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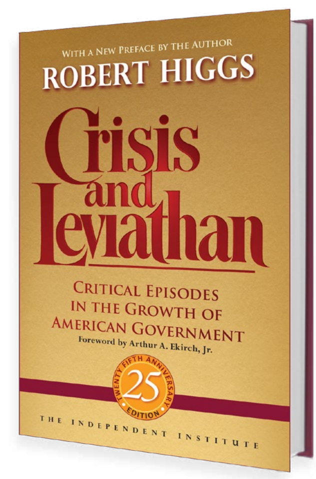

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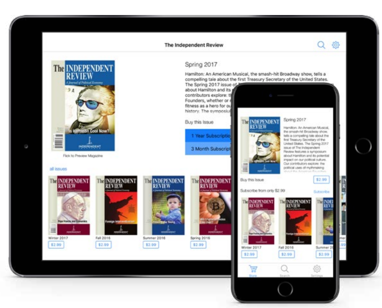

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The Keynes Perplex

WILLIAM N. BUTOS

The publication of *The General Theory of Employment, Interest, and Money* (hereafter *GT*) in 1936 by John Maynard Keynes (1883–1946) marks one of the great watersheds in the history of macroeconomics. Keynes was no unknown upstart—even before 1936, he had become a highly influential economist and civil servant, editing the prestigious *Economic Journal* in 1911 (at twenty-eight years of age) and authoring several important books.[1] After World War II, *GT* quickly swept away the existing "classical" orthodoxy in Britain and America, instigating the "Keynesian Revolution." *GT* changed the course of how economists think about macroeconomics; it is actively discussed to this day, and its theoretical merits and policy implications are still debated.[2]

In this essay, I have selected certain main ideas in *GT* to discuss. My approach is, I hope, a useful but certainly not an exclusive way to understand an important economist. In a nutshell, Keynes claimed that insufficient aggregate investment causes high unemployment. Interest rates can be too high and uncertainties for private investors too great to ensure full-employment investment. The economy, he argued, cannot rely on the self-correcting mechanisms of the market. Although standard macroeconomic countercyclical policy was largely muted in *GT*, Keynes's policy vision stretched beyond

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1. Keynes published several other important books, including *The Economic Consequences of the Peace* (1919), *A Treatise on Probability* (1921), *A Tract on Monetary Reform* (1923), *A Treatise on Money* (1930), and *Essays in Persuasion* (1931). All citations to *General Theory* are to the original edition, Keynes 1936, giving the abbreviation *GT* and page numbers.

2. The voluminous secondary literature on *GT* offers diverse interpretations of "what Keynes really meant," which include reading within the text, between the lines, and sometimes off the page. On this point, see Butos 2001, 7.

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standard fiscal and central-bank policies beginning in his earlier years (see Meltzer 1988; Salerno 1992). Keynes was not dismissive of standard macroeconomic policies, but he did not have great confidence in their reliability to solve the problem of slumps.

Context and the Run-Up to *GT: The Treatise* and the Return to Gold

Keynes considered his general theory a major and pathbreaking theoretical contribution to economics, but his earlier work included antecedents that he adapted for *GT,* especially *A Treatise on Money* ([1930] 1981). The *Treatise* uses a Wicksellian business-cycle model to analyze fluctuations—episodes of deflation and inflation—caused by imbalances in the flows of savings and investment. If saving exceeds investment, the model calls for a cumulative contraction with falling prices and output as well as higher unemployment; the contraction ceases only if savings are reduced and investment increased.[3] Because "saving" in the *Treatise* means reduced demand for consumption goods, "the cruse becomes a Danaid jar which can never be filled up" because "the effect of this reduced expenditure is to inflict on the producers of consumption goods a loss of an equal amount" (Keynes [1930] 1971, 125). Although Keynes dropped the Wicksellian model in *GT,* the Danaid jar metaphor is central to *GT* in that "saving" is depressive to the economy.[4]

In both the *Treatise* and *GT,* Keynes claimed that private-investment instability is central to the explanation of the business cycle. In the *Treatise,* however, the fear of falling prices induces destabilization and motivates the financial market "bears." Investment instability is also central to *GT,* but the explanation there refers to "the dark forces of time and ignorance which envelop our future" in the context of modern "organized investment markets" (155, 150). Keynes claimed that such markets may produce outcomes in the form of a cumulative price deflation and recession and also a level of aggregate output insufficient for full employment. Also, importantly, Keynes emphasized the fragility of expectations in both the *Treatise* and *GT,* but he treated expectations differently in each case.

The *Treatise* centers on unstable short-run expectations of firms' future profits and stable long-term expectations in the context of business cycles; in *GT,* however, short-run expectations are stable, but long-run expectations are not.[5] In both cases but in

3. Keynes's Wicksellian model was a full-employment one; an essential difference between the *Treatise* and *GT* is made explicit in Keynes's preface to *GT:* "This book . . . is primarily a study of the forces which determine changes in the scale of output," whereas his model in the *Treatise* was an "instantaneous picture . . . of a given output" (vii).

4. A key element of Wicksell's model is the "loanable funds" model by which the flow of credit is supplied by savers and demanded by investors, generating market interest rates. In contrast, Keynes understood saving as nonspending or hoarding. In *GT,* he allowed only two forms of holding monetary assets: buying bonds or holding cash balances. We can surmise that had Keynes retained the Wicksellian model, especially the loanable-funds model, much of the general theory would have fallen.

5. This is elaborated in the section titled "The Inducement to Invest."

different contexts, there are presumed to be very weak self-correcting processes endogenous to the system. The *Treatise* was written five years after Britain resumed the prewar parity of sterling against gold in 1925.[6] Keynes argued that sterling was at least 10 percent overvalued and that this overvaluation would result in large-scale unemployment. In Britain, the strength of trade unions in keeping nominal wages rigid would also be played out by falling prices and rising unemployment and after World War I would include other institutional factors that would keep Britain relatively uncompetitive in world markets.[7] For example, unemployment in 1921 reached 11 percent during the recession of 1920–21, gradually settling in at 8 percent in 1923 until 1929. In short, Britain's recovery lagged after the war and did not show a robust upturn during the decade of the 1920s.[8]

Britain's economic woes continued with a recession in the early 1930s: the unemployment rate peaked at 16 percent in 1932 and was still at 8 percent at the onset of the recession in 1937. And it was just a year after the *Treatise* was published that Britain went off the gold standard in 1931. These events were probably crucial for Keynes's writing of *GT*: his explanation of the possibility of a prolonged slump was very timely, given the widespread disenchantment with the workings of the market economy after years of depression; he could also dispense with the "shackles of gold" as a monetary constraint by providing more latitude for domestic-policy options. With *GT,* he was able to rebound from the *Treatise*'s disappointing professional reception.[9]

The Problem with "Classical Economics"

Keynes argued that Britain's unemployment problem was caused by large-scale involuntary unemployment. According to him, the classical school assumed frictionless adjustment that always brings the labor market to equilibrium.[10] But, he argued, workers cannot change the price level or easily adjust the money-wage components of

6. See Keynes's essay "The Economic Consequences of Mr. Churchill" (Keynes 1972, 207–30). Actually, the "gold standard" was a "gold-exchange standard," an arrangement where the monetary authority's currency is pegged to another gold-linked currency—for example, the pound sterling was tied to the U.S. dollar in 1925.

7. See Anderson 1949; Yeager 1976; Dimsdale 1981; Matthews 1986.

8. N. H. Dimsdale agrees with Keynes's claim of an overvalued pound sterling in 1925 but concludes that "it is questionable whether the extent of overvaluation was 10% as he claimed" and that a "slightly lower exchange rate of about $4.40 would not have made much difference to Britain's difficulties in the 1920s" (1981, 343).

9. Among Keynes's *Treatise* critics, Hayek stands out, especially on capital theory (see Hayek 1931–32). See Butos 1994.

10. Early in *GT,* Keynes divided schools of economics into two groups: his own work and that of the "classical economists" who preceded him. His definition of "classical economics" includes true classical economists of the nineteenth century, such as Ricardo, Bentham, and J. S. Mill, as well as postmarginalists, more familiarly referred as "neoclassicists," who included monetary and business-cycle scholars on the Continent and his own English contemporaries and colleagues, luminaries such as Alfred Marshall and A. C. Pigou. Keynes's aim was to insist on a new economics that would replace most of the pre-*GT* work in macromonetary economics.

real wages. So if the demand for labor shifts leftward, real wages cannot easily adjust to their equilibrium values, thus generating involuntary unemployment.

This explanation of the unemployment problem ties into Keynes's interpretation of Jean-Baptiste Say's classical Law of Markets. Keynes argued that Say's Law was defined as an equilibrium state in which "supply creates its own demand" (*GT,* 18).[11] He apparently meant that classical economists claimed that "effective demand" (as discussed later) would be equal to full-employment aggregate supply. Keynes asserted that according to Say's Law all markets are in equilibrium, implying full employment such that "the aggregate demand price of output as a whole is equal to its aggregate supply price for all volumes of output" (*GT,* 26). he claimed that the classical default position was full employment equilibrium; Say's Law, in his reading, cannot explain business cycles or persistent high unemployment.

Yet the salient proposition that Keynes overlooked and that was implicit for pre-Keynesians is that markets provide "incentives to correct any nonuse of also *valuable* (and hence *demanded*) resources of men and assets" (Hutt 1979, 53, italics in original). Also, Joseph Schumpeter argued that "competition between firms always *tends* to lead to an expansion of output up to the point of full utilization of resources. . . . And *this* is the proposition to which Keynes really meant to object" (1954, 624, italics in original). More recently, Steven Kates (1998, 2010) has defended Say's Law and criticized Keynes's interpretation of it. Most pre-Keynesian economists, Kates (1998) finds, were very much aware that recessions occur (and with involuntary unemployment) because of disparities in the composition of commodities supplied and the array of commodities desired by buyers; in such cases, Kates says, recessions are due to "structural problems" and not to insufficient aggregate demand (2010, 16).

Keynes's critique of "classical economics" (with some exceptions—for instance, Malthus) seems to obscure important aspects of the classical system. Nevertheless, the force of his argument was meant to displace important work by postmarginalists, including the Swedish and Austrian Schools and, indeed, his English contemporaries. In this aim, Keynes succeeded handsomely.[12] In contrast to the emphasis in modern macroeconomic textbooks, Keynes's policy playing field centered primarily on prolonged slumps with high unemployment, which Britain was experiencing, and only

11. Keynes eschewed the "law of markets," yet we may question his understanding of it. He quoted a crucial passage from J. S. Mill's *Principles of Political Economy*: "What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the productions of other people consist of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as supply; everybody would be able to buy twice as much, because everyone would have twice as much to offer in exchange" (1899, III.xiv.§2, 107, qtd. in *GT,* 18). Keynes, however, overlooked Mill's next section (108–9), in which Mills explained that an excess supply of particular commodities is caused by the wrong *proportions* of commodities, given consumers' demands.

12. Brian McCormick (1992) calls the effect of *GT* a "Keynesian avalanche." Also, see Butos 1995.

secondarily on the trade cycle. Contrary to "classical economics," Keynes carved out a theory of the slump with no obvious self-adjusting market processes that would remediate such situations.

Aggregate Demand

Keynes's essential argument in *GT* is that insufficient aggregate demand is the cause of an underemployed economy. In his closed-economy construction, consumption and investment expenditures determine aggregate demand. The "propensity to consume" is composed of "subjective" factors that include "those psychological characteristics of human nature and those social practices and Institutions [*sic*]" (*GT,* 91) and various "objective" factors (for example, Keynes identified six factors, including real income, windfalls, and interest-rate changes). He assumed that the subjective factors can be taken as given because they "are unlikely to undergo a material change over a short period of time" (91) and that the objective factors in the aggregate cancel each other out. He deduced that "[w]e are left therefore, with the conclusion that in a given situation the propensity to consume may be considered a fairly stable function. . . . Aggregate income . . . is, as a rule, the principal variable upon which the consumption-constituent of the aggregate demand function will depend" (95, 96).

In effect, Keynes's "consumption function" is a function of current income. Also, Keynes invoked an a priori claim that as income increases, consumption increases, "but not by as much as the increase in . . . income." This implies "a greater proportion of income being saved as real income increases" (*GT,* 96, 97). In order to maintain that level of income (and consumption), the amount saved must be offset by investment expenditures; otherwise, "the fall in employment and income, once started, might proceed to extreme lengths"(98), and "every weakening in the propensity to consume . . . must weaken the demand of capital as well as the demand for consumption" (106).[13]

Keynes claimed that absent the necessary injection of aggregate demand, especially in the form of investment, the system can become mired in a less than full employment equilibrium. In chapter 10 of *GT,* "The Marginal Propensity to Consume and the Multiplier," Keynes introduced the "investment multiplier."[14] Although he saw deficient investment as the broken link causing the slump, he promoted "make-work" projects for those involuntarily unemployed (see *GT,* 128–31). Yet he saw the multiplier as a double-edged sword: he stated that if the marginal propensity to consume (MPC) is near unity, "small fluctuations in investment will lead to wide

13. See *GT,* 84, on the "paradox of saving"—the claim that increased ex ante savings lowers ex post saving because income has fallen.

14. Richard Kahn (1931) originated the "multiplier."

fluctuations in employment," but if the MPC is near zero, the reverse will be true. The problem here for Keynes is that the MPC "seems to lie somewhere between these extremes[,] . . . with the result that we have, in a sense, the worst of both worlds, fluctuations in employment being considerable and, at the same time, the increment in investment required to produce full employment being too great to be easily handled" (*GT*, 118).

In addition, Keynes mentioned that "increased public works" should not incur an "offset through a decreased investment in other directions" and that the "method of financing the policy . . . may have the effect of increasing interest and so retarding investment in other directions" (*GT,* 119). He also noted that in an "open-system," the trade balance will affect the multiplier, increasing its variability. Ironically, the postwar followers of Keynes, especially the early macroeconomics textbook writers, were more sanguine than Keynes about the investment multiplier. As we shall see later, Keynes had bigger fish to fry in rescuing Britain from the slump and in developing his long-term solution for unemployment, which requires us to consider Keynes's theory of investment.

"The Inducement to Invest"

As noted earlier, Keynes's argument in *GT* is that unemployment is an aggregate-demand failure caused by an insufficient investment, and in book 4 of *GT,* "The Inducement to Invest," he reveals the underlying problem as residing in investors' long-term expectations (chapter 12). Leading up to this central point, however, Keynes developed two supporting concepts: first, "marginal efficiency of capital" (MEC) and, second, his theory of "liquidity preference" (or, more familiarly, money-demand theory).

Keynes defined the MEC as that rate of discount that equates the present value of expected returns from capital assets to the current supply price (or replacement cost). The MEC schedule is downward sloping with respect to new investment; given this MEC schedule, a falling market interest rate will induce more investment. His main point, however, is that the MEC schedule is unstable because it is dependent on the *prospective* yield of capital and not merely on its current yield. He claimed that fluctuations in the MEC schedule are dominated by "very precarious" long-term expectations that are "based on shifting and unreliable evidence" that is "subject to sudden and violent changes" (*GT,* 315). The onset of the crisis in the economy is precipitated by a "sudden collapse" in the MEC (315) when investor "disillusion falls upon an over-optimistic and over-bought market" (316).

Keynes's "theory of liquidity preference" is the demand to hold cash balances for executing transactions and for precautionary and (most importantly) speculative motives. The interest rate is determined by the aggregate demand for money and the stock of money issued by the central bank,[15] which sets the market rate of interest.[16] However, a collapse of the MEC induces investors to increase their cash-balance holdings, causing the interest rate to rise and intensifying the downturn in the economy. Keynes opined that the interest rate "may fluctuate for decades about a level which is chronically too high for full employment" (*GT,* 204).[17]

The central bank may attempt to lower interest rates via money creation, but Keynes argued that interest rates may be stuck at some level that is not consistent with full employment. Investors and speculators, according to Keynes, have a default or "safe" rate of interest to which they believe markets rates will revert. Keynes treated such long-term expectations as exogenous conventions that are difficult to dislodge. If the central bank persists in expanding the money stock, it may bump into a "liquidity trap" as speculators add to their idle cash balances, thus thwarting the reduction of interest rates and rendering central-bank policy impotent (*GT,* 172).

For Keynes, as noted earlier, long-term expectations are critical to investment. In chapter 24 of *General Theory,* "The State of Long-Term Expectations," he couched his discussion in the context of financial markets. All players are subject to fundamental uncertainty of the future to the extent that no rational basis or probability calculus can be applied to long-term events. In his *Quarterly Journal of Economics* paper of February 1937, Keynes explained "uncertainty": "The sense in which I am using this term is that in which the prospect of European war is uncertain, or the price of copper and the rate of interest twenty years hence. . . . [T]here is no scientific basis on which to form any calculable probability whatever. We simply do not know" (1937, 214). And "[t]he outstanding fact is the precariousness of the basis of knowledge on which our estimates of prospective yield have to be made" (*GT,* 149).

But the effects of such dire constraints on investment, Keynes held, depend on the institutional context: financial markets before and after the advent of modern stock exchanges after World War I. In the old days, he stated, management and ownership were often the same or well aligned such that investment was "largely irrevocable, not only for the community as a whole, but also for the individual" and entrepreneurs "embarked on business as a way of life" and not "merely as a result of cold calculation" (*GT,* 150). Keynes's famous notion of "animal spirits"—"a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative

15. In *GT,* the aggregate speculative demand for money is inversely related to the market interest rate. In Keynes's treatment, however, each speculator holds either cash or bonds depending on an interest rate that he believes is (subjectively) normal. If the market rate is higher than the speculator's "safe" rate, he will use his speculative balances to buy bonds, given that the price of bonds is expected to rise, generating capital gains. Alternatively, if the market rate is lower than the speculator's "safe" rate, he will sell bonds and add to his speculative balances in the expectation the market rate will rise and bond prices fall, thereby avoiding capital gains loses. See *GT,* chapter 15. Keynes's theory of liquidity preference crowded out the older "cash-balance" and "loanable-funds" approaches.

16. Keynes claimed that an ongoing psychological "fetish of liquidity" ratchets up the interest rate permanently (*GT,* 155). Also, his "lender's risk" maintains higher interest rates.

17. Keynes was skeptical about monetary policy remedies. See *GT,* chap. 15, esp. 207–8.

benefits multiplied by quantitative probabilities" (161)—was necessary in those halcyon days and induced players to act in a socially useful way.

Then came modern financial markets and with them, Keynes argued, rampant *speculation,* played out in a casino-like environment with low-cost transactions, highly liquid assets, and the separation of management and ownership. The state of confidence, convention, and asset valuation is an "outcome of the mass psychology of a large number of ignorant individuals" who are "liable to change violently as a result of a sudden fluctuation of opinion" such that the market will be "subject to waves of optimistic and pessimistic sentiment" (*GT,* 154). Keynes saw the stock exchange as a game of "old maid," "musical chairs," or "beauty contests," in which the goal is to "outwit the crowd, and to pass the bad, or depreciating, half-crown to the other fellow." This game "does not even require gulls amongst the public to feed the maws of the professional" (155).

Keynes argued that speculators focus on short-term capital gains because future estimates of long-term financial assets are fundamentally spurious—"we just do not know" (Keynes 1937, 214). Highly liquid assets in modern financial markets incentivize speculators and displace entrepreneurs whose timeframe would otherwise be for the long haul. This displacement presents a serious problem because speculators troll the market for quick capital gains while avoiding long-term assets. According to Keynes, modern financial markets are relentlessly myopic, self-referential, and largely detached from market processes. In addition to seeing the activities of the financial markets as short-run "games," Keynes saw financial markets in terms of waves of optimism and pessimism that produce greater volatility in markets, which translates into unstable investment activity and instability in the economy at large (see Butos and Koppl 1997, 1999).

The central failure of modern financial markets, for Keynes, is that fundamental uncertainty promotes "long-term expectations" that paralyze entrepreneurial capital-investment projects. He saw expectations as subjective psychological sentiments, but he also treated long-term expectations as inelastic and exogenous. He severed expectations from the market process that would ordinarily generate useful knowledge for investors; instead, for Keynes, market prices (and informal nonprice market knowledge) play no role in interactions that will induce investors to revise their long-term expectations. Instead, the swings in confidence are driven by animal spirits, which raises the odds that mild downturns may morph into prolonged and more frequent slumps. As one article on expectations highlights, "For Keynes, expectations of the future are belief states. If these beliefs are to guide action reliably, they must embody reliable knowledge. But reliable knowledge of the future cannot be had" (Butos and Koppl 1997, 354).

For Keynes, the system's ability to adjust and to remediate is weak and unstable, but "not violently unstable"; the system "seems capable of remaining in a chronic condition of sub-normal activity for a considerable period without any marked tendency either towards recovery or towards compete collapse" and may find itself "in a stable equilibrium . . . below full employment" (*GT,* 249).

In *GT,* Keynes treated (fundamental) uncertainty as monolithic: "we simply do not know." But even if the future is uncertain, individuals may appraise future outcomes in subjectively different ways along a spectrum of uncertainties. If so, investors and entrepreneurs will seek out assets of different maturities consistent with their tolerance for uncertainty, while entrepreneurs will seek niches for exploiting opportunities. With many buyers and sellers on markets, we should expect a sufficient variance in their tolerance of uncertainty—the knowledge each individual has or will accumulate over time in deciding to act upon subjectively perceived opportunities. And we might see a more orderly and safer market up and down the temporal field of play (see Koppl and Butos 2001).

Keynes's Trade Cycles and Social Vision

In terms of economic policy, *GT* for the most part is rather muted until book 6, chapter 22, "Notes on the Trade Cycle," and chapter 24, "Short Notes Suggested by the General Theory." Keynes attributed trade cycles to fluctuations in the MEC driven by expectations that are "very precarious" and "based on shifting and unreliable evidence . . . subject to sudden and violent changes" (*GT,* 315), much like playing psychological wildcards hidden in the deck (see Lachmann 1986; Garrison 2001).

For sustaining such booms, Keynes suggested "various measures designed to increase the propensity to consume by redistribution of incomes" (*GT,* 324). More importantly for Keynes, however, very low interest rates are necessary to ensure full investment, claiming that full investment will require an interest rate equal to the replacement cost of capital (324) and flatly asserting, "I am myself impressed by the great social advantages of increasing the stock of capital until it ceases to be scarce" (325). However, Keynes suggested a more ambitious strategy: "The right remedy for the trade cycle is not . . . in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and thus keeping us permanently in a quasi-boom" (322). Although chapter 22 emphasizes sustaining economic booms, Keynes's principal concern in *GT* was diagnosing the causes of economic slumps and their prevention. He turned his attention to institutional reform in chapter 24, "Concluding Notes on the Social Philosophy towards Which the General Theory Might Lead."[18]

Although Keynes's followers, especially in America, took *GT* as a framework for countercyclical policy, Keynes's vision included a more permanent role for government in attaining ongoing full employment. At the Harris Lecture in 1931, for example, Keynes pointed out that central banks cannot break the "vicious circle" of the state of confidence that keeps interest rates too high. Also, fiscal policies are "not easy to devise at short notice schemes . . . on a really large scale" (1973, 364). His mild disparagement of standard countercyclical policies pushed ahead: "I am not sure that as time goes by we

18. Keynes's "social philosophy" was long-standing and reformist. See Meltzer 1988; Salerno 1992; Garrison 1992, 2001.

may not have to attempt to organize 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" (1973, 364).

In chapter 24, these sentiments take the form of the state exercising a "guiding influence on the propensity to consume partly through its scheme of taxation, partly by fixing the rate of interest, and partly . . . in other ways." Bank policy, Keynes argued, is "unlikely" to lower interest rates enough to induce "the optimum rate of investment" (*GT,* 378). Given this roadblock, "[a] somewhat comprehensive socialization of investment will prove the only means of securing an approximation to full employment." Keynes went on: "It is not the ownership of the instruments of production which is important for the State to assume. If the State is able to determine the aggregate amount of resources devoted to augmenting the instruments and the basic rate of reward to those who own them, it will have accomplished all that is necessary. Moreover, the necessary measures of socialization can be introduced gradually and without a break in the general traditions of society" (378).

Although Keynes's central point is the volume of state investment necessary for full employment, he was rather indifferent to specific kinds of investment and the rent seeking or the political grab-bag that this institutional reform might occasion. We cannot dismiss the likelihood that the contours of this permanent state dispensary will not only redirect investment projects to its liking but also set the rate of return for investors.

Summary and Conclusion

The General Theory of Employment, Interest, and Money is of one of the most important books in twentieth-century economics. But its influence had to wait for the end of World War II before a simplified and attenuated version of it became mainstream monetary macroeconomics. Up to that point, *GT* collected its fair share of endorsements, but some mainstream criticism marred the luster.[19] The development and spread of *GT* started with John Hicks's article "Mr. Keynes and the Classics" (1937) and his famous IS-LM (investment–saving and liquidity preference–money supply) model, which is still prominent in undergraduate macroeconomics texts. After the war, "Keynesian economics" took hold and held on.[20] Hicks's IS-LM model, which Keynes strangely agreed with, was nonetheless a pale and partial shadow of *GT*—an equilibrium snapshot of a temporary general equilibrium, where uncertainty is nowhere to be found

19. See Haberler 1936; Hicks 1936; Robertson 1936; Viner 1936; and Knight 1937. Earlier, Hayek (1931–32) published a highly critical review of Keynes's *The Treatise on Money,* initiating a withering debate with Keynes (see Butos 1994). Surprisingly, Hayek did not review *GT.* He gave several explanations for not responding to *GT* (see Howson 2001).

20. The success of *GT* was promoted greatly by Paul Samuelson's *Principles of Economics* (1948) textbook, which educated several generations of undergraduates, especially in the United States. With it, students were exposed to Samuelson's "income-expenditure" model—a modified and simplistic Keynesian aggregate-demand model, which was also repeated in other principles texts with few exceptions.

and where the excess-demand functions for money and commodities are zero, even if resources in the system are underemployed.

Within that context, it was easy to theoretically devise demand-management policies by simply manipulating fiscal and monetary policies. Yet, as discussed earlier, Keynes was not sanguine regarding countercyclical approaches; he was skeptical of such measures because they were unreliable and generally ineffective. Above all, his vision for solving slumps and unemployment was more deeply rooted and transformative than those short-run palliatives. As a prominent civil servant and respected intellectual, he was eager to reform and create policies and institutions from the 1920s to his passing in 1946. My discussion of chapters 22 and 24 centers on his reforming the system. According to Keynes, the objectives of such reform are to ensure full employment and to avoid slumps by socializing the volume of investment necessary to sustain full employment.

Keynes and his revolution have survived and prospered: it is now commonly accepted for the state to implement fiscal and monetary policies and to authorize new institutions for directing the economy. Despite some pushback,[21] Keynes's ideas and those of his followers have prevailed. We have seen that Keynes's economics is controversial and that his theories are often obscure. For example, although his misrepresentation of Say's Law seems small, it is in fact quite important for his theory of unemployment. There is the confusion of treating "saving" as hoarding idle cash balances, which necessarily lowers the circulation of money and depresses aggregate demand;[22] however, within a loanable-funds world, the flow of credit (savings) will be borrowed for investment purposes and earn a market rate of interest for the saver and the prospect of profit for the borrower.

When we turn to Keynes's "inducement to invest," we can see that he identified a real problem for investors: fundamental uncertainty of future outcomes. Keynes then connected "uncertainty" with causing too little investment and too much volatility. This happens, according to Keynes, because modern financial markets deal with highly liquid assets to maximize speculators' short-term capital gains. However, the paralysis that uncertainty might cause can be lessened by parsing uncertainty choices consistent with one's tolerance for uncertainty. In a heterogeneous world, we see entrepreneurs attuned to different "uncertainty placements" that chisel away at monolithic uncertainty. Although "we just don't know" is true, so too is that what happens in every next second is unknown. But different investors profit from their different degrees of myopia.

Keynes's complex, difficult, and often obscure text swept over the profession by giving an apparent theoretical basis for a message that was growing in acceptability, that was increasingly accepted throughout the twentieth century, and that is now a default position. The theoretical and policy arguments Keynes and others have made, including

21. For example, monetarism, the Austrian School, and public choice.

22. In "Of Money," Hume equated hoarding of money with burying it until unearthed, much like Keynes's idle cash balances. See Hume [1752] 1970, 42.

for the expansion of the state's control of the economy, have been successful in at least one sense: convincing too many economists and policy makers that market systems cannot be relied upon to function effectively without significant government intervention.

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