The Crisis in Economic Theory: A Review Essay[†]

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The Great Recession and the financial crisis of 2007–09 prompted calls for fundamental reforms of economic theory. The role of theory in economics and in recent economic events is considered in light of two recent books: the sociologist Richard Swedberg's The Art of Social Theory and the economist André Orléan's The Empire of Value: A New Foundation for Economics. (JEL A11, B40, Z13)

1. A Discipline with a Theory

D ichard Swedberg's *The Art of Social* **N**Theory and André Orléan's The Empire of Value: A New Foundation for Economics approach theory in ways that are unfamiliar to most economists. While Orléan is a French economist, Swedberg is a sociologist. Economics has always been the odd man out among the social sciences, and economists and sociologists view each other with deep mutual suspicion. Tweaking a colleague in applied microeconomics whose work concerned education with little focus on markets or prices, I asked her, "Why exactly should I not view your work as just sociology?" Without missing a beat, she replied, "Because we do it right." One way in which economists often regard their work as more right than that of other social scientists is that it is driven by theory. Economists even segregate their statistical tools into a separate field—econometrics—which can be distinguished in many accounts from general statistics by the way in which it is fundamentally linked to theory through an overarching concern with identification.

Is this insistence on a uniquely economic approach merely parochialism expressed as a contempt for our sister social sciences or is it a marker of a real distinction? Philosophers of science have certainly noted the attitude, and have attempted to understand its intellectual basis. The philosopher of economics Daniel Hausman (1992) refers to the discipline as the "inexact and separate science of economics," pointing to features that have characterized economics at least since the work of John Stuart Mill in the middle third of the nineteenth century. The philosopher of science Nancy Cartwright (1989, p. 14) groups economics closely with physics, because "economics is a discipline with a theory."

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2. What is Theory?

2.1 Abduction and Theorizing

An examination of Swedberg's book underlines the view that economists and sociologists do not share a common understanding of theory. Swedberg, who mentions economics only in passing, never gives a clear definition of "theory." This is hardly surprising; although widely regarded in a positive light, physicists, biologists, economists, and sociologists would find wide differences in the way "theory" is used in their fields, and they would be utterly bewildered by the way it is used in law, art, or literary criticism. Even within sociology—and, no doubt, within economics, as well—there is a variety of views about what precisely theory is and what constitutes good theory. Swedberg avoids defining theory by drawing a distinction between the product (theory), and the process (theorizing), and by emphasizing theorizing. His book is not a methodological treatise; rather, it is a how-to-theorize guide for sociologists. Economists, however, can learn from it how our sister social science understands theory, which should throw into sharper relief how economists themselves view it.

Swedberg frames theory as abduction, drawing on the work of the important American pragmatist philosopher Charles Sanders Peirce. The contrast between deductive inference (e.g., mathematics or formal logic) and inductive inference (i.e., going from particular evidence to general conclusions) is commonplace, but Peirce (1883 [1986]) regards it as confused. He understands *deduction* in essentially the usual way as necessary inference. And he refers to empirically grounded inference, what is commonly called induction, as *ampliative inference*, which itself divides into two

types: induction and abduction. Typical cases of *induction* included hypothesis testing and parameter estimation. Abduction takes a very different form from induction: "The surprising fact, C, is observed. But if A were true, C would be a matter of course. Hence, there is reason to suspect that A is true." (Peirce 1934, para. 188). Abduction is a weak form of inference, since a valid abduction does not even make its conclusion likely, much less certain. Its importance lies in the fact that it is, in Peirce's view, the only form of inference that introduces a new idea. Abduction is the kind of inference that generates new hypotheses; but no hypothesis is worth believing until it is rigorously tested through induction.²

Swedberg glosses abduction as guessing. When put this way, it might appear to correspond to the first element of Karl Popper's conjectures and refutations, which may be more familiar to economists, and which is the typical format in which economists learn about statistical testing (Popper 1963; Caldwell 1991). The similarity is nonetheless imperfect, since (pace Popper) Peirce and Swedberg believe that philosophy and logic have useful things to say about how hypotheses are formed—that is, about abduction or guessing. The "art" in Swedberg's title is the art of good guessing, and his aim is to give students useful advice about developing tentative explanations. Popper, of course, is famous for denying that such advice is the province of logic or that the process of conjecturing hypotheses can be systematized. Swedberg characterizes the art of his title as "creative theorizing" or "abductive-oriented" theory aimed at "building out theory" (Swedberg 2014, p. 8). 3

¹ For a general introduction to Peirce and his relevance to economics, see Hoover (1994).

²See Mayo (2005) on Peirce's theory of induction.

³In the remainder of this section, a page number without an author in parentheses refers to Swedberg's 2014 book under review.

Swedberg's key idea is that, far from Popper's view that conjectures logically precede testing and come indifferently from anywhere, theory is actually built from an interaction with observations—a backand-forth exchange of mutual refinement. Swedberg notes that the Greek root of $\theta\omega\rho\iota\alpha$ (theoria) is related to observation or contemplation and is used to refer to practical matters, though today we regard theory as abstract (p. 19). Social observation, he maintains, does not start with a blank slate. It is pretheorized, in that the categories under which we observe are themselves the result of theoretical typologies and definitions. Observations and testing result in an orderly, though not mechanical, adaptation of theory to data and observational categories to theory. It is this emphasis on the process of mutual adaptation that provides the basis for his distinction between theory and theorizing. He rejects both *empiricism*, by which he means treating the facts as if they could speak for themselves without any theory (pp. 14–15), and its opposite, abstract theory, meaning privileging a particular theory to a degree that the facts must be made to conform, ignoring the process of adjusting theory systematically in light of the facts—a methodology that he explicitly associates with mainstream economics (p. 15). In particular, he deprecates the construction of theory from "prefabricated pieces, a bit like you put something together from IKEA" even when it is applied cleverly—without taking advantage of the "creative role of observation" (pp. 32–33, 34).

2.2 Theory and Models

The object of theorizing—that is, the theory itself—is, to Swedberg, a good explanation. Here, the language of economists comes apart from Swedberg's usage. What Swedberg means by a good explanation is what economists typically think of as a good concrete, empirical *model*. "Model," of

course, like "theory," is a term with a bewildering number of meanings. Still, broadly speaking, economists regard theories as more general and models as more specific. For economists, the success of a model lends support to the general theory in which it is framed. Yet, it is not the specificity of the theory (i.e., the specific adaptation to a concrete case) nor any explanation per se, but its generality and range of applications (i.e., the range of resources that its supplies to model building and the explanatory enterprise) that are the markers of a good theory.

Swedberg, in contrast, characterizes models as "sometimes true theory," where theory itself is the ultimately true explanation. It is not clear whether "sometimes" delimits the range of application, or the degree of reliability or approximation of the model. More importantly, Swedberg misses the logical priority or greater generality of theories with respect to models. Game theory, the theory of the firm, or the theory of consumer behavior comprise sets of explanatory templates or constraints on acceptable explanation, which in themselves do not support any direct deduction of empirical facts. They are true only derivatively, as they successfully guide and structure observation and explanations of observations. Economics is exactly like physics in this respect. Isaac Newton's theory of mechanics says nothing directly about the world until concrete details are filled in: initial conditions and the nature of the forces (e.g., gravitational, magnetic, or elastic).

The distinct practices of Swedberg and economics with respect to the usage of "theory" and "model" could be written off as merely a linguistic difference, except that it is the economists' conception of theory and a characteristic theoretical content that is captured in Lionel Robbins's famous definition of economics as "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses," and it is the conception that

distinguishes economics from other social sciences (Robbins 1932, p. 15). The distinction is reflected in the advice that Swedberg gives to budding social theorists: allow for the play of the subconscious while immersing oneself in data; the more data, the better; avoid Procrustean preconceived theoretical frameworks; and draw on a range of concepts and mechanisms; in short, "anything goes" (p. 36). Some of the advice that Swedberg gives in this let-a-thousand-flowers-bloom approach is useful; some is anodyne. I am not suggesting that either Robbins's conception of economics or the economic theory that is framed consistently with that conception is necessarily correct or beyond revision; rather that economics in practice reflects a specific conception of the relationship of theory to concrete explanation quite different from Swedberg's and, indeed, one that is shared, for example, by John Stuart Mill's pre-Robbinsian political economy and by various natural sciences. In an economic theory, not just anything goes.

Equally, I would not dissent from Swedberg's implied or explicit criticism of economics, that cleverness in using a narrow set of tools—the professional equivalent of the popular genre of "freakonomics"—is valued over improving the conceptual resources that lie behind the tools. In this regard, Swedberg provides useful discussions of, for example, typology (chapter 3) and the role of analogy, patterns, and metaphor (chapter 4). Economic theory is now frequently seen as a synonym for mathematical economics (think, for example, of the *Journal of Economic Theory*), and students of economics are too frequently taught that such methodological or philosophical reflection is a waste of their time.

It is worth recalling that the original charter of the Econometric Society and the original editorial policy of *Econometrica*, while seeking to advance quantitative economics (mathematical and statistical), explicitly define *econometrics* as "the

unification of the theoretical-quantitative and the empirical-quantitative approach to economic problems" (Frisch 1933, p. 1). According to Ragnar Frisch, the first editor of *Econometrica*, that approach involved the coordination of economic statistics, general economic theory, and mathematics (Frisch 1933, p. 3). General economic theory was seen as deeply conceptual and the glue that held mathematics and statistics together in quantitative economics: "we need the guidance and help of a powerful theoretical framework" if we are not to get lost in "an overwhelming, bewildering mass of statistical data" (Frisch 1933, p. 3). Mathematics was not the magical key to economics, "[b]ut when combined with a thorough understanding of the economic significance of phenomena, it is an extremely helpful tool"; and it is general economic theory, interpreted as conceptual analysis and reflection, that provides that understanding (Frisch 1933, p. 3). Frisch announced that "a considerable portion of the material appearing in Econometrica will probably be entirely non-mathematical" (Frisch 1933, p. 3). Frisch was not a success as a long-term prognosticator of the development of economics. He would have been unpleasantly surprised by the current complexion of *Econometrica* and, generally, by the unwillingness of the economics profession to engage in conceptual reflection.

3. What's Wrong with Economic Theory?

The Great Recession of 2007–09 and the related financial crisis stimulated impassioned cries for a deep conceptual reform of economics—and not just from the clueless outsider, but from some mainstream economists as well. Yet little has changed. Some financial equations were added to the fundamentally real-business-cycle cores of dynamic, stochastic general-equilibrium (DSGE) models; preference functions were generalized to

nest some hypotheses drawn from behavioral economics and psychology; but fundamental conceptual change has proven to be tiny to nonexistent, and the established paradigms of economics remain unshaken.

Of course, over long periods economics does experience conceptual change, but it is conservative and barely perceptible. On the one hand, it is precisely the conservative nature of such change that distinguishes Peirce's logically controlled abduction so admired by Swedberg—from Popper's totally free conjectures. Peirce explains the structure of abduction in his account of Kepler's discovery of the elliptical orbits of the planets—"the greatest piece of [abductive reasoning ever performed—as a series of steps, each responding to an inductive failure to fit the data precisely, in which, using the resources of analogy and the constraint of conserving the quantitative successes already achieved, as well as insights from the nature of the failure itself, a simpler hypothesis is replaced with a minimally sufficiently more complex hypothesis (Peirce 1931, para. 72–74). On the other hand, such a conservative procedure sometimes becomes stymied, and a greater abductive leap may lead out of the impasse, just as Copernicus's qualitative solar-centric hypothesis, which formed the starting point of Kepler's quantitative abductive-inductive sequence, overthrew the very basis of the Ptolemaic geocentric system, which itself had undergone centuries of conservative abductive precisification.

Orléan sees the development of modern, mainstream economics as having reached a similar impasse, in which conservative abductions adding epicycles to DSGE models (a financial sector where there had merely been an interest rate before, or new frictions to justify real-world outcomes as optimal

3.1 The Problem of Value

Orléan's argument is both critical and constructive; it aims for a fundamental transformation of economics. His target is neoclassical economics. To sugar the pill, he admits its achievements and claims to want to preserve them—neoclassical economics is treated as a special case with a limited domain of a truly adequate economics—yet he offers precious few examples of what he regards as actual neoclassical successes (p. 2). The foundation of neoclassical economics in Orléan's view is the perfectly competitive, utility maximizing Walrasian general-equilibrium theory. He interprets neoclassical economics as if it took the Walrasian idealization as directly applicable to the real world: "The Walrasian conception of market dynamics . . . continues to furnish the basic framework

deviations from ideal markets) have proved to be inadequate. Orléan is motivated by the financial crisis and a perceived regulatory failure—a "crisis of legitimacy"—but he actually blames the crisis not on malfeasance or institutional failure, but on fundamental conceptual mistakes in the foundations of modern economic theory (Orléan 2014, p. 2). He proposes to act as a Copernicus to Léon Walras's Ptolemy and to provide a new starting point for a Keplerian economics to replace the Ptolemaic economics of Kenneth Arrow and Gérard Debreu and Finn Kydland and Edward Prescott. His book represents a type of economic theory not often seen in today's economics, but clearly a type contemplated in the original conception of econometrics. It is also an example of the type of theorizing that Swedberg advocates. (Orléan, in fact, cites Swedberg as an authority (p. 315), and Swedberg, in turn, provides Orléan's book with a fulsome blurb.)

⁴The original has "retroductive" rather than "abductive"; at various points, Peirce uses *retroduction*, *hypothesis*, and *presumption* as synonyms for *abduction*.

 $^{^5}$ In the remainder of this section, a page number without an author in parentheses refers to Orléan's 2014 book under review.

within which every situation, real or theoretical, is analyzed by economists" (p. 78). His is a case of a very general French view, which places abstract, formal analysis in the center of many intellectual endeavors (well known in physics and mathematics, as well as in economics). He does not even acknowledge the antithetical pragmatic and worldly strain in Anglo-American economics from Adam Smith to the present.

In contrast to Walras and Orléan, Anglo-American economics has not regarded economics as a complete account of an economy, much less of a society, but as an account that is localized in various ways. As is well known, Smith does not maintain that man is universally self-interested, socially isolated, and individualistic; rather, in his *Theory of Moral Sentiments* (1759), he presents an account of human moral psychology based on empathy and a concern for how we are viewed by others. Yet, in the *Wealth of Nations* (1776), Smith does develop a vision of a competitive economy:

It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest (Smith 1776, bk. I, ch. 2, para. 2).

It is not that self-interest rules all, but simply that with respect to what Alfred Marshall (1890, p.1) referred to as "the ordinary business of life," we will not be misled by assuming that it does. Marshall, like William Stanley Jevons, another founder of neoclassical economics, saw people as guided by a hierarchy of motivations, of which self-interested, economic motivations were the lowest, but the most broadly based (Jevons 1871 [1957], pp. 24–25). The domain of economics is thus not human behavior or social life, but limited aspects of them.

Robbins circumscribed the domain of economics still further, maintaining that economics should take people's preferences as given (Robbins 1932, pp. 11, 29, 44, 86–87).

He did not deny that the question of why people have the preferences that they do is a legitimate one; rather, he argues that it lies within the province of psychology, physiology, or some other science, and that successful economic explanation does not presuppose knowledge of how preferences were formed (Robbins 1932, p. 86).

Similarly, while recognizing a general interdependence of actors within the economy, Marshall (1885) advocated a method in which the greatest detailed focus is directed to a particular problem or aspect of the economy and the most significant relevant causes—not neglecting, but summarizing in less detail lesser causes and interactions.⁶ That general interdependence matters surely justifies the study of Walrasian general-equilibrium models. Useful empirical results, however, frequently require focus and isolation. As a result, most of applied economics has not taken a comprehensive Walrasian general-equilibrium model as its starting point. Practitioners typically regard basic economic models as idealizations that provide simplified templates for organizing analysis, and not as faithful representations of complete economies.

Orléan's critical strategy owes much to Karl Marx, particularly to his doctrine of the "fetishism of commodities"—that is, to the idea that market transactions disguise social relationships as relationships among things, rather than revealing the deeper truth that they are relationships among people (Orléan p. 26; Marx 1867, part 1, ch. 1, sec. 4). Marx thought that the hidden relationships were those of production; Orléan takes a wider view of the relevant social relations. Like

⁶On the contrast between Marshall's and Walras's methods, which is not accurately characterized as partial versus general equilibrium, see Friedman (1955); for a fuller discussion of Marshall's methodology, see Friedman (1949) and Hoover (2006).

Marx, Orléan starts with the concept of value itself.

For Marx, market exchange is fair if the goods exchanged are of equal value. He then asks, what is the source of the commensurability between physically distinct goods with wide varieties of uses? To answer, he famously proposed that goods embody the "socially necessary labor time" needed to produce them and that the embodied labor time constitutes their value. On the one hand, "fair" exchange is the exchange of equal amounts of labor time; on the other hand, normative considerations to one side, the market (at least in an ideal case) gravitates toward exchange ratios equal to ratios of labor time. The labor theory of value suffers from a variety of well-known problems some known to Marx himself—and in the middle of the nineteenth century, neoclassical economics replaced the classical labor theory of value with marginalism. The marginalism of Jevons, Walras, and Carl Menger interpreted fair trade as voluntary trade and posited that market exchange ratios gravitated to ratios of marginal utilities. In some of the early accounts, utility was treated as a quantifiable psychological quality.

Orléan brackets both neoclassical economics and Marx, along with other classical economists, as subscribing to the *substance* hypothesis—that is, to the view that value is a property adhering to the goods themselves (pp. 13–15). He characterizes neoclassical economics as holding essentially to the early view that utility is objective: "a quantity that exists separately from the activity of exchange in the form of a property . . . peculiar to commodities" (p. 3). He asserts that neoclassical economics treats (marginal) utility as the conserved quantity that explains the commensurability of disparate goods in exchange (p. 37). Orléan does recognize that modern neoclassical economics refers to preferences rather than, except as a manner of speaking, to utility. But neoclassical preferences,

for Orléan, also instantiate the substance hypothesis. Yes, they are subjective in the sense that each individual may have distinct preferences over the same goods, but they are objective and no different from utility, in that they exist prior to exchange and can be seen as property of the commodities themselves (pp. 38–39).

While early marginalists did consider utility to be an objective, potentially measurable psychological quantity, Orléan mischaracterizes even their views. Without ruling out interpersonal comparisons of utility as a basis for welfare judgments, even Jevons, a declared follower of Jeremy Bentham's utilitarianism, understood that only *intra*personal comparisons of utility were needed to explain exchange ratios (Jevons 1871 [1957], p. 14); a fair exchange is simply one that each party finds advantageous by its own lights and not, pace Marx, one that conserves value in exchange. Hence, for early, as for later, neoclassical economics, exchange value is just a synonym for relative price.

Orléan ignores the history of neoclassical economics in which the utilitarian starting point is abandoned, as a series of economists from Vilfredo Pareto through Robbins (1932) replaced cardinal utility with ordinal utility, so that even the word "utility" and the idea of a "utility function" are merely vestigial. Orléan distinguishes himself from Marx and, he believes, from neoclassical economics, in his claim that value is not a substance and not objective, but instead reflects a relationship between the parties in exchange. That seems exactly right; yet it also seems not to differ from the ordinary understanding of the nature of value held by neoclassical economists today.

Orléan is on stronger ground in noting the neoclassical assumption of *fixed* preferences—that is, that preferences are taken to preexist exchange and that they are not altered in the process of exchange. In contrast, Orléan claims that exchange

determines preferences and preferences do not determine exchange: "Utility, so far from being the cause of exchange, is the result of it" (p. 5). This claim would be more believable if it were modified to allow that it is the experience of trade that may alter preferences. More importantly, Orléan misses the point that, in keeping with Robbins's strategy of strictly delimiting the domain of economics, fixed preferences are a methodological assumption for neoclassical economics and not a point of fundamental ontology.

This is the essence of Stigler and Becker's famous paper, "De Gustibus Non Est Disputandum" (1977). Orléan (p. 323, fn. 32) quotes Becker (1976, pp. 5–8) asserting that "the combined assumptions of maximizing behavior, market equilibrium, and stable preferences, used relentlessly and unflinchingly, form the heart of the economic approach . . . applicable to all forms of human behavior." Orléan treats this, however, as "the basis of a conceptual model that lays down a set of assumptions it assumes to be true in advance of experience." The approach will ring true to many neoclassical economists, but where Orléan will lose many of them is with the notion that Becker is defining what he takes to be fundamental, a priori truths about human nature, rather than what he regards as a methodology—a particularly effective way of working.

3.2 Money, Markets, and the Mimetic Hypothesis

Orléan believes that neoclassical economics mischaracterizes the market as fundamentally a set of barter relationships with a central clearing mechanism (the Walrasian auctioneer) in which money has no essential role. It is correct that the best developed general-equilibrium theory has these characteristics. However, these aspects of general-equilibrium theory have been criticized within neoclassical economics itself and have generated research programs

aimed at bringing more realistic features into general-equilibrium models. What is more, Orléan's criticism would prove fundamental only if, first, Walrasian general-equilibrium theory were the essence of neoclassical economics and, second, if good work within neoclassical economics required prior successful underpinning in the Walrasian general-equilibrium model. Actual practice shows that neither condition is true.

Still, it is easy to sympathize with Orléan's view that an ideal market model in which money is a fifth wheel is an idealization too far. Orléan points out that, first, no sophisticated market economy could operate without money and a money-based financial system and, second, that money resolves Marx's problem of the commensurability of disparate goods and the conservation of value in exchange: money value is exchange value. Marx, of course, understood the point, which is why he opens Capital with the discussion of M—C—M diagrams, representing the exchange of money for commodities and back into money. The essence of capitalism for Marx is found not in the expansion of real goods and services, but in the capitalist's motivation to expand money holdings themselves (abstract value). Money provides the motivation; production and exchange merely the instrument. That Orléan does not credit Marx with that insight is simply because Marx thought that the labor theory of value provided a yet deeper, objective account of the value of money, while Orléan believes the value of money, like all other economic values, is a product of subjective relations.

With money, Orléan turns to his main constructive point. Preferences are not preexisting, but socially conditioned, and that fact lays the groundwork for the *mimetic hypothesis*: we value goods because others value them, and the degree of value depends on the overall valuation of other members of society. Such valuation is supported by anthropological study and is related to Thorstein Veblen's (1899 [1994]) emphasis on social emulation and the importance of "prestige goods," as well as to John Maynard Keynes's (1936) account of social conventions. It permits value cascades that are observed in fads, bubbles, and the "madness of crowds." Although it is a vital element in his thesis, Orléan gives only a thin, schematic account of how such valuation arises, drawing, for example, on Schelling's (1960) account of focal points and Keynes's (Keynes 1936, p. 156) analogy of the beauty contest in which the object is not to pick the most beautiful contestant, but the one most often picked by the other judges.

It is easy to agree that mimetic valuation and associated phenomena occur. But Orléan characteristically overstates the case in taking it to be the only basis for valuation, rejecting all objective bases. The result is the absurd (and unsupported) claim that scarcity is never a natural fact, but always the product of social organization (pp. 88, 96–97), and the extraordinary claims that there was no scarcity in the Stone Age and that there is no death from hunger in primitive societies (p. 89).

The key to Orléan's account of market functioning is that money itself is valued mimetically. There is a clear sense in which the value of money is bootstrapped: money is valuable because it is valued; its value rests on faith, confidence, credit (in its broadest sense), and convention. This point has been noticed many times, even among neoclassical economists. And it has been noticed that the basic Walrasian general-equilibrium model has difficulty incorporating money that is valued not intrinsically, but only in relation to the prices of other goods (see, especially, Hahn 1965, cited by Orléan). Various epicyclical fixes have been offered to resolve the difficulty: for example, cash-in-advance constraints, money as a source of liquidity services or transactions-facilitating services, or overlapping-generations models of money.

The neoclassical resolution that comes closest to Orléan's own approach is probably the one embodied in search models of money in which there is no Walrasian auctioneer, and yet, one good can become valued as the (nearly) universal intermediary in transactions, even if there is no preference for that good for its own sake as an object of consumption or a factor of production (e.g., Jones 1976; Kiyotaki and Wright 1989, 1993). The value of money in such search models is fragile in the same way that for Orléan, mimetic goods are generally fragile: any refusal to accept money in an exchange can lead to a cascading collapse in its value.

The search models of money do not capture the fact that in real life, valuation can become conventional and may be reinforced through mechanisms such as legal-tender status and the requirement that taxes be paid in money, so that there is little need for constant monitoring and evaluation by individual agents. Money (or any other mimetically valued good) may take on a stable-enough life of its own that it can be pushed into the background of economic analysis and treated either as a direct object of preference or as an institutional framework, rather than as an emergent valuation that is parasitic on preferences over more basic goods (see Hoover 2009).

Some may object that money is not a proper object of preference, especially if *nominal* money balances are placed in preference functions, giving rise to the irrational money illusion. But that ignores the fact that the neoclassical conception of rationality is a very sparse concept that requires only the consistency of preferences, and not that they be restricted to certain objects.

Money in Orléan's account is a mimetic institution, and money grounds the entire financial system. Liquidity is an emergent property that becomes valuable in itself. Like money, financial assets are valued mimetically. The financial system makes possible

the characteristic features of the capitalist market economy: first, the ability to separate capital as a source of monetary yield from the fixed and illiquid real capital that generates the real goods; and second, the tendency of prices to take on a nearly objective quality relative to individual choice, as market exchange and arbitrage keep them aligned throughout the economy. The Walrasian fantasy of a set of mutually coordinated, rational economic relations is approximately realized only in the non-Walrasian monetized (and financialized) economy. A benefit of a monetized economy is that, by-and-large, it replaces "gift, theft, violence, [and] forcible seizure" as the most common modes of distribution and social interaction (p. 10). The downside is that, since mimetic valuation is ultimately ungrounded, the economy is subject to various sorts of instability. Frequent booms and slumps are punctuated by severe crises.

3.3 What Is to be Done?

After the subtle, if sometimes wrongheaded, argument of the first three-quarters of the book, its last part, "Self-referential Finance and the Subprime Crisis"—which Orléan concedes was a late addition—is a disappointment. It offers a stylized recounting of the run-up to, and the unfolding of, the Great Recession and financial crisis of 2007–09. The disappointment arises from the fact that Orléan's account differs little from many others and draws relatively little on the first three parts of the book, except for the possibility of mimetically driven asset bubbles subject to sudden collapse. But that possibility is widely acknowledged, and Orléan adds little additional insight. The account is rife with internal contradictions.

In the opening pages of the book, Orléan derided financial regulators for adopting a "suicidal scheme of financial deregulation" and economists for a "lack of intellectual courage" in their responses to the crisis

(p. 1). He goes on to call for fundamental reforms. Yet, in his more direct recounting of events, he argues that it is mimetic self-referentiality—an irreducible feature of the economy—and not corruption or broken rules or cognitive biases that account for financial volatility (pp. 241–42). At another point, Orléan asserts that financial companies did not act prudently in extending credit in the boom and engaged in dishonest representation to their customers (p. 249). Later he reasserts the point with respect to credit-rating agencies; and, then, with hardly a pause, he absolves them:

in a world of radical uncertainty, no infallible method of prediction exists; when it comes to forecasting the future, there are only individual opinions. It is only natural, then, that each person should favor the one that best suits his own interests (p. 264).

This is not simply a softening of the charges against the financial institutions and rating agencies, for Orléan asserts a few pages later that inductive methods are "inherently" invalid in a nonstationary world (p. 268). Orléan cannot resist criticizing regulators and rating agencies for failing to anticipate problems or providing lenient valuations, contrary to evidence (inter alia pp. 265, 281, 284, 294), while at the same time denying that effective tools exist for predicting the relevant course of future events or establishing sound valuations, so that there is no evidence to be contrary to. He refers to

the irreducible subjectivity of financial valuation—a philosopher's way of saying that investor decisions are based on nothing more than personal opinion. . . . Knowing exactly what structured products are made of, and how they are made, does nothing whatever to help us assess their actual value. Nor do issuers know any more than investors when it comes to forecasting the future. . . . Ignorance is the common lot of all financial actors, because in the face of radical uncertainty there is no effective procedure by which indisputably correct valuations may be determined (pp. 279–80).

Orléan wants simultaneously to act the moralist and the radical skeptic, and one role undermines the other. The radical skeptic is happy to say,

extrapolating from the past, no matter how brilliantly it may be done, will never give us prior knowledge of the future. . . . By definition a bubble forms between the price of an asset and its true value. In order to demonstrate the existence of a bubble, it must therefore be possible to determine the asset's true real worth. This, however, is precisely what economists are powerless to do (pp. 278–80).

Orléan the moralist cannot resist attacking the rating agencies for their "underestimation of the risk" (p. 281)—that is, for not acting on what Orléan the skeptic assures us is knowledge that they are denied in principle. The skeptic denies any foundations for rational valuation; the moralist wonders whether regulators "really could not have seen what was going on, and not recognized the very dangerous level of risk" (p. 294). The skeptic tells us that knowledge of the future cannot be based on the past; the moralist assures us that the problem is blindness that can be alleviated through looking "closely at crises in historical perspective" and by thinking "carefully about the nature of value" (p. 309).

At the deepest level, Orléan blames economists for the financial crisis, since economists were the purveyors of the attitudes toward financialization and deregulation that ultimately led to the crisis (p. 319). But again, he finds it hard to maintain a coherent position. Economists should, he believes, give up trying to guide or change the world. Rather, "[u]nderstanding economic behavior as it is must henceforth be their primary task" (p. 318). Orléan sees his book as prolegomenon to a "new foundation for economics" (p. 319). Yet, he also denies that ideas matter:

The chance that an idea will acquire practical influence depends, not on whether it fits the facts, but on the interests that it supports and

the conviction that it inspires—things having only the most remote and tenuous connection with its "intrinsic" truth (p. 319).

His best advice is that economists should avoid entanglement with practical affairs.

If history teaches us anything about the relationship of knowledge to practical affairs, it is that not succeeding in aligning policy with the truth about the way the world really is (whether through deliberate policy or the slow accretion of informal practical knowledge or just good luck) results in disaster. Lysenko's false account of genetics set back agriculture in the Soviet Union by decades; Mao Tse Tung's false understandings of both the workings of the physical and biological worlds and of society led to a human catastrophe in which millions of Chinese died. What's the point of economic understanding if, following Orléan's advice, economists refuse to be sullied by the interests of the real world? If the people who have devoted their lives to understanding how the economy works are to maintain their intellectual distance, what is to become of the world we live in?

As economists, we are taught to draw a distinction between positive economics and normative advice. It is a useful distinction, but it does not suggest that the positive knowledge should not be offered to policymakers, just because our hands may be dirtied in the process. Writing in the dark years of the Depression and the rise of totalitarianism in the run-up to World War II, Lionel Robbins responded to the charge that his desire to formulate economics around rationality was invoking the implicitly normative principle that people should be rational, undermining the disinterestedness that he had used to frame scientific economics according to the positive/normative distinction. His reply was to admit the charge:

... in the last analysis Economics does depend, if not for its existence at least for its significance, on an ultimate valuation—the affirmation that

rationality and the ability to choose with knowledge is desirable . . . [T]hat branch of knowledge which above all others is the symbol and safeguard of rationality in social arrangements, must, in the anxious days which are to come, . . . possess a peculiar and heightened significance (Robbins 1932, p. 141).

Our days are by no means as dark as the 1930s, but Robbins's point still resonates.

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