# MARKET AND SOCIETY

## Two Theoretical Frameworks

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# Introduction

The following outlines and illustrates two theoretical frameworks for analyzing relations of the market and society: one is economic, the other sociological. The first framework is used within pure economics or economic theory, the second in economic sociology or sociological economics. For the sake of convenience, this work adopts the ancient Greek word *catallactics* to denote the economic framework for approaching the market, and coins the expression *sociologics* to designate the sociological. Thus, catallactics and sociologics are used as convenient designations for these two frameworks. In essence, catallactics expresses what can be termed "endogenous market logic," that is, "sociologics" exogenous "social structural logics" (Slater and Tonkiss 2001).

The *differentia specifica* of this book is an attempt at a joint or simultaneous application, comparison, illustration, and, when possible, combination, if not integration, of these two seemingly conflicting (Fligstein 2001) frameworks for approaching the market and society. This, in turn, lends to the work an eminently interdisciplinary character. Generally, such a joint application and comparison of the two frameworks allows analyzing the market both as a "closed self-referential" system as done in catallactics (to paraphrase Luhmann) and as a social field or structure (in Bourdieu's terms), thus an integral part of society, as per sociologics. Notably, it permits simultaneously considering the market an economic mechanism à la Walras and a Durkhemian social institution, respectively. This elaborates on the implicit definition (for example, by Schumpeter) of catallactics or pure theoretical economics in terms of approaching markets as economic mechanisms, and of sociologics or economic sociology in terms of examining them as social institutions. Such a joint application and comparison of these two frameworks may highlight their contrasts, even contradictions (Fligstein 2001) as well as some complementarities (Baron and Hannan 1994). Overall, they can be deemed both contradictory and complementary in various respects and degrees, with the first aspect perhaps more pronounced or apparent to economists and sociologists alike. But whether they are (more) mutually exclusive or complementary is here a secondary issue relatively to the endeavor to simultaneously apply, compare, and illustrate them in analyzing the market and society. In a sense, either way, the two approaches can be placed and combined, if not integrated, within a single catallactic-sociologic or socioeconomic framework for analyzing the market and society. An early case in point is Weber's social economics that includes both catallactics (pure economics) and sociologics (economic sociology plus economic history) as alternative, even conflicting, frameworks.

The attempt at a joint application and, in part, combination of economic and sociological frameworks for analyzing the market and society gives the present work its distinctiveness relative to much of the current literature in economics and sociology. No doubt, the current literature in both disciplines is replete with catallactic and sociologic analyses of the market and society. Still, many, if not most, of these economic and sociological analyses are usually separated from, even opposed to, each other. With some exceptions, modern catallactics or pure mainstream economics is typically dismissive, even disdainful, of sociologics or economic sociology, with the latter often responding in the same way, each talking to a different audience and in a different language. Consequently, the economics literature practices some sort of benign neglect of sociological studies and perspectives on market phenomena. In turn, the sociological literature leaves much to be desired in terms of systematic comparative considerations of sociologic versus catallactic analyses of the market and society. In this sense, catallactics and sociologics exist as separate, mutually exclusive, even contradicting frameworks. With some exceptions, particularly lacking in the current literature of economics and sociology are coherent attempts at jointly (in the same work) applying, comparing, illustrating, and combining these two frameworks in the way done here. And those early explicit attempts (for example, by Weber, Schumpeter, Parsons, and others) at what Parsons and Smelser denote as "integration of economic and sociological theory" have been largely neglected or not further developed by contemporary sociologists and economists for various reasons.

Against this background, the present work seeks to contribute to remedying this void in the current literature by making a step to a joint application and combination of two seemingly contradictory frameworks for examining the market and society. The underlying epistemological premise is that catallactics and sociologics, be they complementary or contradictory frameworks, can, to a degree, be simultaneously applied, compared, and combined, as, incidentally, indicated by Weber's social economics as well as, influenced by him, Schumpeter's blend of "market economics" and economic sociology (even Becker's recent blend of rational choice and sociological perspectives). Hence, it is not enough for catallactics or pure economics to dismiss sociologics as "soft" on method and "idealistic" in theory, and then claim a plausible or complete description, explanation, and prediction of the market and society. So is it insufficient for sociologics or economic sociology to criticize catallactics for methodological formalism ("ritual purity") and the "unrealism" of its substantive assumptions, as the ground for rejection. Instead, no matter if mutually complementary or contradictory, catallactics and sociologics are possible to be simultaneously applied and illustrated, thus combining, if not integrating, in some way their initially different assumptions and approaches. The minimal condition is that each framework takes cognizance of the arguments of the other. Practically speaking, this means that contemporary catallactic economists need to become more cognizant and appreciative of sociologics or what one of their neoclassical precursors (Jevons) perhaps first calls "economic sociology." So do today's economic sociologists in respect of catallactics, or what one of those economists-turned-sociologists (Schumpeter) termed "the theory of market economics."

With the above in mind, this book presents the main outlines of catallactics and sociologics, as well as applies and compares their respective frameworks for approaching the market and society in an intentional interdisciplinary endeavor. While such endeavors are not infrequent in the current literature, rare are joint or simultaneous coherent applications, comparisons, and combinations of these initially conflicting frameworks. Pure economics typically adopts the framework of catallactics and conspicuously displays its lack of a "taste" for sociologics, though with some exceptions trying to incorporate elements of the latter into the former. Alternatively, much of economic sociology while by assumption relying on the framework of sociologics lacks thorough familiarity with or the penchant for catallactics, again with exceptions. This generally holds true, though there seems to be a difference in degree to the effect that most economic sociologists appear more knowledgeable and appreciative of catallactics than are pure economists of sociologics, which may be a matter more of the sociology (and psychology) of knowledge than of anything else. Attempting to at least overcome this separate "peaceful coexistence" of catallactics and sociologics through their joint application to the same subject, this work is, in a sense, atypical in light of these features of the current literature.

Then, the main purpose of this work is to contribute to a more multidisciplinary understanding of the market-society relationship by applying two alternative—economic and sociological—frameworks for its analysis. As a deliberately inter- or rather transdisciplinary exercise, this work seeks to relax, if not transcend, the rigid disciplinary boundaries (Kalleberg 1995) within social science between economics and sociology. It is for this purpose that it attempts to compare, illustrate, combine, and, if possible, integrate catallactic and sociologic frameworks for the analysis of the market and society. In particular, by its interdisciplinary nature, the work purports to show the insufficiency of catallactics in itself for this analysis and the need for it to be combined, if not integrated, with sociologics in a single framework, despite their initial substantial divergences. By the same token, it aims to suggest that sociologics even when, or because, complementary with catallactics cannot afford to disregard the latter as the alternative framework or a point of comparison. At this juncture, a disclaimer is in order. As hinted, this work is not an exercise either in catallactics (economic theory) or sociologics (economic sociology) as such, but a tentative application, comparison, and illustration of both.

The outline of this book is as follows. Chapter 1 deals with the nature, development, and branches of catallactics within traditional economics. Chapter 2 centers on elements of sociologics within sociology as well as economics. The treatment of the market within catallactics is the content of Chapter 3. Chapter 4 examines the analytical status of the market and society within sociologics. Examined in Chapter 5 is the concept of market laws in catallactics. Chapter 6 concerns the sociologic treatment of market and social laws. The catallactic analysis of market equilibrium is the content of Chapter 7. Chapter 8 outlines the relations of market and social equilibrium within sociologics. In Chapter 9, the catallactic theory of value and prices is considered. Chapter 10 centers on the sociologic conception of value and prices. Finally, concluding (or postscript) comments follow.

# 1

# Catallactics

Pure Political Economy is essentially the theory of the determination of prices under a hypothetical regime of absolutely free competition (*L'économie politique pure est essentiellement la theorie de la determination des prix sous un regime hypothetique de libre concurrence absolue*).

—Walras, *Elements d'économie politique pure*

## ECONOMICS AS CATALLACTICS

In this work the term *catallactics* is used to denote a purely economic approach to analyzing the market and economy overall. Catallactics thus generally signifies pure economics, particularly what is conventionally designated as "price theory." The original meaning of catallactics or *catallaxy* (an ancient Greek neologism) pertains to market phenomena, such as exchange transactions, money, value, prices, and so forth. The term originally had a double meaning: an economic one ("exchange") and a noneconomic one ("to turn an enemy into a friend"), with economists normally adopting the first. In its economic sense, catallactics originates as coterminous with what Aristotle termed "chremastics" as the science and art of wealth acquisition or money making through market exchange. In particular, for Aristotle the doctrine of exchange value represents the "pivot" of chremastics in the sense of what Schumpeter calls a "theory of market economics."

Since its introduction in Greek social philosophy, the concept of catallactics has gained prominence in the development of economic theory, including its classical, neoclassical, and contemporary stages. Moreover, some economists propose or intimate that economic science should be renamed and reconceptualized in terms of catallactics. This line of reasoning can be traced back to classical political economy, especially its post-Ricardian phase. In a probably first explicit endeavor, Archbishop Whately (succeeding Senior at Oxford in 1831) proposes (in *Introductory Lectures on Political Economy* published in 1832) to substitute catallactics for the name *Political Economy*. He characterizes catallactics as the "science of exchanges" or the "science of values," as do McCulloch and J. S. Mill (in his *Principles*) though in a somewhat different sense, as well as some contemporary economists (Robbins 1981). This implies reconceptualization of economics as the science of exchange, value, prices, and other market phenomena. Whately's underlying ontological rationale for catallactics as an epistemological endeavor is as his predecessor Senior (as well as his successors like Wicksteed) suggests, that the nature, production, and particularly distribution of wealth is primarily "effected" through market exchange in the "state of society" assumed by the "political economist."

While Whately is usually credited with the term catallactics for this "science of exchanges," such an idea also has earlier or parallel origins or anticipations in some classical economists, particularly Say, Senior, and, in part, Malthus. In particular, these attempt to mitigate or replace the Ricardian emphasis on production and distribution by proposing an alternative (or additional) focus on exchange and the market. Alternatively, Ricardo's neglect, followed in various degrees by Mill, Marx, and Cairnes, of exchange as the "mere sphere of circulation" is probably responsible for these early counterbalancing though implicit conceptions of economic science as a sort of catallaxy. Hence, as another reaction to such neglect, Whately's explicit conception of economics as catallactics further articulates and reinforces these misgivings about the Ricardian approach. This perhaps explains why Whately's impact has been secondary within classical political economy and its sequels by comparison with other dissenters from Ricardo, such as Malthus, Say, and his predecessor at Oxford, Senior. Reportedly, despite Mill's designation of Whately as an "eminent writer," the latter's influence is shown only in (according to Seligman, for example), a "number of minor followers." This holds true of his influence on the later generations of economists, though the idea of economic science, or, as then called, "political economy"-cum-catallactics persists in some segments of neoclassical and contemporary economics. Still, the aforesaid suggests that Whately's substantive influence is not necessarily linked with the recurring impact of this idea and, of course, with the use of the term catallactics in postclassical economic theory. For example, Mises in advocating the idea of economics as catallactics identifies and grounds this idea in a seemingly noncatallactic (Ricardian) classical economist like Mill, and even more so than in Whately or Senior. So does Schumpeter by identifying elements of the concept of catallactics in the history of economic thought long predating Whately and Mill, namely, in Aristotle's chremastics.

In any event, since Whately and Mill, many economists explicitly or implicitly regard and conceptualize economics as catallactics. This especially applies to Austrian economics. For example, following Menger's early views Wieser maintains that the theory of exchange value, thus by implication catallactics, lies at the "heart" of economic science, as does Böhm-Bawerk in his own respective formulations. Further, other Austrian economists like Mises and Hayek explicitly and persistently urge conceiving and designating economic science as catallactics in the sense of an analysis of market exchange. Mises offers a catallactic interpretation of the development of economic theory to the effect that economists (and others), once realizing that market phenomena conform to laws or Edgeworth's "catallactic formulae" develop catallactics as the "heart of economics." In particular, he remarks that the expression catallactics or the science of exchanges is first used by Whately. Likewise, Hayek proposes that economics should be redesigned in the form of a theory of the market system as the assumed basis or instance of a "spontaneous" social order. Moreover, less orthodox Austrian economists like Schumpeter trace, as indicated, the idea of catallactics back to Greek philosophical thought, notably Aristotle's chremastics. In such interpretations, the history of economics appears as that of catallactics. In other words, the development of economic thought "is nothing but the history of our efforts to understand the workings of an economy based on market transactions" (Blaug 1985:6). This warrants a succinct consideration of the history of the concept of catallactics in economic theory.

## DEVELOPMENT OF CATALLACTICS

### Classical Political Economy

This overview of the concept of catallactics in classical political economy starts with Adam Smith as its widely regarded founder. While Smith does not explicitly use the term, his political economy contains or implies elements of catallactics in the sense of a theory of market exchange despite the lack of a clear definition of the market as some of his successors like Cairnes lament. Catallactics thus understood would be part and parcel, though not the whole, of Smithian and the rest of classical political economy. In particular, this holds true insofar as Smithian and other classical political economy is broadly defined as the science of the production, distribution, and consumption, as well as the exchange or circulation of wealth. Parenthetically, Smith's successors, including Say, Malthus, and Senior, as well as Ricardo, Mill, and Marx, make this latent definition of political economy more manifest. In this sense, catallactics constitutes one of the four branches of economic science, dealing with what Smith and (especially) other classical economists like Ricardo and Marx somewhat dismissively call a "mere sphere of circulation" or market exchange in contrast to the assumed primacy of that of production and distribution. In particular, Smith and then most other classical economists regard "market price" formed within the "sphere of circulation" (supply and demand) as secondary or dependent relative to "natural value" determined in the realm of production (labor-cost). In these respects at least, catallactics appears as a secondary rather than a main branch of Smith's political economy in comparison to those dealing with production and distribution, though Ricardo, Mill, and Marx more consistently clarify and reinforce this point.

A certain illustration or ramification of the secondary status of exchange (and consumption) relative to production and distribution in Smithian and later classical political economy is the peculiar treatment of *homo economicus* or the perfectly rational economic agent. As Mises notes and laments, Smith and other classical economists, including Ricardo, envision *homo economicus* only as an agent acting rationally in the domain of production and distribution, not in that of consumption and thus by implication exchange. As hinted, this is probably due to the prevalent classical, Ricardian view of market exchange or "circulation" as secondary in relation to production and distribution.

In addition to being just one branch of his "pure" economic theory, catallactics coexists with what Schumpeter denotes as Smith's "economic sociology" or "sociological economics" (Reisman 1998). In early interpretations (for example, Bouke 1922), admittedly, Smithian sociological economics contains the "picture of a social economy" rather than a Robinson Crusoe one, as well as the "praise of normal man" as distinguished from a hyperrational superman or "anemic one-sided *homo economicus*" (Bowles 1998:78). This suggests that Smith's political economy can be described as catallaxy (Reisman 1998) only if the latter is understood in conjunction with his "sociological economics" or "economic sociology." This description is subject to the qualification that catallactics is just one part of Smith's political economy or pure economics, alongside his theories of production, distribution, and consumption. As anticipated, this qualification a fortiori applies to the elements of catallactics within Ricardian economics discussed next.

Though not using the term, Ricardo also implicitly envisages a place for catallactics in his economics, though this role is even more secondary than in the case of Smith. Systematizing Smith's view, Ricardo generally redefines *political economy* in the sense of a science of the production, distribution, and exchange or circulation of wealth. Apparently, this general definition allows for catallactics as, by implication, the branch of economics dealing with the circulation or exchange of wealth. However, in his specification of this definition Ricardo unambiguously states the "main problem" of political economy is determining the "laws" of production and (especially) distribution rather than those of market exchange or circulation. This statement clearly attributes a secondary role to the theory of market exchange, thus catallactics, relative to those of production and distribution within Ricardian political economy.

No wonder most manifest or latent proposals for economics as catallactics purport to be corrections of the perceived Ricardian neglect of exchange or circulation in favor of production and distribution. Notably, Whately's explicit catallactic project of economics is largely aimed at correcting, if not superseding, the prevailing Ricardian conception of it as the analysis of production and distribution. The same can be said of certain more implicit ideas of catallactics such as those of Say, Malthus, and Senior. Say places an alternative emphasis on what he calls "circulation or successive exchanges" as a countervailing approach vis-à-vis Ricardo's focus on production and distribution. In particular, in contrast to Ricardo, he identifies the main determinant of prices in the sphere of market exchange by stating that value varies in direct and inverse ratios with demand and supply, respectively, rather than (only) with cost of production. So does, though in a more qualified way, Malthus in response to Ricardo's identification of this determinant in the realm of production (labor). Moreover, Malthus responds stating that supply and demand are the "first and most universal principle" of economic science or "universally acknowledged" laws in an apparent refutation of Ricardo's "prime" law of cost of production. Similar statements are characteristic for Senior, who, in what he calls the "reply to Ricardo," states that relative values are determined by demand and supply, with "comparative limitation in supply" being "by far the most important" condition rather than cost. This indicates that price formation as well as distribution is, as Senior puts it, "principally affected by means of Exchange." In this connection, he classifies the "laws" of market exchange into those applying "generally to all exchanges" and those that apply "specifically" to its "respective kinds."

These counter-Ricardian statements warrant considering Say, Malthus, and Senior (though none use the term) precursors of Whately's idea of catallactics in the classical framework. Alternatively, those classical economists questioning or unambiguously rejecting these catallactic proposals resort to or develop Ricardo's arguments. Instances of the first are

Mill and Cairnes, of the second, Marx. Still, some interpretations (Bouke 1922) are intriguing in claiming that Ricardo's political economy represents more a theory of market exchange or catallactics than that of Smith. In this view, Ricardo's economic theory is not based on those ethical postulates such as benevolence and sympathy that Smith advances in his preeconomic writings (*Theory of Moral Sentiments*), but adapts directly the "theory of valuation" to "economic ends." As such, Ricardian and other post-Smithian (for example, Malthusian, Millian) economics becomes a "science of exchange relations" or the "science of catallactics" that sacrifices breath to an "ideal of logical precision and neatness." In consequence, the "new" science of catallactics is said to supplant the "social economy" of Smith and others. This interpretation is correct only if classical catallactics is understood in the sense of political economy, as the study of the production, distribution, exchange, and consumption of wealth, as distinguished from what Say and Mill call the "science of social economy" concerned with the "laws of society" (thus virtually identical with Comte's sociology). In this sense, Ricardian catallactics-cum-pure economics probably supersedes Smithian "social economy" within the classical framework. Alternatively, if by catallactics is meant only a special branch of pure economics, namely, the theory of market exchange or the circulation of commodities, then it seems incorrect to conceive Ricardian political economy at least in strictly catallactic terms. After all, a favorite target of most catallactic conceptions, from Whately (Say and Senior) to Mises and Hayek, is precisely the Ricardian notion of political economy as principally the study of production and distribution, and secondarily of market exchange. Alongside heterodox Ricardians, like Marx, the above also applies to those more orthodox, such as Mill.

In retrospect, Mill is probably one of the first major classical economists in the post-Ricardian era to adopt the term catallactics. Notably, he is among the first to give consideration to the idea of economics as catallactics in direct response to such arguments made by some non-Ricardians, for example, Whately referred to as "one eminent writer." To anticipate his main counterargument, according to Mill, the proposed notion of catallactics or catallaxy as a "name for Political Economy" is too narrow. Viewing such "denominations" as not being "logically correct," Mill states that deferring for "so long" the discussion of the "elementary laws" of value and exchange (in his *Principles*) "is alone a sufficient proof" that the catallactic view of the nature of economic science is "too confined." Mill's reason is that catallactics, that is, the "consideration of Value" and market exchange, relates only to one of the "two great departments" of political economy, namely, the distribution of wealth, the other being its production. And this holds only insofar as market competition rather than usage or custom (as often is the case) constitutes the "distributing agency." Mill argues that the "conditions and laws" of production will remain identical even if the "arrangements of society" are not dependent on market exchange. Arguably, even in the "present system of industrial life" market exchange is "not the fundamental law" of wealth distribution just as "roads and carriages" are not the "essential laws of motion." In Mill's view, confounding these ideas is "not only a logical, but a practical blunder," as a special case of "common" error in political economy to conflate necessities resulting from the "nature of things" and those created by "social arrangements." This error is the source of "two opposite mischiefs." The first is classifying the "merely temporary truths" of political economy into its "permanent and universal laws." The second is mistaking the "permanent laws" of production (and population) for "temporary accidents" ensuing from the "existing constitution of society," with would-be framers of a "new system of social arrangements" being at liberty to disregard it. While production is seen as governed by the "physical laws of nature," Mill treats distribution, and so by implication exchange, as a "matter of human institution solely" on the grounds that the way wealth is distributed and exchanged in any society depends on its "laws and customs." This implies that the market as a phenomenon of exchange is a "human institution" or an "arrangement of society" rather than a necessity arising from the "nature of things."

Still, Mill envisions that the "question of Value" and exchange can be "fundamental" in a "state of society" where the industrial system is "entirely founded on purchase and sale" in a market. Hence, he suggests that "almost every" consideration of the "economical interests" of such a society implicates "some theory of Value" and exchange, thus catallactics. In this sense only can Mill be interpreted (as done by Mises) as, in part, adopting or suggesting the idea of political economy as catallactics. Overall, Mill seems more reserved about what he sees as the too-limited catallactic view of economic science than these interpretations allow. In particular, Mill–Ricardo's conception of political economy as the study of the production, distribution, exchange, and consumption of wealth seems broader than Whately's proposal for its reformation or reduction into catallactics as the science of exchanges or the circulation of commodities. From Mill–Ricardo's perspective, then, Whately's catallactics expresses a "proposed deflection of subject matter to a narrowly constrained emphasis upon the 'sphere of circulation'" (Hollander 1977:46).[1]

In any event, since Mill, the concept of catallactics has been largely dormant, neglected, even abandoned within much of classical political economy, as shown by the cases of Cairnes and Marx. Though with qualifications, Cairnes appears to suspect, if not implicitly reject, the idea of economics as catallactics. Formally, unlike Mill, he hardly ever uses the term as the possible designation of economics or some of its branches, namely, the theory of the "sphere of circulation." In substantive terms, Cairnes adopts and prefers Mill–Ricardo's emphasis on production and distribution as the primary "subject-matter of Political Economy" in relation to circulation or exchange as a secondary one. Moreover, he goes a step further than his predecessors by redefining *political economy* as the science only of the "laws of the production and distribution of wealth," thus implicitly excluding the sphere of exchange or circulation from his definition, unless this sphere is interpreted, as in Mill's context, to be included in distribution.

In retrospect, Cairnes is not the only classical post-Ricardian economist who implicitly excludes exchange from the definition of economic science. More surprisingly, even Senior, a supposed precursor or exponent of catallactics, implies this exclusion by defining political economy as the science of the "Nature, Production and Distribution of Wealth," again unless exchange *is* implied in distribution. So does Say, another presumed catallactic forerunner, in his definition of political economy as the study of "the manner in which wealth is produced, distributed, and consumed," with the same qualification about exchange and distribution. These definitions cause one to wonder whatever happened to "exchange" in such presumably catallactic conceptions, and if Whately is not prompted in his plea for catallactics also by these omissions of his precursors just as by Ricardo's commissions. Despite these "uncatallactic" definitions, among the major classical economists, Say and Senior probably come most closely to a latent conception or anticipation of catallactics, as, incidentally, Marx suggests.

Even more vigorously than Cairnes and Ricardo, Marx rejects the reduction of economic science to the theory of exchange or the circulation of commodities, especially the substitution of the latter for the study of the production and distribution of wealth. While like Cairnes not using the term, Marx essentially treats this catallactic reduction as a specimen of what he calls "vulgar" or "apologetic" political economy, as one of the "grand exploits of economic apologetics." According to Marx, catallactics ("apologetic economics") has two characteristic methods. One is the "identification of the circulation of commodities with the direct barter of products" by abstracting from their differences, an implied case in point being Say's "law of markets" stating that "one kind of commodity" is always "exchanged for another." The other is explaining away the "contradictions of capitalist production" by the reduction of the relations between those engaged in it to the simple relations emerging from the "circulation of commodities." In this light, Marx objects that in no science more than in political economy is such a "big fuss" made with "commonplace truisms" exemplified by the "apologetic shifts" of "vulgar economists." In particular, among his favorite targets are Senior (and thus Whately) as well as Say and other representatives of the so-called Free-trader Vulgaris. For illustration, Marx calls Senior the *bel-esprit* of English "bourgeois" political economists, and denies scientific credentials to his catallactic theory describing it as vulgar economic "science," "so-called analysis," "apologetics," and so on. Curiously, leading contemporary and non-Marxian economists like Samuelson (1994) adopt Marx's terminology by describing Senior's economic theory as "apologetic." Incidentally, perhaps for this reason Marx does not seem to consider Whately, Senior's catallactic successor, worth paying attention to. Similarly, he rejects what he calls the "trivialities" of Say—who, for example, as Marx put it, "knows that a commodity is a product"—particularly his perceived "vulgarisation of Adam Smith."

The preceding intimates some association between holding a certain theory of exchange value and the specific position on catallactics. Specifically, like Mill, Cairnes, and especially Ricardo, Marx's labor-cost theory of value probably is instrumental in his negative attitude toward catallactics. For illustration, elaborating on Ricardo, Marx dismisses exchange values, thus by implication the "science of exchanges," as merely "accidental and purely relative," as "only the mode of expression, the phenomenal form" of something more substantial and intrinsic, that is, labor-value as their "common substance." As Whately remarks (approvingly cited by Senior) in reference to the classical (Ricardian) theory of price—thus anticipating neoclassical critiques of that of Marx—the assumption that products are valuable in proportion to their respective cost in labor naturally leads to denoting that labor their value. The above association holds good especially if labor theory identifies the source of value and prices in the sphere of production (abstract labor, cost, difficulty of attainment), and catallactics in that of the circulation of products or market exchange (supply-demand, scarcity-utility). Hence, as a proximate rule, those classical economists like Smith, Ricardo, Mill (in part), Cairnes, and Marx holding a consistent labor or cost of production theory of value and prices (see Chapter 9) tend to suspect, even reject, the idea of economics as catallactics.

Alternatively, others such as Say, Malthus, and Senior, as well as Whately modifying or deviating from this theory in favor of supply-demand or scarcity-utility explanations of value and prices are, as I have noted, inclined to adopt or support such an idea. Conversely, an explicit and coherent idea of catallactics tends to be inclusive or generative of such explanations as the components of the general "theory of exchanges." As indicated, a case in point is Whately's substitution of an implied supply-demand explanation of prices for a labor-cost of production theory, as indicated by his statement that costs or efforts do not explain the high prices of scarce goods (for example, pearls), but rather conversely. He therefore seems to suggest that his project of catallactics while incongruent with a cost of production theory of value and prices is fully consistent with or contingent on alternative, supply-demand or scarcity-utility conceptions. In retrospect, this is also a view that Whately's successors within marginalism, especially Austrian economics (for example, Mises and Hayek), adopt or imply by treating, for example, marginal-utility theory as the cornerstone of, thus its labor counterpart as alien to, catallactics. In passing, Marx would agree with Whately and the Austrians on this point though for, of course, different reasons implicit in his rejection of catallactics as "vulgar" and "apologetic" versus "scientific" Ricardian-type, including labor, theory. However, as hinted, Mill would counter both that catallactics, especially in the sense of a "theory of values," is by assumption compatible with any conception of value and prices, thus not necessarily incongruent with its cost of production varieties. In this sense, he would regard the latter as elements of classical catallactics, and their alternatives as those of its neoclassical version. Still, catallactics while largely neglected (Cairnes) or stigmatized (Marx) in classical political economy since Mill gains a new life and prominence in various forms within neoclassical economics characterized by different conceptions of value, as discussed next.

## Neoclassical Economics

In contrast with its classical counterpart, neoclassical economics, especially marginalism, features scarcity-utility (marginal utility) or market-based (supply-demand) conceptions of value and prices. And such conceptions reveal a strong association or affinity with catallactics understood (as Mises and Schumpeter suggest) as the theory of all market phenomena, including exchange values or prices. Thus, marginal-utility or market-based conceptions of value are instrumental in bringing the concept of (though not necessarily the term) catallactics back to center stage by neoclassical economics, just as Ricardian–Marxian ones were in relegating it into "trivial," "vulgar," and "apologetic" political economy.

As indicated, this especially applies to the Austrian school of economics. Most of its members purport to conceive, even designate, economic science as catallactics; at least, they consider the latter the essence of the former. For instance, while not using the term, Wieser argues that the theory of exchange value, based on the "law of margins" and so by implication on that of supply-demand, is the "heart" of economics, thus implies a concept of catallactics. So do his colleagues Menger and Böhm-Bawerk in similar pronouncements. However, Wieser proposes an "empirical" theory of exchange values as opposed and preferred to its "philosophical" counterpart rejected for its perceived "metaphysical" connotations, as also does Böhm-Bawerk. Wieser suggests this in his discussion of what he identifies as Smith's two, philosophical and empirical, theories of value, specifically a labor and a cost-of-production theory, respectively. Böhm-Bawerk does so in his critical designation of Marx's labor theory as "philosophical" that is part of a broader cost-of-production theory designated as "empirical." The aforementioned implies that Wieser adopts the concept of catallactics in the sense of the theory of exchange values and prices as concrete empirical variables rather than the theory of value as an abstract metaphysical entity (a similar view is held by Pareto, which I will discuss later). Predictably, Wieser prefers neoclassical catallactics resting on the marginal utility theory of value and prices to its classical counterpart predicated on labor ("philosophical") or cost of production ("empirical") explanations. In so doing, Wieser develops the earlier ideas of the founder of the Austrian school, Menger, as does, Böhm-Bawerk.

Statements and implications similar to those in Wieser can be found in Menger's and Böhm-Bawerk's analyses of market phenomena. Menger places the theory of exchange value, thus by implication catallactics, at the core of his theoretical economics defined as the "science of the general nature (empirical forms) and connection (the law) of economy." Menger's preferred version of catallactics is (one resting on) the concept of what he calls "marginal importance" or utility as an explanation of value, prices, and other market variables (for example, demand). Alternatively, he rejects the classical type of catallactics based on the labor or cost theory of exchange value as indicated by his branding it as the "most egregious" error of economic science. While this statement indicates rejection of the classical value theory of Smith, Ricardo, and others, Menger and other Austrians fully embrace, even reinforce (for example, Mises, Hayek), invisible hand and laissez-faire doctrines. Menger declares à la Smith that the "most noteworthy problem" of economics and all social science is how institutions, including money, markets, and states, serving the "common welfare" emerge and evolve without the presence of a "common will" seeking to establish them. The implied answer is that this is achieved by the operation of the market that converts, as if by an "invisible hand," individual interests into the common good. This is assumedly performed without any external (for example, government) interference, which indicates adoption of a laissez-faire position, as exemplified in the notion of a "night watchman" state, in early as well as contemporary Austrian economics (Kirzner 1997). Hence, the "invisible hand," conjoined with laissez-faire, indicates a catallactic solution to the problem of economic (and social) coordination, in the form of a nexus of individual voluntary and unfettered exchange transactions in the market. This dominant catallactic ontology then endows catallactics with corresponding primary epistemological importance within Menger's and Austrian theoretical economics. The preceding suggests that Menger adopts and develops what can be termed the "market structure" or "industrial organization" component, epitomized by the idea of free, atomistic, pure or perfect competition, of classical catallactics thus evincing continuity with the latter. In turn, he rejects that component of classical catallactics consisting of the labor or cost theory of exchange value in favor of a marginal-utility or supply-demand alternative, and thus exhibits discontinuity.

This curious duality of continuities and discontinuities, if not ambivalence, in Menger concerning classical catallactics is characteristic for virtually all later Austrian economists, even for neoclassical economics overall. Thus, Böhm-Bawerk dismisses the price theory component of classical catallactics as being in "absolute contradiction with facts," while fully embracing its "market structure" element exemplified in the idea of free competition. Indicative of this embrace, Böhm-Bawerk argues that any restrictions of free exchange and competition in the market are "retrograde" steps. Generally, Böhm-Bawerk, like Menger, Wieser, and other Austrians, builds catallactics (while not using the term) on a marginal-utility theory of exchange value in conjunction with the notion of a freely competitive market. Since in this view the theory of value is the essence of economics, this implies constructing the latter as a whole on such putatively catallactic foundations. Notably, Böhm-Bawerk seeks to formulate his elaborate theory of capital and interest, at least to some degree, in catallactic or exchange terms. For instance, he states that the loan of capital is no more than a "true and genuine exchange" of present for future goods. The exchange of future goods (means of production or savings) for present ones (consumption goods or money) is assumed to be conducted in a free market. Specifically, this exchange takes place in capital (loan) markets, labor markets, markets for land use, and commodity markets for intermediate products, all of which are governed by free competition. In this sense, Böhm-Bawerk conceives the formation and investment of capital as a market process, thus as an exchange or "catallactic" phenomenon. In his formulation, catallactics deals with the determination of prices in, for instance, the case of "isolated" and free market exchange by the "marginal pairs" of sellers and buyers, as a process expressing the "marginal law." This case illustrates the two intertwined building blocks of Böhm-Bawerk's catallactics and Austrian (neoclassical) economics overall: the principle of marginal-utility prices and the assumption of a free competitive market.

A next, more explicit, attempt to redefine and classify economics by means of catallactics involves J. B. Clark, who not only adopts and redefines the concept but also uses the term unlike most of his neoclassical colleagues. Within neoclassical economics, another prominent exception in using the term is, for example, Edgeworth whose respective views are presented when discussing the formal specification of the scope of "catallactics" in the next section. However, while the Austrian economists, like Whately, Say, and Senior, conceive economic science in terms of catallactics, Clark considers the latter (only) one part of the former, which seems closer to Ricardo–Mill's implied views. So do many other neoclassical economists, including Jevons, Wicksell, and Wicksteed (which will be discussed next), for whom the theory of exchange represents a particular though essential branch of economic theory rather than economics *tout court* as in the Austrian school. In his terms, Clark proposes inclusion of catallactics in the "natural divisions" of economic theory. He does this in the context of his proposal for a division of economic science, specifically the "pure theory of Economics," on the basis of what he calls "sociological evolution" [*sic*]. In so doing, he replaces the "traditional plan of division" into four parts, namely, production, distribution, exchange, and consumption, on the grounds that these are not "distinct operations." Specifically, catallactics represents the "second division" of theoretical economics, alongside "universal" economic theory as the first, and economic dynamics as the third. By adding to "universal" phenomena those resulting from exchanges, catallactics is defined as a "science of an organized economy" painting a "picture of society as a single organization" that engages in its "entirety" in producing and distributing wealth among its participants.

Thus understood, catallactics generally centers on a static and simple society, examining economic or exchange phenomena in "consequence of organization and nothing else," for example, change, growth, progress, movement, disturbance, and frictions. In order to, as Clark put it, "reduce society to a stationary state," he suggests the following "five generic changes" be abstracted from population growth, increase in capital, improvements in production methods, changes in the "forms of industrial establishments," and "multiplication of consumers" wants. In particular, Clark's catallactics analyzes the nature and determination of values or prices, wages and interest—as well as profits in turn presumed to be zero—in a "static condition of society." In short, for Clark the "work of catallactics" is to study that "group system" called market in a "static state." By virtue of being premised on "static principles," Clark's catallactics is coterminous with "static economics" or the "theory of economic statics" in contrast to "dynamic economics" or the "theory of economic dynamics." Apparently, Clark's concept of catallactics is narrower than that of Austrian economists. As such, his catallactics as just one branch of economic science is a far cry from the Austrian reduction of all economics to that branch. Moreover, most Austrian economists would reject Clark's catallactics-cum-"economic statics" because of its overly static implications (for example, equilibrium) in favor of a more dynamic version stressing the "market process" (Kirzner 1992). Overall, as commentators like Young remark, in Austrian and neoclassical economics in general, for "system's sake the whole material equipment of human living is recast in molds fashioned after the notions of catallactics."[2]

Though not using the term, as do Clark and Edgeworth, such an early neoclassical economist as Jevons, like Menger, harbors a latent concept of catallactics, as does a fortiori another marginalist pioneer, Walras. Notably, Jevons suggests that theoretical economics incorporates catallactics as its important branch, given his attention to and elaboration of the theory and "formulae of exchange," including "ratios of exchange" or prices. For illustration, these, in Jevons–Edgeworth's words, "formulae of exchange" include, first, the "law" of diminishing marginal utility (and productivity); second, the "law" of increasing total utility with increases in wealth; third, the "law" of increasing marginal disutility of labor; fourth, the "law of indifference" or a single market price; fifth, the principle of substitution between commodities; and so forth. Also, Jevons's emphasis on the realm of consumption, in contrast with that of Ricardo, Mill, Cairnes, and Marx on production and distribution, suggests similar implications insofar as the first is instrumental to a more positive attitude toward catallactics, and vice versa. Jevons urges that the "theory of political economy" start with what he calls an "exact theory of consumption," and thus become a "science of human wants and their satisfaction," rather than with that of production and distribution as most classical economists propose. (Incidentally, these and related statements of the marginal-utility theory of value prompted Marshall to defend Ricardo and Mill against Jevons's "attacks" in an "ungenerous" review of the latter's *Theory of Political Economy*.) By implication, by virtue of its assumed generality and prominence, Jevons's theory of consumption relates to, even incorporates that of exchange. Hence, Jevons's theoretical political economy includes catallactics thus understood in association with or incorporation in the theory of consumption, alongside analyses of distribution and production. In turn, he regards theoretical political economy, including the "mathematical theory of economics," as one of the branches of economic science, alongside, for example, "commercial statistics," "systematic and descriptive economics," "economic sociology," and "fiscal science."

The aforesaid about Jevons also holds true for his disciple Wicksteed on the basis of his respective emphasis on the theory of exchange and consumption (while also not using the term catallactics). Like Jevons and unlike Austrian economics, Wicksteed considers the "theory of exchange" and thus catallactics (just) a special branch of pure economics in conjunction with theories of consumption, production, and distribution. In particular, following Jevons, Wicksteed implies that catallactics is associated with, even grounded on, the theory of consumption given that the latter is "closely linked" with exchange. Specifically, he sees the laws of value and exchange as dependent on the (psychological) "law of diminishing returns of satisfaction" as the presumed basis of the "entire theoretical study of consumption." In this sense, the "universal" catallactic law of supply and demand involves a (psychological) linkage with the realm of consumption.

Similar implications can be drawn from the work of another neoclassical economist, Wicksell, to some degree influenced by Jevons. Thus, virtually replicating Jevons, Wicksell suggests that among the subdivisions of pure political economy the "general theory of consumption" should be "logically placed . . . first" before the others, namely, the theory of production and of productive factors, and the "social problem of distribution." Interestingly enough, Wicksell apparently does not include the theory of exchange in these subdivisions in contrast to Jevons and Wicksteed. One possible explanation of this unusual omission within neoclassical economics is that Wicksell, like Jevons and Wicksteed, links the theory of consumption with that of exchange. Further, given its attributed generality and relevance, Wicksell's "general theory of consumption," just as that of Jevons and Wicksteed, might by implication incorporate that of exchange as one of its parts. To that extent, catallactics is latently present in Wicksell's conception and division of "theoretical political economy." Generally, Wicksell divides economic science into, first, pure or theoretical political economy containing a "statement of economic laws," second, applied political economy as the application of such laws to the "concrete economic life of society," and third, social economy (or economic policy) as an investigation into the "existing economic and legal structure of society." In retrospect, this division of economic science seems virtually identical to that of Walras, whose concept of catallactics is discussed next.

Even more explicitly than both Jevons and Menger, Walras defines what he calls "pure political economy" as some kind of catallactics (though without using the term), namely, as the "theory of the determination of prices under the hypothetical regime of absolutely free competition" used as the epigraph to this chapter. This can be considered an exemplary definition of (pure) economics in terms of catallactics, or at least what is today termed the "theory of prices" ("price determination") as well as market structure ("absolutely free competition") or industrial organization, and the like. Walras also advances an alternative and more general definition of "pure political economy" as the "theory of social wealth," which obviously resembles, if not adopts, the classical (Smith–Ricardo–Mill) conception of economic science. However, like in classical political economy, this alternative definition would imply that catallactics is not the whole of pure economics—as the first definition suggests—but only part of it. By implication, catallactics as a branch of pure political economy thus understood specifically deals with the exchange of "social wealth," with the other branches coping with its production, distribution, and consumption.

Also, as hinted, what is perhaps less known to many contemporary economists is Walras's tripartite typology and conception of economic science. Specifically, Walras divides economic science into three disciplines: "pure" political economy as defined, applied political economy defined as the "theory of the production of social wealth," and, voilà, social economy as the "theory of the distribution of social wealth." As mentioned, this division of economic science is virtually identical to, and probably serves as the building block for, that in Wicksell. Further, Walras contributes to all of these fields by separate works, prompting Schumpeter to characterize these three volumes as "the richest books" of economic science. These books are *Elements d'économie politique pure*, *Études d'économie appliquèe*, *Études d'économie sociale*, of which, alas, only the first has been translated into English so far. Perhaps because of this (or a lack of command in French), most, especially American,[3] mainstream economists adopt, focus or elaborate on Walrasian "pure" theory as epitomized by his general equilibrium analysis, with neglecting or downplaying the other parts, especially his "social economy." The result is what some analysts term the "misperception of Walras" (Burgenmeier 1994) in mainstream economics today. In the terminology of this chapter, they center on his catallactics or the pure theory of value, prices, and market structure, and decenter on the noncatallactic or sociological elements of Walrasian economics. What is more important to the present discussion is that catallactics constitutes Walrasian pure political economy (only) insofar as the latter is specifically understood as the "theory of price determination." Alternatively, if pure economics is defined as a more general "theory of social wealth," then catallactics belongs to, but does not exhaust, such a theory. Simply, in the first case pure economics *is* catallactics; in the second the latter is just part of the former. On balance, since (or insofar as) the "theory of price determination" definition is primary, Walrasian "pure political economy" essentially amounts to catallactics or what Schumpeter calls "market economics," including general equilibrium analysis.

In a vein similar to Walras, Pareto conceives economics along catallactic lines. This can be inferred in part from the Paretian implied conception of pure political economy in terms of market-equilibrium analysis focusing on the relationship or "opposition" between "tastes" and the "obstacles for their satisfaction." Since equilibrium is seen as the result of the operation of the law of supply and demand, by implication pure economics includes, if not becomes, a catallactic analysis of such market laws and exchange processes leading to equilibrium. In particular, like Walras, Pareto emphasizes the states of or tendencies toward general market equilibrium as the focus of pure economics. Hence, the essence of Paretian pure economics-cum-catallactics becomes general market equilibrium analysis à la Walras. Similar to Walras, Pareto characterizes "pure political economy" by "general theories of economic equilibrium," thus by the theory of price and market structure or simply catallactics. In this connection, Pareto notes that a "notable step in advance" within catallactics is distinguishing exchange value from what is called "utility value," probably referring to Smith's distinction between exchange and use values. Then, Pareto identifies "further progress" in deriving the "more exact" notion of "final utility" from that of "utility value," with an obvious reference to marginalism. And, he infers that, as the result of this progress in catallactics or the theory of exchange value, theories of general market equilibrium are "finally attained."

Implicit in the preceding are some modifications and nuances in Pareto's concept of catallactics (though he does not use the term, either). A key modification is the shift from catallactics premised on the traditional idea of abstract or natural value to that resting on the notion of empirical exchange values, thus market equilibrium. Pareto indicates this shift when he states that (pure) political economy cannot any longer be based on the "indeterminate concept of value." The alternative is the presumably more determinate concept of exchange value, which by virtue of this determinacy permits (general) market equilibrium analysis. Thereby, Paretian catallactics or pure economics moves from a theory of value in the philosophical (metaphysical) sense into one of exchange values/prices as empirical categories (quantities), thus ultimately an analysis of general market equilibrium. As implied, the same can be said of Wieser and Böhm-Bawerk on the basis of their comments on Smith's and Marx's philosophical and empirical theories of value, respectively. However, the salient difference is the suspicion, even rejection, by Wieser, Böhm-Bawerk, and most other Austrian economists of the use of the concept of general equilibrium within catallactics in favor of that of "market process" by contrast to Pareto as well as Walras, Jevons, Marshall, and others. As Pareto put it, to "prattle" about "value" is "much less difficult" and supposedly less impertinent for pure economics than discovering and comprehending the "laws" of market-economic equilibrium.

## Contemporary Economics

While the term has almost disappeared, the concept of catallactics continues to be prominent, if not prevalent, within modern economic theory.

This is indicated by the centrality of the theory of price and market exchange in contemporary (micro)economics, though the latter seldom uses catallactics or catallaxy for characterizing this theory. This centrality suggests that contemporary (micro)economics has almost realized the underlying idea and objective of Whately, as well as of his later followers like Mises and Hayek, of reconstructing economic science into catallactics. By the same token, however, the plea of Whately et al. for formally renaming economics as catallactics is as far from its realization as ever, given the infrequent use of the term, though with exceptions discussed next.

A major exception is, of course, the Austrian school, as indicated by Mises–Hayek's catallactic vision of economics. Adopting and elaborating on the early views of Menger, Böhm-Bawerk and Wieser, Mises, Hayek, and their followers carry the concept of catallactics further and make it more explicit and coherent. In particular, Mises, perhaps more than anyone else, persistently promulgates and argues the idea of economic science as catallactics. As noted, Mises explicitly states that catallactics in the sense of the theory of market phenomena is the "heart of economics." Hence, he seeks to interpret the development of economic theory in these terms, an example being his (controversial) interpretation of Mill's political economy as catallactics. So does in his own way Hayek, who apparently following or reminiscent of Whately proposes that the proper designation for economics should be catallactics by centering on the emergence of a "spontaneous order" from the system of market exchanges. Following Mises and Hayek, most contemporary Austrian economists equate economics, especially economic theory, with catallactics in the sense of a "theory of voluntary interpersonal exchange" (Rothbard 1951:946). Thus understood, Austrian catallactics comprises two main components, the marginalist theory of exchange values and the conception of a free market.

As mentioned, leading contemporary economists outside the Austrian school rarely use catallactics even when doing what the concept implies or conceiving (micro)economics as price theory, the study of markets, equilibrium analysis, and the like. Among these, a certain exception is Robbins, who perhaps due to the influence of Austrian economics, adopts the term. Moreover, on occasion he seems to flirt with the Austrian idea of economic science as catallactics. In his earlier work, Robbins implicitly conceives economics in catallactics terms in a manner close to that of some Austrian economists (for example, Menger, Mises, and Hayek) with their strong and consistent emphasis on "market exchange." This holds true though his explicit definition of the scope of "pure economics"—that is, as a science of "scarce means in relation to the multiplicity of ends"—is intended to be broader than catallactics. The catallactic connotation of his conception of economics is implicit in his argument that the only economic generalizations and laws are those of definite market phenomena, namely, the law of supply-demand, price, and exchange. Negatively, such a connotation is implied in Robbins's denial that these generalizations/laws are linked with what he labels "vague" concepts of production such as total product or national income/dividend. In this connection, he argues that a law of production has "never" been established on the grounds that a change in the aggregate product is not a "definite conception" in contrast to exchange variables like supply, demand, and price. By such arguments, Robbins generally downgrades, like most Austrian economists, the relevance of the realm of production relative to that of market exchange. He implies that economic science should center on market phenomena and decenter on those of production, thus suggesting the centrality of catallactics (while not using the term at this point) for economics, if not subsuming the latter under the former in the way of the Austrian school, especially Mises and Hayek. As mentioned, a de-emphasis on the realm of production is associated with the predisposition for a catallactic project of economics as the theory of market phenomena, and this is the case with Robbins at this occasion.

However, at other occasions Robbins shows some misgivings, specifically about the idea advanced by Hayek, of economics as catallaxy or the theory of exchange predicated on the market system as a "spontaneous" social order. On the one hand, Robbins (1981:1–2) agrees that the "economic aspects" of decisions/activities pertaining to scarce resources and time can be seen as the "exchange" of one state of affairs for another. On this account, he subscribes with Hayek that catallactics leads to "very deep insights." However, Robbins cautions that the approach of catallactics does not make "sufficiently clear" the conditions leading to (actual or implicit) exchange, and to that extent wanting. Alternatively, his proposed definition of economics in terms of behavior conditioned by scarcity specifies these conditions, since scarcity is conceived as the relationship between (individual or collective) objectives and the limited means for their attainment (Robbins 1981:2). In retrospect, this specification resembles Menger's concept of scarce goods relative to human needs as well as Pareto's opposition between "tastes" and the "obstacles" for satisfying them, with this opposition reconciled in market equilibrium. In any event, Robbins unambiguously declares that his conception of economic science is not fully identical to catallactics as advocated by Hayek, Mises, and other Austrian economists.

Not surprisingly then, most recent mentions, considerations, and advocacies of catallactics cluster around contemporary Austrian economics and its sympathizers. One endeavor involves the grounding of catallactics in the market "foundations" of economic order as well as in subjectivism, thus displaying apparent Hayekian influences and connotations (Barry 1992). In another similar endeavor, particular attention is paid to Hayek's conception of catallaxy as linked with the notions of market competition and cognition (Streit 1993). Other endeavors analyze the relations of catallactics to conventions and social order in light of the presence of two mechanisms of coordination, the market and normative rules (Klein 1996). Also analyzed are the connections between catallaxy, information, and transactions as the key concepts of what is called "evolutionary market theory" (Streit and Wegner 1992).

In sum, contemporary mainstream (micro)economics features some paradox concerning the idea of economic science as catallactics. While virtually abandoning the term, contemporary microeconomics, like its neoclassical predecessor, continues to be in essence some version of catallactics in the sense of a theory of prices, market exchange, equilibrium, and so forth. On the terminological or formal side, it seemingly ignores Whately's call for renaming economic science as catallactics. As noted, this call resulted from the dissatisfaction with what was perceived as classical (Ricardian) political economy's overemphasis on production, and the neglect of exchange as merely the "sphere of circulation." On the theoretical or substantive side, contemporary microeconomics almost fully embraces the underlying catallactic or neoclassical conception of ("pure") economic science as what Walras termed the "theory of price determination" under a market of "absolutely free competition." In short, "catallactics is dead" as a term, "long live catallactics" as a substantive concept!

## THE SCOPE AND BRANCHES OF CATALLACTICS

The preceding suggests that the general meaning of catallactics is, in Schumpeter's view, the "theory of market economics," or the "economics of the market" (Rothbard 1951:946). In this sense, the scope of catallactics is defined as consisting of, in Mises's words, "all market phenomena with all their roots, ramifications, and consequences." Hence, catallactics becomes a comprehensive, almost universal market or price theory. Hence, those economists like Mises et al. who explicitly conceive economics in catallactic terms define it as the "theory of all market phenomena," as the "study of the working out of the market mechanism" (Friedman 1976:2), and the like. More implicitly or at least not using the term, Robbins and others characterize economics as a "theory of exchange or the market economy," as an analysis of "exchange systems and its institutions" (Boulding 1970:17–18), and to that extent some type of catallactics.[4] This particularly applies to pure economic theory or what Schumpeter calls "economics proper" that centers on the economy as a mechanism, especially "market mechanisms."

The discussion of the development of the concept also suggests certain specifications of its general meaning, or of the scope of catallactics in substantive and formal terms. In substantive terms, the scope of catallactics or pure economics is specified as the analysis of market phenomena or those human actions conducted on, as Mises says, the "basis of monetary calculation." Its task being to study the operation of, in the terms of Clark and Hayek, respectively, that "group system" or "anonymous group" called market, catallactics as it relates to the analysis of the "static state" of the economy or comparative economic statics.[5]

The formal definition of what Edgeworth calls "pure" catallactics puts an emphasis on mathematical analyses of market phenomena. In this sense, he defines catallactics as the "mathematics of a perfect market" and thus "cultivation of the mathematical science" within economics. In his view, economics consequently becomes the "mathematical theory of catallactics" or "pure catallactics" premised on the concept of perfect competition.[6] Arguably, Edgeworth's "catallactic molecule" as the "simplest type" of agent is contained in the definition of perfect competition, as are "catallactic formulae" or equations of exchange seen as the essence of market laws. In this regard, a "perfect state of competition" features, as he put it, the "jungle of catallactic molecules" or the "jostle of competitive crowds," incidentally, governed by the "higher orders of evolution," namely, the Darwinian principle of natural selection on the "superior in capacity" basis. In passing, contemporary economists like Mises object that "catallactic" or market competition is "emulation" between people wanting to surpass one another rather than biological "survival of the fittest" or a "fight" in the Darwinian sense. In addition, he argues that "catallactic competition" is a determinant not only of competitive prices but also monopoly ones in the belief that any commodity competes with all others in the market.

According to catallactics, the aggregate outcome of such competition between economic actors as, to paraphrase Edgeworth, catallactic atoms is what Wicksteed calls a "catallactic or market society" (Hirschman 1982; Slater and Tonkiss 2001). From the stance of catallactics, the latter is or becomes a market, as suggested by Bastiat's expression the "great market place of society." Presumably, the market via its agency of practical catallaxy or freely competitive exchange, represents and re-creates a "comprehensive spontaneous" (Hayek 1991:358) social order that is not the result of any deliberate design but rather a sort of "natural" society. Apparently, such a catallactic presumption is premised on or restates Smith's doctrine of the "invisible hand of competition" (Arrow/Scitovsky's phrase) in the market. In catallactic terms, the doctrine postulates that competitive market catallaxy performs a miraculous conversion of individual gains into public benefits, thereby creating, sustaining, or advocating a spontaneous natural social, including political, order. Specifically, the doctrine has historically provided strong political and ideological arguments in favor of modern capitalism and against its various possible or actual alternatives (Hirschman 1977). The aggregate outcome of such practical catallaxy is thus Bastiat's "great market place of society."

The preceding specifications of the scope of catallactics point to its particular spheres or subjects. As defined, catallactics contains two primary or proper spheres, and certain secondary or adjacent ones. The two primary spheres or domains of catallactics are, first, market exchange and, second, value and prices. The original and prevalent meaning of catallactics (the "science of exchanges") suggests that its first primary sphere is economic exchange, especially transactions in the market. This sphere thus involves exchange under what contemporary microeconomists call "market structure" or "industrial organization" as a set of specific markets, ranging from perfect competition to pure monopoly and quasi monopolies (for example, oligopoly) to monopolistic/imperfect competition. Conventional catallactics, specifically the traditional theory of market structure, assumes that exchange takes places primarily in what Walras connotes as "the regime of absolutely free competition," and secondarily under other conditions, though with qualifications and revisions (for example, theorems of monopolistic and imperfect competition). Hence, the first sphere or domain of catallactics can be denoted economic exchange, and freely competitive market transactions in particular.

Also, the cognate alternative definition of catallactics as what Mill as well as McCulloch term the "science of values" anticipates its second primary sphere. This is the sphere of exchange values and/or prices (Mill, for example, distinguishes between the two). In particular, some Austrian economists imply that this sphere of catallactics consists solely in the actual market process of the determination of exchange values or prices rather than in the ideal. Thus, Mises proposes that catallactics describe and explain (only) price formation in the market, namely, the "real" rather than the possible or desirable formation of prices. This proposal makes explicit an earlier implicit suggestion, for example, by Wieser and Böhm-Bawerk that catallactics should contain an empirical theory of concrete exchange values rather than a philosophical speculation on the source and measure of abstract value à la classical labor theory. In turn, such a suggestion reveals or claims certain differences between classical and neoclassical versions of catallactics in terms of the second sphere. Presumably, classical catallactics juxtaposes both the empirical and the metaphysical aspects of the sphere of exchange values, as implied in Wieser–Böhm-Bawerk's critique of Smith's and Marx's dual theory of value, respectively. By contrast, its neoclassical or marginalist counterpart confines to the empirical with the exclusion of the metaphysical. However, some economists (Mirowski 1989) would question this interpretation, especially the exoneration of marginalism from a metaphysical fallacy, that is, the neoclassical search of "invariant" value in marginal utility versus labor-cost of production in classicism. In any event, the second primary sphere of catallactics pertains to, following Schumpeter, the creation of market values or the formation of prices. By assumption or implication, this process takes places under a freely competitive market. Hence, the preceding suggests that the two primary spheres of catallactics relate to each other, even combine in a single domain composed of exchange transactions and the formation of prices in such markets.

In some views, catallactics implicitly includes or relates to such auxiliary, secondary, or adjacent realms as consumption, as well as indirectly production and distribution. In this view, catallactics would by implication refer to the realm of consumption via market exchange. As noted, neoclassical economists like Jevons, Wicksteed, and Wicksell suggest that theoretical economics must begin with a general and "exact" theory of consumption. Following their suggestions, pure economics should, as Jevons urges, place the general theory of consumption and human wants "logically" first before any other, on the grounds of consumption being the sole end of production and all economic activity. (Here, Jevons et al. embrace Smith's views on consumption, while rejecting his theory of exchange value.) Further, on these grounds, economics would constitute what Jevons and Wicksell call a "science of human wants and their satisfaction," or simply of consumption. More important to the present question, they imply that this process of want formation and satisfaction takes place in and through the market. The process involves effective demand as the market expression of wants or preferences, and available supply indicating the possibility for their satisfaction or consumption. This anticipates the neoclassical justification for including consumption in the scope of catallactics. For instance, Wicksteed finds the underlying rationale for such inclusion in the fact that market exchange is "closely linked to consumption," namely, demand and supply to wants and their satisfaction. As indicated, he regards the "laws of value" as depending on the "psychological law of diminishing returns of satisfaction" (marginal utility), thus by implication on consumption. In particular, he implicitly attributes such dependence on consumption to the "universal" market law of supply and demand by virtue of its "psychological link." In general, this may imply that the supposedly psychological domain of consumption becomes the basis and goal of market exchange, and thus an underlying or intermediate domain of catallactics.

In its original and dominant meaning, catallactics does not involve distribution in the strict sense, especially what Walras and Wicksell call the "social problem of distribution." Both Walras and Wicksell include the issue of distribution thus understood into "social economy" as distinguished from pure economics, including catallactics (theory of price determination). In retrospect, in so doing they perhaps echo, if not adopt, Mill's characterization of distribution as a "matter of human institution only" in contrast to production and in extension exchange seen as subject to "natural laws" akin to those of nature. In any case, this characterization implies that distribution does not belong within the scope of catallactics generally defined by Mill as the science of exchanges and values. Such an interpretation is also supported by Mill's implicit inclusion of distribution into what he calls the "science of social economy" (as essentially equivalent to Comte's sociology) rather than "political economy proper" and thus catallactics as its part. This anticipates and highlights Walras–Wicksell's own inclusion, even relegation, of distribution into their "social economy." Parenthetically, they define this discipline narrower, the study of the "social problem" of wealth distribution, than does Mill, as the "science of the condition of man in society."

Nevertheless, some neoclassical economists would by implication include distribution in the scope of catallactics. This implication can be drawn from the proposition that the distribution of income is linked with—more precisely, determined by—the market. For illustration, Wicksteed proposes that only one conception of distribution is available or valid, "and that is the theory of the market." He thus suggests that distribution is to be explained in terms of catallactics as the designation for such a market theory. He finds the reason for this in that there exist not many laws of distribution but only one, "and that is the law of the market," or what Edgeworth names the "catallactic formula." As such, the process of distribution becomes a part of Wicksteed's "catallactic society," thus within the scope of catallactics, though as a secondary and dependent sphere.

The concept of catallactics was originally and (still) is mostly used to counteract the perceived overemphasis on production and distribution, and the alternative neglect of exchange as the mere "sphere of circulation," within classical Ricardian political economy. Hence, it may seem incongruous to include production in the strict sense in the spheres or subjects of catallactics, and this is exactly what most advocates and critics alike of the concept suggest. Most of its advocates explicitly or implicitly exclude what they see as, in the words of Robbins, "vague" notions of production (for example, total product) from the scope of catallactics in favor of more "definite" market concepts such as supply, demand, exchange value, prices, and so on. Hence, they tend to sharply contrast the theory of prices and markets or simply catallactics with that of production, especially its aggregate forms, though this is not necessarily coterminous with the distinction between micro- and macroeconomics. Also, critics or skeptics of the concept of catallactics see the realm of production as outside of its scope, though for opposite reasons, namely, the narrowness of the concept. This position is especially characteristic for Ricardian economists, including Marx and Cairnes, even in part Mill and Marshall. As remarked, Marx brands as "vulgar" and "apologetic" the kind of (catallactic) economic science centering on the "circulation of commodities" while neglecting the process of production and distribution, as personified in Senior, Say, and others. So do some leading contemporary economists, with, for example, Samuelson (1994) labeling Senior's catallactic theory as "apologetic." Even Mill who is often considered an early and prominent advocate of catallactics (for example, by Mises) shows some misgivings because of its neglect or exclusion of production, thus its overly narrow scope. So does in an almost identical though more implicit way Cairnes as well as, in part and with qualifications, Marshall, judging from their adoption and development of the cost of production theory of "normal prices."

Still, as in the case of distribution, neoclassical economists like Wicksell and Wicksteed implicitly include production in the scope of catallactics as a secondary sphere or subject. Specifically, the scope of catallactics would incorporate production indirectly through distribution by analogy to incorporation of consumption via market exchange. This is implicit in Wicksell's statement that the analysis of production and of productive factors "cannot be separated from the theory of distribution." This analysis is seen as inseparable from the theory of the market or catallactics, given that neoclassical economists assume that distribution is determined by market laws, as Wicksteed, Walras, and others emphasize. In this sense, production is linked with the market in a roundabout way in contrast with both consumption and distribution whose market links are assumed to be more direct. Hence, the path of inclusion of production into the scope of catallactics appears longer and more indirect than that of the other two secondary spheres.

In turn, such contemporary economists such as Robbins insist that production is by assumption outside the scope of catallactics. As hinted above, he does so in asserting that there are no "definite" concepts of production akin to those of the market but only indefinite notions. The assertion thus implies that "pure" economics, including catallactics, deals only with definite market concepts, not with "vague" ideas of (aggregate) production. To the extent that this posits a sharp separation between the realms of production and of the market, thus between the theory of production and catallactics, the latter would not incorporate the former. Alternatively, production would be, at most, a secondary and remote segment of

Wicksteed's "catallactic society," entering the scope catallactics (only) through the intermediation of distribution.

In sum, as a theory of (primarily) market exchange and prices and (secondarily) of consumption, distribution, and production, catallactics appears almost coterminous with economic science as conventionally defined. In the present context, however, catallactics is understood in the narrower sense of pure theoretical economics, rather than economic science as a whole. More precisely, catallactics signifies the purely economic theory of the market, or simply price theory in the conventional and broad (loose) meaning. In this regard, the term *pure* in Edgeworth's expression "pure catallactics" (McNulty 1968) appears redundant. This holds true unless "pure catallactics" is understood, as in Edgeworth, in the sense of a formal (mathematical) model of markets that is "purified" of any substantive ingredients, economic and social. The specification of the scope of catallactics leads to specifying its branches done next.

Identification of the spheres of catallactics permits identifying its branches. By analogy to its spheres, catallactics can be divided into two primary branches and other secondary ones. One primary branch of catallactics is the theory of economic exchange, in particular of market transactions (especially) under the conditions of free competition. In this sense, the first branch of catallactics represents the analysis of market structure or industrial organization, and thus corresponds to Whately's "science of exchanges."

Another primary branch of catallactics can be termed the "pure" theory of value seen as, in Wieser's view, the "essence of economics." In turn, authors like Myrdal contrast the theory of price formation as the "essential integral part" of (positive) economics with the "pure theory of value" as a part, instead, of normative economics.[7] In any event, this branch of catallactics corresponds to Mill's "Science of Values." The two primary branches of catallactics, therefore, merge into what Walras calls "pure economics-cum-the analysis of price formation and general market equilibrium," or the "theory of social wealth," in the conditions of free competition.

By analogy to its auxiliary or adjacent spheres, the secondary branches of catallactics include consumption, distribution, and (in part) production theories. The theory of consumption is included into the branches of catallactics in light of the assumed links between market exchange and consumption activities. So is the theory of distribution by virtue of the relations between market and distributive processes. Moreover, with a view of these relations, such a neoclassical economist as Wicksteed argues that the conception of the market is the only valid "theory of distribution." The above also applies to the theory of production as a secondary branch of catallactics though to a lesser extent insofar as productive processes are seen as linked to market exchange not directly but indirectly via distribution, as Wicksell maintains. To summarize, catallactics thus understood can be divided into two main branches: first, the theory of value and prices in the conventional sense exemplified in cost of production, marginal utility, and other explanations; second, the theory of market structure or industrial organization epitomized by conceptions of perfect and imperfect competition, and so forth. As such, the primary branches of catallactics correspond to those of what has been (loosely) referred to as "price theory."

Finally, a brief note is in order: The preceding pertains to catallactics in the sense of a positive analysis or scientific theory as distinguished from its normative counterpart, especially welfare economics. Since normative catallactics or welfare economics is not of concern in this work, only a few general observations are made for the sake of illustration of its subject and orientation. The idea of economic science as a normative analysis, especially welfare economics, is exemplified in the statement of Pigou that "economic welfare is the subject matter of economic science." In this view, economics as a "practical science" represents the theory of the ways of satisfaction of human needs that provide, as Wicksell put it, the "most possible satisfaction to society as a whole," or Bentham's proverbial "greatest happiness for the greatest number." No wonder some contemporary economists like Schumpeter object that neoclassical welfare economics "merely revives the Benthamite tradition" of utilitarianism and hedonism. In this regard, others, like Myrdal, suggest that the normative concepts of welfare and social utility, thus by implication welfare economics, be "relegated" from contemporary economic science. Curiously, still others lament that modern welfare economics is not utilitarian or individualistic enough in that it does not always conceive the social welfare function in terms of a summation of individual utilities (Harsanyi 1977), with some complaining about its idea of "socially optimal allocation" (Kirzner 1997). Further, other economists (for example, Lange) consider welfare economics as coterminous with what they name "social economics," a view resembling Walras–Wicksell's (and Mill's) description of the latter as dealing with the societal problem of distribution thus having normative connotations. In any case, welfare economics or any normative analysis is of secondary interest relative to the positive conception of catallactics as well as of economic sociology or sociologics discussed in the next chapter.

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# 2

# Sociologics

Economics must be the handmaid of sociology.

—Wicksteed, *The Common Sense of Political Economy*

## THE IDEA OF SOCIOLOGICS

By sociologics is understood a sociological conception of the economy, the market in particular. Such a conception postulates the social nature, organization, and construction of the market and economy. This conception is variously termed "economic sociology" (Smelser and Swedberg 1994), "sociology of economic life" (Granovetter and Swedberg 1992), and "sociology of the market" (Fligstein 2001), as well as "sociological economics" (Collins 1986), "socioeconomics" (Etzioni 1988), and "social economics" (Becker and Murphy 2000), all of which are taken mostly as interchangeable or comparable terms, as also done in this work.[1] Hence, the empirical domain or the ontological reference of sociologics is what can be termed the "sociologic," including "social structural logics" (Slater and Tonkiss 2001:35), underlying the market and the economy overall. This provides the principal substantive reason for choosing and using sociologics as an epistemological or conceptual expression of an ontological reality in which the market exists and functions within a "social environment" (Becker and Murphy 2000).

The epistemological construct sociologics expresses the following specific ontological aspects of market-economic phenomena. The first aspect is the social attribute or character of the economy, including the market. For instance, such seemingly pure catallactic or market activities as profit making reportedly evince this attribute to the effect that gain seeking is controlled by the "fact of its social nature" (Danner 1996). To take another example, exchange value or market price is as even neoclassical economists like Clark, Schumpeter, and others (for example, Aftalion, Seligman) admit "essentially social" in character. In this sense, the determination of exchange values or the formation of prices is not just a simple market process, as usually conceived in catallactics, but also a broad and complex social one as I will elaborate in Chapter 10.

The second aspect emphasized by sociologics is the social constitution and organization ("embeddedness") of market and other economic phenomena. This means that market phenomena are not self-contained and independent of the rest of society as viewed within catallactics, but constituted by and organized ("embedded") within a wider social context. On a micro- or interactional level, sociologics emphasizes the social constitution of market exchange by treating it as a particular form of human social action, interaction, or relationship. At a macro- or systemic level, it conceives the market (and the economic overall) as an integral part of society or a subsystem of the total societal system. In terms of the embeddedness conception (Granovetter 1985), sociologics embeds individual market transactions in interpersonal networks of social relations or microembeddedness, and the economy in a larger societal structure, including institutional arrangements or macroembeddedness (Carruthers and Uzzi 2000).

The third ontological aspect of sociologics is to some degree a corollary or implication of the previous two, namely, the social attribute and constitution of the market. This aspect can be designated as the "societal structuration" or "social construction" (Granovetter 1990) of the market and economy. A case in point is the institutional structuring of the market, that is, the operation of institutions as "structuration principles" (Stein 1997) of the economy. This aspect of sociologics suggests that market variables are structured, constructed, and determined (in the nondeterministic sense) by a range of social phenomena, including institutions. For example, market prices reportedly derive from a process of the "social construction of value" (Smith 1989). In particular, they can result, as Weber points out, from power relations and conflicts in the market and society. By virtue of this third aspect, sociologics analytically converts prices and other market variables into social derivations and constructions, including what Durkheim calls collective representations (Granovetter and Swedberg 1992). Notably, on the account of the institutional structuration of these variables, sociologics analytically transforms the market from an ostensibly