . . . That, indeed," Keynes says, "is why I am pessimistic as to an early return to normal prosperity" because "it may be extremely difficult both to restore confidence adequately and to reduce interest rates adequately" (p. 365). Fiscal policy, that is, "new construction programmes under the direct auspices of the government or other public authorities," does not fare well either, because "it is not easy to devise at short notice schemes which are wisely and efficiently conceived and which can put rapidly into operation on a really large scale" (p. 364).

Interest in cyclical phenomena during the interwar years on the Continent, England, and America brought forth a steady stream of important research. And it was certainly a hobbyhorse Keynes mounted. How does this, then, square with the interpretation of Keynes found in *Time and Money*? From the beginning, Keynes's specific interests in economics were oriented toward "real world problems," and like other leading economists of the time, those interests increasingly gravitated toward the character and causes of systemwide instabilities. Keynes's activities indicate that his engagement with colleagues was dominated by closely argued analytical questions that generally fell then, as they do today, into the "cyclical" domain. His engagement as an economist centered on elaborating and defending his economic theories, and the arguments he used were those of a professional economist. During and after the war, Keynes directed much of his effort toward various matters of "practical policy," especially as it concerned the postwar world. And here, too, Keynes gives the general impression of a practicing economist, though now writing and commenting on drab government reports, sticking in the main to his knitting, and avoiding outbursts of a "social vision" that call for the "socialization of investment," such as is encountered in chapter 24 of *The General Theory*.

There are strong hints, however, that chapter 24 was lurking all the while just beneath the surface. In the aforementioned 1931 Harris lectures, Keynes's

relative disparagement of standard fare countercyclical policies leads him to suggest the following:

I am not sure that as time goes by we may not have to attempt to organise methods of direct government action along these lines more deliberately than hitherto, and that such action may play an increasingly important part in the economic life of the community. (Keynes 1973, p. 364)

Keynes (1980) approvingly quotes, in a May 1943 memorandum on postwar employment policy ("The Long-Term Problem of Full Employment"), Treasury's Sir H. Henderson's assertion that

Socialists are on strong ground when they argue reliance on supply and demand, and the forces of market competition, as the mainspring of our economic system, produces most unsatisfactory results. Might we not conceivably find a *modus vivendi* . . . in an arrangement under which the State would fill the vacant post of entrepreneur-in-chief? (p. 322)

His own argument leading to his quoting of Henderson emphasized that the "main task" of a full employment policy "should be to *prevent* large fluctuations" in investment "by a stable long-term programme." How did Keynes imagine this to be achieved?

If two-thirds or three-quarters of total investment is carried out or can be influenced by public or semi-public bodies, a long-term programme of a stable character should be capable of reducing the potential range of fluctuation [in investment]. (p. 322)

The "onset of this golden age," Keynes tells us, will require changing "social practices and habits so as to reduce the . . . level of saving" because "eventually depreciation funds should be almost sufficient to provide all the gross investment that is required." According to Keynes, fundamental reform, as opposed to countercyclical measures, is necessary for achieving and maintaining full employment because "If a large fluctuation is allowed to occur, it will be difficult to find adequate offsetting measures of sufficiently quick action." Keynes goes on to note that "I doubt if much is to be hoped from proposals to offset unforeseen short-period fluctuations in investment by stimulating short-period changes in consumption" (1980, pp. 324, 322-23).

These considerations broadly support Garrison's argument in chapter 9 ("Secular Unemployment and Social Reform") that Keynes perceived faults of such a serious kind in the market economy that only fundamental reform at the institutional level could correct the problems. Although below I shall return to certain specifics of Garrison's argument, it is useful to entertain the idea here that no tension need exist between Keynes the "social visionary" and Keynes "the economist," since he appears to have realized that the intellectual value of his "social vision" relied on the economic arguments he believed

conducted toward or perhaps necessitated certain kinds of institutional reform. In other words, I take Keynes to subscribe to the position that the vindication of his social vision had to pass the test of reasoned argument at the level of analytical economics. For example, in *The Treatise on Money* he used the saving-investment relation to show that “windfall” changes in profits (and hence, in his setup, saving) could affect output. However, partially in reaction to *The Treatise*’s lukewarm reception from such notables as Hayek and Robertson, Keynes finally admitted in the preface to the English edition of *The General Theory* that its whole apparatus was too static and sometimes too confused to be of much value in providing a theory of “changes in the scale of output . . . as a whole” in which employment is chronically below its desired size (1936, p. vii). Hayek’s (1978, pp. 283-84) explanation that he had chosen not to respond to *The General Theory* because Keynes might again change his mind is unnecessarily harsh, if not disingenuous, because it suggests a dilettantism in Keynes that is difficult to square with the evidence. It may be more to the point to suggest that the analytics contained in *The Treatise*, in effect, was discarded because it failed to provide adequate support for the larger argument Keynes was implicitly trying to advance. Keynes knew where he wanted to end up; the problem he tackled was finding the correct set of tools and arguments to warrant his conclusions. Chapter 24 of *The General Theory* notwithstanding, Keynes’s expression of his “social vision” in his scholarly work and published papers, though vital to his overall purpose, is on balance muted and restrained.

If we accept this somewhat more generous reading of Keynes, we would expect to see in *The General Theory* economic arguments constructed to support and lend credibility to his social vision. Keynes, no doubt deeply affected by the long slump in Great Britain and around the world during the 1920s and 1930s, viewed the market economy as subject to chronic unemployment and incapable of generating the necessary adjustment forces to restore and maintain full employment. Most commentators agree that Keynes attributed these maladies to “the dark forces of time and ignorance” (1936, p. 155), which are reflected in investment activity that is volatile and insufficient. As much as anything, it is the inventive ways Keynes developed these supporting arguments that make him interesting. Keynes’s economic argument hinges on interest rates that are kept chronically too high and investment outlays that are chronically too small to generate full employment. According to Garrison’s discussion in *Time and Money*, Keynes emphasizes the perverse effects of something he calls the “fetish of liquidity,” an ongoing and excessive disposition to hoard money; of “lenders’ risk,” a cost of lending originating from the risk of “voluntary” or “involuntary” default by the borrower that raises the required rate of interest on loans above the borrower’s risk associated with the prospective yield of an asset (p. 144); and, lastly, of what Keynes refers to as

the casino-like character of *modern* financial markets pummeled by unmoored, psychologically driven “waves of optimistic and pessimistic sentiment” (p. 154). For Keynes, the “fetish for liquidity,” lenders’ risk, and perverse financial markets reflect uncertainty-generated market failures that, as Garrison emphasizes, are beyond resolution given prevailing institutional arrangements. So what did Keynes recommend?

Aside from his suggestion that State policy should be directed at more nearly equalizing income differences,³ Keynes argues for policies he claims would result in a “state of full investment in the sense that an aggregate gross yield in excess of replacement cost could no longer be expected . . . from a further increment of durable goods” (p. 324). But attaining a rate of investment that would reduce the marginal efficiency of capital close to zero is not possible unless the interest rate can be driven to nearly zero or investment outlays maintained at a high enough level to push the MEC to nearly zero. To solve this problem, Keynes calls upon the State—public and quasi-public agencies—to ensure that the volume of investment maintains a rate consistent with full employment. For Keynes, the State is singularly equipped to overcome macro-economic market failure by internalizing the social costs of uncertainty via its control of the scale of investment outlays.

The kinds of institutional rearranging that Keynes calls for is premised upon the existence in the market economy of “Keynesian maladies.” These can be, and (if Keynes had his druthers) ought to be, analyzable by economic reasoning. In part, this is precisely what *Time and Money* sets out to do, and it achieves that objective brilliantly with its “six-panel graphs” and the analytical clarity and tightness of its prose. Garrison’s treatment of Keynes (but the same thing could be said about the other main parts of the book) and the effects on labor, commodity, and loanable funds markets of “the fetish for liquidity,” “a collapse in the MEC,” and other Keynesian maladies, capture with great effectiveness the various “before” and “after” situations germane to Keynes’s economics.

KEYNES, GARRISON, AND EXPECTATIONS

According to Garrison, defenders of Austrian business cycle theory are sometimes challenged by critics who ask the “rhetorical question: ‘What about expectations?’—hence the impish tone with which it is posed” (p. 17). Garrison deflects this challenge from the “imps,” as he calls them, by claiming the context of the question is itself “wholly anachronistic” because modern treatments of expectations emerged from Keynesianism and “cannot simply be

³But Keynes accedes to “social and psychological justification for significant inequalities of incomes and wealth, but not for such large disparities as exist to-day” (1936, p. 374).

grafted onto the Austrian theory, whose origins predate Keynes" (p. 18). Aside from rejecting these "modern treatments" (in particular, rational expectations), Garrison wants to shift the emphasis of macroeconomics back toward capital theory and away from expectations. According to Garrison, however, the analysis of the intertemporal capital structure cannot be unhooked from expectations because the structure itself is necessarily a reflection of the plans and expectations of entrepreneurs. In effect, the intertemporal structure of capital provides the relevant context for considering expectations.

As Garrison emphasizes in chapter 2, the "Lachmann Problem" reminds us that the passage of time and changes in knowledge (and, hence, expectations) go together. In *Time and Money*, expectations are reflected in "time markets"—the loanable funds market and in the plans upon which the capital structure is based. In equilibrium, expectations are fixed. When the system is disturbed, let us say by central bank policy, the attempt of agents to execute their plans and reformulate them implies various adjustments and readjustments throughout the system; the system starts from an initial equilibrium position and ends up back at that equilibrium position. The changes that must occur in the model and that are necessitated by the model's assumptions require that agents' actions are constrained by the underlying economic realities and by expectations that are kept in line with those realities. For Garrison there are certain "understandings" (p. 26) about expectations implicit in Austrian theory: first, entrepreneurs act in the face of uncertainty; second, changing prices convey relevant characteristics about changes in underlying realities; and third, prices tend to promote the coordination of economic decisions.

Now, these "understandings" are indeed altogether sensible and seem to squarely capture salient aspects concerning action through time (that is, expectations) that most Austrians ought to find agreeable. By establishing the relevant context of decision making and the role of the price system in conveying knowledge and coordinating plans, expectations are endogenized and in the end are reflected in coordinated plans as required by the nexus of equilibrium outcomes implied by the model. As the system moves from one equilibrium to the next, "everything works out" in the sense that expectations are satisfied and all markets "clear" (even though in the labor-based case the system settles into an unemployment equilibrium). Expectations cannot behave in ways apart from the general constraints implied by the prior "understandings." In effect, expectations are "reasonable" because they are assumed to "facilitate the coordination of economic decisions" (p. 26). A violation of this assumption, Garrison notes, "implies a denial that the market is a viable solution" (p. 26). These "understandings," however, are theoretical conjectures that do not command universal assent and, hence, are themselves areas of controversy among economists. In particular, as noted earlier, Keynes held

that long-term expectations are liable to change through time and to do so unpredictably and uncontrollably. They are unhooked from the market process. Keynes, in effect, denies the assumptions Garrison postulates about expectations. And this denial is precisely the problem for economic analysis that Keynes's views pose.

Keynes is quite insistent that he wishes to generate a model of a monetary economy in which "changing views about the future are capable of influencing the quantity of employment and not merely its direction" (p. vii), an indication of his interest in questions concerning "historical time." Recognition of this facet about Keynes has, as might be expected, resulted in various attempts to more completely dynamize Keynes's theories. For example, Kregel (1976), a leading post-Keynesian, claims that two distinct models appear in *The General Theory*: the theory of stationary equilibrium and the theory of shifting equilibrium. According to this reading, these models are characterized by different assumptions concerning "short-period" and "long-term" expectations. Keynes's "stationary equilibrium" assumes the state of long-term expectation is constant, but allows for disappointment in short-period expectations, which Keynes claims are hooked into realized outcomes (1936, p. 47), making them relevant to entrepreneurial decisions for the current period. In addition, although Keynes's stationary model does not preclude the attainment of full employment via a trial-and-error method of decisionmaking by entrepreneurs, the "wrong" state of long-term expectations and other potential problems make full employment improbable and accidental.

Alongside and intermingled with this set-up, Keynes also mentions—it seems almost in passing—something he calls "shifting equilibrium": "the theory of a system in which changing views about the future are capable of influencing the present situation" (p. 293). A direct application of this notion is that changes in long-term expectations will also affect short-term expectations and thus have the capacity to affect current production and employment decisions, financial markets, interest rates, and hoarding in ways that, according to Keynes, are likely to be socially undesirable. The idea of "shifting equilibrium" conveniently allows Keynes to transfer the results of his theoretical apparatus, largely gained from stationary analysis, to a historical-time (and path-dependent) context. This procedure accomplishes two important objectives: first, it supports Keynes's call for an economics of the real (that is, calendar-time) world as opposed to theories "where all things are foreseen from the beginning" (p. 293); and second, it is used to fortify Keynes's claim that for extended periods of calendar time the market economy is incapable of operating at full employment. At any moment, the system will be in equilibrium at less than full employment, and, as it moves through historical time, it will remain roughly in that state of slump.

The salient feature of Keynes's use of "shifting equilibrium" is that long-term expectations are assumed exogenous. This means, as Garrison and others

have noted, that the “state of long-term expectation” is a free parameter in the model and that it plays a role in *The General Theory* akin to a “wild card”—something to be invoked at the theorist’s pleasure and used in the model as those occasions warrant. A model “in time” (as Hicks might describe it) has been constructed, but it is one in which “uncertainty of the future” is used to manufacture a particular result. Thus, while Keynes’s model might appear to provide a comfortable nesting place for expectations in general and on that account gives his treatment of expectations an aura of credibility, the particular way Keynes treats and uses expectations is analytically unsatisfying, if not idiosyncratic.

In *Time and Money*, changes in expectations find appropriate proxies within Garrison’s construction that allow their implications to be traced through the various “panels” connecting the loan, output, and labor markets. The model is adept at handling “if this, then that” propositions concerning Keynes-type expectational assumptions, and it does so in ways that are more illuminating and coherent than other macro models, including Keynes’s. The text in *Time and Money* adds substance and much interesting detail to the analytical superstructure, extending its relevance and applicability to the real world, and it does so in a way that does not stray far from the constraints provided by the model. Thus, while both Keynes and Garrison generally work within the context of an analytical framework, they also both move outside their models in ways that interest us, although each interprets the acceptable range of that latitude quite differently.

For Keynes, long-term expectations are literally beyond the pale and have no necessary or systematic connection to the market process that they so severely affect.⁴ This has the effect, ironically, of removing Keynesian-type expectations from the purview of economics and relocating them elsewhere. Keynes, in effect, does not accept Garrison’s assumptions. Consequently, Garrison’s framework, though entirely adequate in examining the *implications* of Keynes’s expectations, cannot ascertain their theoretical legitimacy or the extent to which they are empirically relevant.⁵ Is it the case, then, that Austrian macroeconomics has no systematic basis for rejecting Keynes’s theory of expectations? Should one counter Keynes’s assertion that expectations

⁴Keynes actually admits this when he says near the end of chapter 12 (“The State of Long-Term Expectation”) in *The General Theory*: “We should not conclude from this that everything depends on waves of *irrational* psychology” (p. 162, *italics added*).

⁵Garrison’s model in chapter 8 (“Cyclical Unemployment and Policy Prescription”) shows that the Keynesian malady of a collapse in the MEC cannot be remediated by a flexible wage rate, which, Garrison maintains, “will only partially eliminate the immediate problem of unemployment while contributing nothing—and even forestalling—a solution to the root problem, the collapse in investment demand” (p. 150). Here, Keynes-type expectations trump the system’s coordinating mechanisms.

can and are likely to be perverse, and if so, how? If the preference and comparative advantage of economists is to mend their *own* fences, the ways Austrian macroeconomics might address "the Keynes challenge" emerges as a significant and, as of now, open-ended question. Although various strategies to address such concerns might be suggested, it seems that in this area the kinds of differences separating Keynes (and his followers) from the Austrians may be extremely difficult to reconcile.⁶ If so, Austrians may well find it necessary and useful to pursue a complementary tack by framing questions in ways that facilitate empirical analysis and testing, broadly understood.⁷ Keynesians may want to insist that expectations are fragile and volatile, but that does not explain the reasons or circumstances under which that might be the case, or, perhaps more importantly, the degree of their fragility. Important aspects of these questions seem approachable from historical and empirical analysis, and such means may be one of the few ways these difficult questions can be addressed. This may be especially the case when serious researchers start from incompatible assumptions in their economics.

CONCLUSION

Time and Money provides a highly effective platform from which to consider macroeconomic theory, and its capacity to service the needs of comparative macroeconomic analysis is an important contribution in its own right. The book will be important for the development of Austrian economics because it identifies important questions and provides sensible answers to the questions it analyzes. Although not discussed at length in these remarks, the framework contained in *Time and Money* is receptive to the extension of Austrian economics, especially with respect to monetary disequilibrium theory and to comparative institutional analysis. The impetus Garrison's book provides for the wider acceptance and extension of capital-based macroeconomics will be carried out both at the level of theory and, one hopes, at the empirical level as well.

REFERENCES

- Burczak, Theodore A. 2001. "Profit Expectations and Confidence: Some Unresolved Issues in the Austrian-Post-Keynesian Debate." *Review of Political Economy* 13(1): 59-80.

⁶Many of these differences concern epistemological and methodological issues, which, if nothing else, are notoriously unresolvable to the satisfaction of both parties. For example, the reactions to Butos and Koppl (1997) by post-Keynesians (Burczak 2001; Carabelli and DeVecchio 2001) give a sense of the degree of these differences.

⁷Empirical analysis is multi-dimensional. Garrison's chapter on "Risk, Debt, and Bubbles" is an excellent example.

- Butos, William N., and Roger G. Koppl. 1997. "The Varieties of Subjectivism: Keynes and Hayek on Expectations." *History of Political Economy* 29(2): 303-29.
- Caldwell, Bruce J., and Stephan Boehm, eds. 1992. *Austrian Economics: Tensions and New Directions*. Boston: Kluwer.
- Carabelli, Anna, and Nicolo De Vecchi. 2001. "Hayek and Keynes: From a Common Critique of Economic Method to Different Theories of Expectations." *Review of Political Economy* 29(3): 269-85.
- Garrison, Roger W. 1986. "From Lachmann to Lucas: On Institutions, Expectations, and Equilibrating Tendencies." In *Subjectivism, Intelligibility, and Economic Understanding*. Israel M. Kirzner, ed. New York: New York University Press. Pp. 87-101.
- . 2001. *Time and Money: The Macroeconomics of Capital Structure*. New York: Routledge.
- Hayek, F.A. 1935. *Prices and Production*. 2nd ed. London: Routledge.
- Horwitz, Steven. 2000. *Microfoundations and Macroeconomics: An Austrian Approach*. New York: Routledge.
- Keynes, John Maynard. 1936. *The General Theory of Employment, Interest, and Money*. New York: Harcourt, Brace and World.
- . 1973. *The Collected Writings of John Maynard Keynes*. Vol. 13. *The General Theory and After: Part I: Preparation*. D. Moggridge, ed. London: Macmillan and St. Martin's Press for the Royal Economic Society.
- . 1980. *The Collected Writings of John Maynard Keynes*. Vol. 27. *Activities 1940-1946, Shaping the Post-War World: Employment and Commodities*. D. Moggridge, ed. London: Macmillan and St. Martin's Press for the Royal Economic Society.
- Kregel, Jan. 1976. "Economic Methodology in the Face of Uncertainty: The Modeling Methods of Keynes and the Post-Keynesians." *Economic Journal* 86(342): 209-25.
- Meltzer, Allan H. 1988. *Keynes's Monetary Theory: A Different Interpretation*. New York: Cambridge University Press.
- Rizzo, Mario J. 1992. "Afterword: Austrian Economics for the Twenty-First Century." In Caldwell and Boehm, eds. (1992). Pp. 245-55.
- White, Lawrence H. 1992. "Afterword: Appraising Austrian Economics: Contentions and Misdirections." In Caldwell and Boehm, eds. Pp. 257-68.