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Always Rational Choice Theory? Lessons from Conventional Economics and Their Relevance and Potential Benefits for Contemporary Sociologists

Milan Zafirovski[1]

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Abstract

The paper reconsiders the problem of whether traditional economics constitutes or comprises rational choice theory in the sense of a comprehensive economic model of and approach to human action and society. Rational choice theorists in economics as well as sociology and beyond claim that their theory and approach is founded in, derived from and justified by classical and neoclassical economics, especially its major figures. This reconsideration casts strong doubt on such claims to "rational choice" traditional economics. It argues and shows that both classical political economy and neoclassical economics essentially is or has no rational choice theory. This applies to virtually all the major economics classics and neoclassics, with some exceptions among their lesser counterparts. The paper aims to contribute to understand better the origins and rationale or lack thereof of rational choice theory and the economic approach to behavior and their implications for its sociological version. The rationale/benefit of this analysis and its finding for contemporary sociologists is three-fold. The first relating to rational choice sociologists is showing that classical/neoclassical economics is not rational choice theory and does not represent their theoretical foundation and precursor. The second pertaining to economic sociologists is demonstrating that conventional economics has elements of economic sociology, especially more than of rational choice theory. The third concerning other sociologists is to make them more familiar with the original ideas of conventional economics as distinct from their interpretations by contemporary economist pursuing the economic approach and rational choice theory.

Keywords Classical/neoclassical economics · Rational choice theory · Economic approach · Economic sociology

✉ Milan Zafirovski
zafirovski@unt.edu

[1] Department of Sociology, University of North Texas, Denton, TX 76203, USA

Introduction

> "The economic approach to human behavior is not new, even outside the market sector (for example, Adam Smith). The economic approach is applicable to all human beings. The rational choice approach has been refined during the past two hundred years. The rational choice model provides the most promising basis presently available for a unified approach to the analysis of the social world by scholars from different social sciences" (Garry Becker, 1976, p. 8; 1991, p. ix; 1993, p. 403)
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> "The uncritical acceptance of the rationality assumption is devastating for most of the major issues confronting social scientists and is a major stumbling block in the path of future progress." (Douglass North, 2005, p. 4)

The emergence and development of economics is that of rational choice theory–or maybe not and why is this question relevant for contemporary sociologists? The sociological rationale and potential benefit or interest of addressing this issue is three-fold. The first reason relates to rational choice sociologists and consists in investigating and estimating whether conventional, including classical and neoclassical, economics constitutes or comprises rational choice theory, and hence if they can invoke it as their respectable theoretical foundation and precursor. Thus, it may be of benefit or interest and curiosity to rational choice sociologists to investigate and estimate if this is the case or not. Presumably, if the answer is affirmative, they will have strong prior theoretical bases and precedents to ground and elaborate their theory and will be more confident in its legitimacy of transmission from economics to sociology and probably its soundness. Conversely, if the answer is negative or inconclusive, the opposite will hold for rational choice theory.

The second rationale of addressing the above question pertains to economic sociologists and involves examining and assessing whether conventional economics has pertinent elements of economic sociology, just as does classical sociology. Thus, it may beneficial or interesting and intriguing for economic sociologists to examine and asses if this is so or not. Arguably, an affirmative answer will contribute to or support their view that economic sociology represents an interdisciplinary field with origins in both classical sociology and conventional economics, and conversely.

The third and overarching intent and justification of this analysis for contemporary sociologists is to make them more familiar with or recall some of the original concept and theories of conventional economics that may bear on their present concerns, as distinct from the interpretations and reconstructions by contemporary economists and others. Especially this may be beneficial or instructive in view of that in particular contemporary economists who are proponents of the economic approach and rational choice theory often tend to make questionable interpretations and reconstructions of conventional economics, as the following analysis shows.

To develop the opening question, the dilemma arises as to whether classical political economy and/or neoclassical economics really constitutes or comprises rational choice theory in the sense of a universal market-economic conception of and an economic approach to all human beings and behaviors. This is the approach and theory that especially neoclassical economist Garry Becker (1976, 1993) espouses in economics and expands into sociology and other social sciences, along with some other economists from the Chicago School and beyond who follow or justify this path (Lazear 2000; Smith 2003; Stigler and Becker 1977; Sugden 1991). Reportedly, "Becker's research goal was to apply the standard tools of maximizing behavior to study a wide variety of topics that were not then part of the domain of economics"—ranging from addictions, crime, discrimination, marriage, divorce, and childbearing to social interactions–thus overstating the case in view of that humans "diverge from homo economicus" (Thaler 2017, p. 1802). Admittedly, these and other exponents of the economic approach expand beyond economics into sociology and all social science the "idealized model of Homo economicus even in the face of apparently contradictory evidence" (Thaler 2016, p. 1577) such as "departures from the rational choice paradigm" (Ok et al. 2015, p. 301).

By such an and expanding range the rational choice model at least in Becker's "economic approach" and linked earlier formulations in sociology (Coleman 1990) amounts virtually to a Theory of Everything–"TOE" as the physicists would say[1]—in society moving far beyond the economy and markets as its initial and proper domain (Bruch and Feinberg 2017; Ermakoff 2017; Thaler 2017). The question of imperialistic claims for rational choice as such a theory is apparently no current debate in sociology,[2] albeit its recent sociological advocates continue to implicitly claim this by stating that theirs is the only theory that involves the "development of precise theoretical models" and permits "theory-driven research" (Kroneberg and Kalter 2012; p. 85; also, Hedstrom and Ylikoski 2010). Hence, this analysis focuses on the question of whether rational choice has a theoretical foundation and precedent in and derives its legitimacy from orthodox economics as a high, indeed the highest, epistemic authority for its advocates.

Furthermore, largely following the above economic approach, recent sociological rational choice theory continues to embrace or, as its adherents state, approximate the "model of man known as Homo economicus" consistently pursuing "utility maximization", in which actors are "optimally informed rational egoists" (Kroneberg and Kalter 2012, p. 80). By contrast, the economics of information reportedly demonstrates that many results of the standard rational choice model are "not valid" (Stiglitz 2012), although sociological advocates confess of being forced to adopt its "wide version" because of evidence demonstrating the "empirical inadequacy" of its assumptions, notably Homo economicus and the "basic mechanism of expected utility maximization" (Kroneberg and Kalter 2012). Reportedly, just as the model of Homo economicus" in the economic approach, rational choice theory in sociology relies on the concept of instrumental rationality as an unrealistic ideal contrary to reality (Boudon 2011, p. 36), and the empirical grounds of its assumptions are "either dubious or lacking" (Ermakoff 2017, p. 128).

In sum, its recent sociological advocates claim that rational choice theory by appropriating, if somewhat relaxing, the model of Homo economicus from economics has "some extent transformed the mainstream of core sociological fields of study" (Kroneberg and Kalter 2012, p. 84; also, Hechter et al. 2016). In contrast, its critics

[1] I credit Prof. Lawrence T. Nichols, the main editor of the *American Sociologist* for this and subsequent observations in the introduction and conclusion.

[2] I am thanking the editor for bringing this point to my attention.

suggest that precisely because of this economic core sociology "never fully embraced the rational choice model of behavior" (Bruch and Feinberg 2017, p. 209), which belongs to "micro-level theories of (material) interests" (Lyn and Strand 2013, p. 86) along with its twin, social exchange theory (for recent statements see Kuwabara 2011; Molm et al. 2012).

In sociological terms, at issue is therefore whether conventional economics represents or contains an economic theory of society (Ermakoff 2017; Kroneberg and Kalter 2012), in particular politics and culture, including art, morality and religion. This would be in addition to and conjunction with representing the theory of the economy and markets as what neoclassical economist Walras (1926; also, Hicks 1961; Pareto 1927; Samuelson 1983; Wicksell 1934) denotes "pure political economy" and Schumpeter (1956) "market economics". One thus wonders if it is or has rational choice theory as the economics of all social action (Becker 1993; Lazear 2000), including public choice as the economics of politics (Buchanan and Tullock 1962; Buchanan 1991; Coleman 1986; Djankov et al. 2002; Mueller 1997; Olson 1971), such as elections (Blinder and Watson 2016; yet see Benabou and Tirole 2016).

Most exponents of the "economic approach to human behavior" and/or rational choice theory claim that it originates in classical/neoclassical economics, and therefore they only continue and elaborate a long-standing venerable tradition (Becker 1976; Buchanan 1991; Mueller[3] 1978; Smith 2003; Stigler and Becker 1977). They thereby attempt to found, justify, and glorify their presumably all-encompassing and unifying theory and approach, and thus "economic imperialism" intent on taking over "all the other social sciences" (Boulding 1969;, Lazear 2000; Stigler 1984; Tullock 1972). This expresses the "expanding domain" (Hirschleifer 1985; Rosen 1998) and supposed primacy of economics in, as the crowned "queen" of, the social sciences (Demsetz 1997), in spite or because of remaining a "dismal science" (Martin and Pindyck 2015). For that purpose, they invoke the authority, precedent, heritage and influence of classical/neoclassical economics, from Smith (Becker 1976; Buchanan 1991) and before (Hume, Condorcet, etc.) to J. S. Mill, Wicksell and Schumpeter (Mueller[4] 1997; Tullock 1972), most of whom many, especially economic and rational choice, sociologists know. In retrospect, this invocation of orthodox economics' authority as the foundation of rational choice legitimacy is reminiscent of the manner medieval scholastics invoked theological or philosophical authorities to legitimate their ideas.

This is a problem not only for the economists specializing in the history of economic theory since Schumpeter who was an economist-sociologist and is known and relevant, even if occasionally controversial–especially by his "purgatory" solution to the Great Depression and laissez-faire opposition to the New Deal–among economic sociologists (Collins 1997; Granovetter 2005; Smelser and Swedberg 2005; Swedberg 1991). It is also an important issue for many contemporary economic sociologists and their rational

[3] Mueller (1978, p. 1) states that "Rational Choice Theory is the meta-theory of human behavior built upon the (microeconomic) behavioral postulate that man is an egotistic, rational, utility maximizer" and adds that "public-choice theory is the specification of the Rational Choice Theory to political behavior."

[4] Mueller (1997, p. 1) lists among the "precursors" of public choice theory as an application of the "methodology of economics to the study of politics", for example, Condorcet, Mill, Wicksell, and Schumpeter, along with some other lesser or less known figures from economics. Also, Tullock (1972, p. 321) asserts that "With Hume and Smith, then, we see an economic approach to a very large part of social behavior."

choice counterparts who concur with such reconstructions of traditional economics by their colleagues from the economic approach to behavior. As noted in the beginning, it may be beneficial or interesting for economic sociologists to infer or reaffirm that their field has origins also in conventional economics, just as instructive to rational choice theorists to find that their theory or approach is largely missing in the latter. More broadly, it may be useful for sociologists to (re)refamiliarize themselves with and see that conventional economics is essentially no rational choice theory in the modern sense, and thus contradicts its adherents' assertions.

Thus, Schumpeter in his *History of Economic Analysis* implicitly casts doubt on these reconstructions in that he presents economics since Smith (and before) less as an origin and development of such an "economic approach to human behavior", i.e., "rational choice theory", than of "economic sociology", alongside "economic theory" in the sense of pure, "market economics". In essence, Schumpeter (1954) portrays this history as the dual-track evolution of economic theory defined as the "analysis of economic mechanisms", specifically markets, and "economic sociology" characterized as the "analysis of economic (and social) institutions" and their impact on the economy,[5] rather or more than of an "economic approach" and "rational choice theory."

To that extent, the latter is a non-existent ingredient, at most minor event, within this historical context and development of economics, as, for instance, Schumpeter nowhere defines economic theory as the analysis of non-economic social mechanisms and behaviors, but only of their economic forms such as real markets and objective money prices. This is contrary to the "economic approach to human behavior" alleging spurious "implicit markets" and arbitrary "imputed prices" (Becker 1976; Stigler and Becker 1977). It contradicts as well sociological rational choice theory continuing to rely on utility maximization and Homo economicus (Coleman 1990; Kroneberg and Kalter 2012) and its variant "analytical sociology" (Boudon 2011) purporting to analyze "social mechanisms" by reductively construing them as forms, extensions or equivalents of the market mechanism and the economy. In this respect, in this *History of Economic Analysis* since classical political economy and before the economic theory of and approach to "all" human beings and behaviors and the whole society is absent, and primarily "market economics" is present, in conjunction with "economic sociology" (Boulding 1969). In short, such a theory/approach is a missing link in this development of economics. What instead exists and prevails is "pure political economy" as the theory of markets, prices and wealth conjoined, as most economics classicals and neoclassicals suggest, with "social economy" as the theory of justice in wealth distribution and generally of social factors in the economy.

In sum, Schumpeter, whom contemporary economic sociologists (Smelser and Swedberg 2005) classify among the pioneers of the field, will be probably surprised if classical/neoclassical economics reconstructs itself to be such an economic approach and rational choice theory, even if himself being sometimes invoked among the

[5] And probably because of this dual history, Schumpeter became a major figure of economic theory and of economic sociology alike, simply an economists-sociologist, rather or more than "rational choice" including "public choice" theorist, as sometimes alleged by the exponents of the "economics of politics" (see the previous note), due to his theory of democracy in terms of competition. Yet, this allegation overlooks that competition is not purely economic or market phenomenon, but a general social process, what Simmel (1955, p. 60) calls an 'incomparable sociological constellation", including its various and probably more numerous non-economic forms.

precursors of the latter, particularly public choice theory as the economics of politics. The same holds if economics does not define itself as a relatively delimited and well-specified "analysis of economic mechanisms" such as markets and monetary prices, simply "market economics". This definition of economics rules out noneconomic "social mechanisms", including non-markets and non-prices qua "implicit markets" and "imputed prices", as a non-sequitur, indefinite domain and infinite scope (Arrow 1998; Boulding 1957; Coase 1998; Etzioni 1999; Hodgson 1998; Ostrom 2010). Therefore, at least Schumpeter's highly respected and influential history of economics should cause not only contemporary economists but also, being a dual economist-sociologist himself, economic and other sociologists to reconsider and suspect the "economic approach", "rational choice" reconstruction and interpretation of conventional economics.

Like their counterparts in economics, most adherents of "sociological rational choice theory" (Abell 2000; Coleman 1990; Hechter and Kanazawa 1997; Kiser and Hechter 1998; Kroneberg and Kalter 2012; Hedstrom and Ylikoski 2010; Lindenberg 1992) attempt explicitly or implicitly to base in and justify it by classical/neoclassical economics. As noted, even more recent "wider" versions of this theory (Kroneberg and Kalter 2012) continue to embrace, even if supposedly relaxing, the model of Homo economicus from orthodox economics. This holds true overall, with some pertinent exceptions involving less economistic or utilitarian and more integrative versions (Boudon 2003; Elster 1989; Ermakoff 2017; Fararo 2001).

These sociological advocates usually agree with economists expanding the economic approach that conventional economics is or has rational choice theory and thus as a respected precursor theoretically legitimates and prefigures their own version, even if this legacy is presumably less important to sociology as a whole. Likewise, they assert that economics' basic assumptions and methods—materialistic motivations (profit, wealth), self-interest/egoism, stable preferences, maximization of utility, perfect markets, equilibrium, complete knowledge and information–can serve as the theoretical and methodological foundation for rational choice or analytical sociology. They do so by extending them from economic behavior, the market and the economy to all social action and polity, culture, and society as a whole. Therefore, rational choice (or "analytical") sociologists indirectly and perhaps unwittingly contribute to expanding the scope of economics indefinitely into virtual infinity—only the sky of all human behavior or the sun of the entire society seemingly being the limit, as critical economists object (Thaler 2017)–just as do so directly and deliberately economic-approach exporters from economics. (This probably applies to "public choice" political scientists adopting the economics of politics.)

By contrast, most other economists, especially institutional, social, behavioral or unorthodox, regard traditional as well as contemporary economics as a well-defined and delimited science of economic action and economy, rather than of all human behavior and beings and the whole society. Just as does Schumpeter, they understand it as the analysis of economic mechanisms, structures, or systems, particularly of the market and prices, rather (or more) than of their non-economic and non-market forms analyzed by the other social sciences. Generally, these economists define economics as a social science with a specific domain and relatively limited scope, as distinguished from those of the other social sciences. This is economy as part of and immersed in the societal system or social structure (Acemoglu and Robinson 2008; Akerlof 2002;

Arrow 1994; Boulding 1970; Hodgson 1998; Myrdal 1953; North 2005; Stiglitz 2002), but not society as a whole.

Some economists caution or imply that economics' theory or approach is not fully applicable to and cannot account for many forms and aspects of social action and society, as well as various societies and times, contrary to the rational choice model as the "economic way of looking at behavior" (Becker 1993). Therefore, what in their view defines economics, like any other of the physical and social sciences, is its subject matter (Arrow 1998; Coase 1998; Nelson 1995; Hodgson 1998; North 1994; Williamson 2010). The latter is relatively specific and bounded—the economic component and system of social action and society–as opposed to its expanding and nearly unlimited domain and infinite scope through rational choice expansion (Thaler 2017). Conversely, its method or procedure does not define economics or sociology, instead providing an invalid definition for social and physical science (Hodgson 1998). This is contrary to the overarching economic, "science of choice" approach redefining economics by its methodology such as the "optimization apparatus" (Williamson 2002, 2010) of utility and profit maximizing claimed to be applicable beyond economic action and the economy to non-economic actions and domains of society, and as immutable in space and time to all societies and times.[6]

Consequently, many leading economists express serious misgiving or discomfort about extending conventional economics' assumptions and methodology to non-economic activities and systems through the comprehensive economic, science of choice approach (Akerlof 1990; Sen 1990; Solow 1990; Williamson 2002), while being also skeptical to its sociological extension rational choice sociology (Hodgson 1998). Moreover, some leading economists (Akerlof 2002; Arrow 1994; Kranton 2016; Krugman 1997; North 2005; Ostrom 2010; Sen 1995) warn their colleagues, above all the exponents of the supposedly universal economic model and method that they pronounce on non-economic and non-market matters from law and politics to family and religion to art and culture only on their own peril.

The above holds good especially so long as these exponents lack the requisite minimal background in or reasonable knowledge of the other social sciences, thus suggesting that their preparation and work in economics alone are not sufficient for that purpose. It implies that economists can credibly do so only to the extent they are or tend to become social-scientifically, including sociologically, minded and especially informed. Such instances are J. S. Mill, Pareto, Schumpeter, and many other prototypical classical, neoclassical and contemporary (Akerlof 2007; Boulding 1970; Myrdal 1953) economists-turned explicit or implicit sociologists,[7] not to mention their less orthodox counterparts, for example, historical and institutional economists like Weber and

[6] Conceivably, if like economics in the rational choice rendition every social or physical science defines itself by its approach supposed and expended as "all-encompassing" rather than by its specific, limited subject, each would claim or aspire to become universal, unifying, imperial—simply, the "queen"–and only valid and legitimate in relation to all others, hence making these invalid, useless, redundant! And this is what defining economics not by its limited subject matter, the economy, specifically wealth, markets and money prices, but by its unlimited "approach to all human behavior" amounts to in the social sciences.

[7] The obverse is that sociologists, particularly those economic and rational choice ones, can credibly pronounce on economic matters, including markets, only in the degree of having or acquiring a minimum of background or knowledge in conventional economics.

Veblen. Moreover, prominent contemporary economists (North[8] 1995, 2005) warn that the rational choice model may not be a really "rational choice of theory" (Abell 1992) and methodology for economics and sociology and social science in general, thus a problem in its own right rather than the best solution (Becker 1993), panacea (Lazear 2000) for all these sciences.

The paper argues that classical/neoclassical economics does not represent rational choice theory in the sense of the economics of what Parsons (1967) and Schumpeter (1991) denote social action (also, Fararo 2001; Lange 1945; Morishima 1998) and society, i.e., the "social world" according to (Becker 1993). Conventional economics constitutes no theory of and approach to a bewildering range of phenomena (Thaler 2017) as a hallmark of rational choice theory (Arrow 1998; Hodgson 1998; Sen 1995; Smelser 1992; Sobel 2005) marking its Becker-Coleman's rendition and remaining in its recent formulations (Kroneberg and Kalter 2012; also, Ermakoff 2017)–a virtue for its exponents and a vice to critics. Rather, this economics is or has primarily a definite and relatively limited theory of the economy, including the market, thus of market-economic actors and behaviors. This proposition hence supports the view of economics as a specific well-defined and delimited science of the economic system as its proper subject, and not of the whole society or social structure that is the domain of sociology and related social sciences, as expounded by most classical-neoclassical and embraced by many contemporary economists. Conversely, it does not support the claims of the exponents of the comprehensive economic approach to all human behavior and beings tracing it to, and the advocates of sociological rational choice theory justifying it by, the authority or prestige of classical-neoclassical economics.

The remainder of the paper proceeds as follows. Section I addresses the question if rational choice theory exists in classical-neoclassical economics as the science of the economy and the finding is negative. Section II reexamines the definition and conception of classical-neoclassical economics as the specific social science of wealth and market contradicting its rational choice theory reconstruction or interpretation. Section III argues and shows that classical-neoclassical economics operates with the notion of limited economic rationality in the form of rational action primarily in the economy, and not in society as a whole. The last section provides conclusion.

Rational Choice Theory in the Science of the Economy?

In particular, the following method or procedure does not define conventional economics. This is maximization such as maximizing profit by entrepreneurs and utility or satisfaction by consumers (Arrow and Scitovsky 1969; Hicks 1961; Keynes 1960; Samuelson 1983), but not by "all human beings and all human

[8] North (2005, p. 363) proposes that "it is necessary to dismantle the rationality assumption underlying economic theory in order to approach constructively the nature of human learning. History demonstrates that ideas, ideologies, myths, dogmas, and prejudices matter; and an understanding of the way they evolve is necessary for further progress in developing a framework to understand societal change." Moreover, North (2005, p. 4) suggests that the "rationality assumption has served economists (and other social scientists) well for a limited range of issues in micro theory but is a shortcoming in dealing with (macro) issues. Indeed the uncritical acceptance of the rationality assumption is devastating for most of the major issues confronting social scientists and is a major stumbling block in the path of future progress."

behavior" contrary to the economic approach. As neoclassical economists like Böhm-Bawerk acknowledge and classical sociologists such as Durkheim emphasize, what determines and subordinates the method of economic and any science is its subject matter rather than conversely. Thus, Böhm-Bawerk (1959, p. xxv) proposes that "there is no method which could in itself lead us to the truth, but conversely, each method is good, if, in given case, it leads us to the objective of science." Even for a neoclassical, though non-mathematical Austrian-school, economist Böhm-Bawerk as the hardcore adherent of marginal utility theory, the universal economic approach is essentially missing from conventional economics, and the utility-maximizing method is not universally adopted within contemporary economics, let alone all social science, and even increasingly rejected, criticized, or challenged. It is one, non-debatable thing to say that the approach or method of economics and sociology, like any science, should be scientific, as Böhm-Bawerk and, for that matter, his sociological contemporary Durkheim (1966) do. In passing, Böhm-Bawerk is probably unknown and impertinent to most sociologists in theoretical terms and probably for a good reason because he, as Schumpeter (1956) reports, seems among the least sociologically-minded eminent economists and a representative of the "economistic approach" (Smelser and Swedberg 2005). Still, at least Böhm-Bawerk can become better known and even partly pertinent to sociologists methodologically by virtue of his apparent and perhaps unexpected methodological convergence with Durkheim.

Furthermore, traditional economics is a branch of a broader social science, focusing on the economy, and not the whole of or a universal science, thus no rational choice theory since Adam Smith. No doubt, the latter is a well-known and to some degree relevant figure to especially economic and to some degree other sociologists, as Schumpeter (1949a, 60) suggests by identifying the "economic sociology of Adam Smith" analyzing the "social framework of the economic course of events", just as some later writers identify "Smith's sociological economics" (Reisman 1987). While apparently referring to the *Wealth of Nations* in the above statement, Schumpeter (1949b) also invokes Smith's earlier work the *Theory of Moral Sentiments* as among "outstanding instances of a large genus" of economic sociology, along with the "sociological work" of Pareto and some other neoclassical economists.[9] In addition, contemporary economic sociologists (Smelser and Swedberg 2005) consider Smith a major figure in early economic sociology such as the "original societal approach" to the economy (along with Montesquieu and Quesney). On the other hand, staunch rational choice sociologists (Coleman 1986) claim that the rational/purposive theory of action is "fundamental" in Smith, while their moderate counterparts (Boudon 2003) suggest echoing Schumpeter that neither the *Theory of Moral Sentiments* nor even the *Wealth of Nations* rest on rational choice theory in the sense of a general theory of instrumental rationality.

[9] In this context, Schumpeter (1949b, 167) remarks that "many economists, and especially those who define economics proper rather strictly, have done sociological work". He therefore implies that economists who do not define economics as the overarching "economic approach" to behavior or general "rational choice theory" tend to do work in economic sociology; and most of them refrain from doing the first, consequently doing the second, as shown throughout the main text.

In any event, Smith (1937) considers economics–then called political economy–a "branch of the science of statesman or legislator".[10] This hence suggests that economics forms part of a broader social/political science and does so because it is defined by its relatively limited and specific subject-matter in relation to that of the latter seen as more comprehensive and general, namely the economy versus society, including polity as well as culture. Alternatively, Smith implies that political economy is *not* the "science of statesman or legislator", i.e., of politics, law, and society, thus no public choice theory (Sen 1995) in the sense of an application of economics' methodology of maximization to politics, generally no rational choice theory cum economics of society and the "economic approach to all human behavior". Smith evidently does not say that economics is the science both of the economy and the state, law, and all society, but only of the first as its sole and proper subject-matter, while treating the second as the domain of another broader science, including "economics of religion" (Rothschild 1994).

In addition to and conjunction with the above, conventional economics is often regarded as a branch of moral-social science, as well as of moral philosophy. Thus, Smith's political economy presented in the *Wealth of Nations* represents part or sequel of his moral as well as political philosophy as mainly expounded in the *Theory of Moral Sentiments* (Bhagwati 2011; Sandel 2013; Sen 1995; Shiller and Shiller 2011). After all, Smith began and remained officially as professor in moral philosophy both preceding and at the time encompassing and engendering (Bhagwati 2011) political economy as the original name for economics. Evoking Smith's example, many later economists with whom sociologists are generally familiar, including J. S. Mill, Marshall, and Keynes, consider economics a (branch of) "moral science" (also, Bhagwati 2011; Boulding 1969), and also part of a broader scientific discipline Comte designates, influencing many of them, as "sociology" (also, Mises 1960; Wieser 1967), i.e., of social science in general. Alternatively, this implies that they, like Smith, do not consider economics the science of both the economy *and* morality and related elements of society, but only of the economic system as its sole or proper subject and its delimited scope, while treating non-economic phenomena as the domain of a broader or distinct moral and social science. If so, then this rules out construing their versions of economics, like that of Smith, as the economics of all society, and thus rational choice theory its adherents are prone to do.

Moreover, economics is sometimes a branch of sociology understood as a more general social science, rather than being or claiming itself to be the latter. Directly or indirectly following Comte's treatment of political economy as part of sociology as the science of society, various classical, neoclassical, and contemporary economists treat economics in this way since his contemporary follower and critic J. S. Mill (Bladen 1941; Hayek 1950; Schumpeter 1954). Although probably less than Smith, the latter is also known and to a degree relevant to economic and other sociologists, as Durkheim suggests by including J. S. Mill among prior "sociologists" along with Comte–who reportedly over-influenced him–and Spencer, and even in some recent views "a passable candidate as a 'founding father of English sociology' "(Kumar 2001). In particular, Schumpeter (1950) estimates that J. S. Mill allocated "about one-third" of his

[10] The paper does not give citations in the main text for Smith and other classical and neoclassical economists as well as classical sociologists like Comte assuming that their theories and works are well-known to the reader (plus in public domain) and for economizing on space but provide them in the notes.

major economics work (*Principles of Political Economy*) to "Economic Sociology." In turn, some rational choice sociologists (Coleman 1986) assert that the rational-purposive theory of action is as "fundamental" in J. S. Mill as in Smith.

Following Comte, J. S. Mill (1968) considers political economy a branch of the "science of social economy" as a broader discipline that is, by analyzing "man in the social condition". The "science of social economy" seems essentially identical or compatible with the Comtean project of sociology, including his underlying concept of economic sociology as the conception and analysis of the "social economy" within and conditioned by society. Furthermore, Schumpeter (1950) by the above estimation suggests that even Mill's political economy understood as economics comprises a significant portion of "Economic Sociology," along with standard economic theory.

Smith's earlier follower (Baumol 1999; Keynes 1960; Samuelson 1997; Schumpeter 1954) J. B. Say anticipates J. S. Mill in this respect. In terms of sociological relevance, while almost unknown or uncited in sociology Say is potentially relevant to sociologists by probably belonging, along with Smith, to the "original societal approach" to the economy and hence economic sociology (Smelser and Swedberg 2005), particular the sociology of entrepreneurship (Ruef 2010). Relatedly, Say is indirectly relevant especially to economic sociologists by his "social economics" (Forget 1999). Thus, Say proposes that the "proper name" for economic science should be "social economy" instead of "political economy." The rationale for this is the fact that its subject matter represents the economy of society, and not the latter as a whole, thus not being rational choice theory cum economics of society, though its advocates may interpret the "economy of societies" as such.

Furthermore, neoclassical economist Jevons probably–and for many surprisingly given his utilitarianism or hedonism–is the first to use explicitly the expression economic sociology and thus, if this is correct, precedes Durkheim and other classical sociologists, although the concept is clearly present in and likely taken from Comte's (1983, 274) idea of the "social economy". With regard to sociological relevance, Jevons seems hardly known or rarely mentioned in sociology, albeit Parsons (1935) in his early writings on "sociological elements" in economics points to his "discovery of the principle of marginal utility" connected with "psychological hedonism" that he inherited from Bentham, as do some later sociologists (Swedberg 1998; Yonay 1998). At least Jevons' probable invention of "economic sociology" makes him relevant or interesting and intriguing to contemporary economic sociologists (Swedberg 1998). Specifically, by formally inventing the term and proposing economic sociology within economics Jevons seemingly qualifies as partly belonging to the "return to societal approach" (Smelser and Swedberg 2005) to the economy, as even does by some, even if atypical, substantive statements below. By contrast, except for the latter, by most of his substantive writings expounding pure—technically marginal-utility and generally, utilitarian–economics Jevons mostly belongs to the marginal, neoclassical "return to economistic approach" (Smelser and Swedberg 2005).

At any rate, Jevons (1965) pleads that one can "rescue" (sic) economic science from its "confused" state "only by subdivision", namely by acknowledging "a branch of Economic Sociology" ("together possibly with two or three other branches of statistical, jural, or social science"), but no economics of society and thus rational choice theory. While not defining it explicitly, Jevons understands economic sociology as the study of the dependence of the economy and markets on social, including political, processes—and not as "economics of society" as the word "economic" might convey–by adopting what he interprets as Spencer's and in extension Comte's definition of sociology as the "Science of the Evolution of Social Relations". This seems plausible judging by Jevons' substantive statements apparently pertaining to economic sociology. Thus, he acknowledges that some market transaction must be solved on "other than strictly economical grounds", as by indeterminate bargaining involving knowledge, "feelings of justice or of kindliness" and conceivably power, and in particular that the "future" supply and demand and their influence on the market depend on present "political information". Conversely, he does not state nor even imply that political processes are market-like phenomena, thus proposes no public choice theory as economics of politics.

Formally, Jevons classifies economic sociology into the "various sciences" of economics, together with the "mathematical theory of economics", "systematic and descriptive economics", and "fiscal science", but not conceivably "economics of society", thus rational choice theory being a missing link in this classification. At this juncture, Schumpeter (1954) in essence adopts Jevons' classification of economics by incorporating "economic sociology", alongside "pure" economic analysis as "market economics" and some other branches (including economic history and statistics), but not economics of society qua rational choice theory despite its advocates invoking him as the "public choice" pioneer.

Moreover, Jevons' successor Wicksteed elaborates and reinforces his predecessor's formal invention and partly substantive formulation of economic sociology. With regard to sociological relevance, while Wicksteed seems even less known or cited in sociology, including Parsons' (1935) early economic writings, than Jevons, some contemporary economic sociologists suggest that Wicksteed's statements—which they cite–on the market and society continue to be "relevant today" (Lie 1997) for the sociology of markets. In this respect, Wicksteed to some extent belongs to the "return to societal approach" (Smelser and Swedberg 2005) to the economy, specifically the market. More broadly, Wicksteed is relevant to sociology by reintroducing–after J. S. Mill's introduction of–Comte to neoclassical economics by even opening his major work with citations from the latter. Notably, Wicksteed (1933) infers that economics must be the "handmaid of sociology" (also cited in Lie 1997), which must be striking and perhaps shocking for economists such as Becker et al. and rational choice sociologists like Coleman, who state or imply precisely the opposite through expanding and embracing the economic approach to social action and society. Wicksteed[11] draws this inference from what he implies to be the social setting of the economy, in particular the market that consequently "never has been left to itself" and even "never must be" (also cited in Lie 1997). Furthermore, Wicksteed cites and uses in original French Comte's statement that "economic analysis proper" is part of "sociological analysis"[12] as the prologue and credo of his main work (the *Common Sense of Political Economy*), thus reintroducing sociology into neoclassical economics.

[11] Wicksteed (1933, p. 784) complete citation is as follows: "The better we understand the true function of the market in its widest sense, the more fully shall we realize that it never has been left to itself, and the more deeply shall we feel it never must be. Economics must be the handmaid of sociology" (also fully cited in Lie 1997, p. 354).

[12] Comte's statement is the following which Wicksteed (1933, p. 1) cites from the French original: "It does not seem to me that economic analysis proper ultimately should be either conceived or cultivated, dogmatically or historically, apart from the whole of sociological analysis, static or dynamic" (*L'analyse économique proprement dite ne me semble pas devoir finalement être conçue ni cultivée, soit dogmatiquement, soit historiquement, à part de l'ensemble de l'analyse sociologique, soit statique, soit dynamique*).

Similarly, Pareto (1963), a neoclassical economist-turned sociologist become known and even (in)famous and relatively relevant to sociologists since Parsons (1967) introducing him by the *Structure of Social Action*, characterizes economics as one among the various "specialized disciplines" studying social actions and part of sociology described as their "synthesis" by being a general science of society[13] and having greater "complications". Relatedly, he treats the economy as a constitutive component of the "sociological system" as "much more complicated" by comprising not only rational factors like "interests and appetites" only found in the first, but especially non-rational ones such as sentiments and their spurious rationalizations, i.e., "residues and derivations" (also, Millikan 1936; Morishima 1998; Parsons 1967; Schumpeter 1956; Smelser 1997; Wrong 1979). Consequently, he infers that the "study" of many economic facts presupposes the "aid of sociology". This prima facie contradicts the economic approach to behavior that claims precisely the opposite in an even more extended and categorical fashion to encompass Pareto's entire "sociological system" in the sense of "all" non-economic behaviors and systems to be studied by such a method.

The preceding applies, with some qualifications, to certain members of the so-called Austrian school of neoclassical, more precisely marginalist, economics. Generally, this school is known and in part relevant to sociologists primarily through the theoretical, methodological or professional connections of some of its members, above all Schumpeter, as well as Wieser, Mises and in part Hayek, with Weber and his students like Schutz (Prendergast 1986; Swedberg 1991, 1998). Thus, Schumpeter (1949b) classifies Wieser's last major writing (theory of power) among "outstanding instances" of economic sociology and more broadly "sociological work". In particular, the "tradition of Austrian economics" receives occasional mention in contemporary economic sociology, especially sociology of entrepreneurship (Granovetter 2002). On the other hand, contemporary economic sociologists classify the founder of Austrian economics, Menger into the category of the marginalist "return to economistic" (Smelser and Swedberg 2005) or "abstract-deductive" (Granovetter and Swedberg 1992) approaches, thus as not relevant to the field characterized by a "social perspective on the economy". Overall, Austrian economics, notably Schumpeter's theory of entrepreneurship and development, is relatively known to many, especially Weberian, sociologists (Collins 1997; Swedberg 1998) and in part relevant to contemporary economic and other sociology.

In any event, some members of the Austrian school follow Weber's (1968) concept of what he outlines and his first English translator, neoclassical economist Knight (1958) denotes as "sociological economics" (also, Hodgson 2000; Lewin 1996; Solow 1990) or "social economics" (Schumpeter 1954; Swedberg 1998). This primarily holds for Wieser and Mises, in addition to, of

[13] Pareto (1963, p. 3) notes that "human society is subject of many researches. Some of them constitute specialized disciplines law, political economy, and the history of religions. To the synthesis of them all, which aims at studying human society in general, we may give the name of sociology." He adds that while the "complications in sociology are greater still and by far. There is in addition to logical conduct, which is alone envisaged in economics, one has to deal with non-logical, and in addition to logical thinking, with derivations" (Pareto 1963, p. 1733).

course, Schumpeter whom Weber probably influenced most strongly (Swedberg 1991), and secondarily or hardly for Menger and Böhm-Bawerk, as well as Hayek. Thus, writing after Menger, they view economics as what Wieser (1967) calls "only one phase of social science", an "advance guard of sociology", and a special part of the "main body of the theory of society". Mises (1960) condenses the later Austrian view (minus Hayek 1955) by describing economics as a "branch of a more comprehensive science of sociology" thereby understanding it in the sense of Comte's general science of society.

Classical-Neoclassical Economics–the Social Science of Wealth and Market

In particular, traditional economics constitutes the concrete and relatively limited science of wealth rather than of all social actions, thus excluding from its domain those not involving this pure and scarce economic element/resource and its correlates markets, monetary income, prices and costs, material wants and goods, etc., and to that degree being no rational choice theory. By stark contrast, the latter trespasses this bounded domain[14] of its predecessor to expand it beyond wealth and scarcity of economic resources, as well as its market-money covariates, to encompass their effective opposites or extra-economic. It thus makes what Schumpeter (1991) might call "extra-empirical" extensions by dubious analogies like "psychic" income, costs and benefits", "scarcity" of non-economic phenomena, "implicit markets", "shadow imputed prices", spurious consumption and production/investment, and durable and consumable "goods", including children, parents, and spouses.

In this respect, rational choice theory not only violates the well-defined domain and delimited scope of classical-neoclassical economics while claiming to be based on and justified by the latter. It also does violence to or makes ridicule the classical-neoclassical subject-matter of wealth and its scarcity, markets and monetary prices, incomes and costs, material wants[15] and goods, and related economic variables, processes and outcomes by making them virtually meaningless through such non-economic constructs to the point of absurdity or frivolity, say, "psychic wealth?," religious "economies", "markets", "capital", etc.

Thus, classical political economy and neoclassical economics alike represent the theory and analysis of wealth and thus the aggregate of economic resources or material goods as its exclusive, proper, or prime subject matter and its well-defined and delimited scope, as shown by a sequence and continuity from Smith and Mill to their neoclassical successors. In Smith's words, the "inquiry into the nature and causes of the wealth of nations" —a concept Keynes (1936), Schumpeter (1951), Robbins (1953) and contemporary economists (Frederick et al. 2002; Johnston 1997; Landes 1998; Manuelli and Seshadri 2014; Olson 1996) adopt and analyze –is the foundational

[14] Becker (1976, p. 4) claims that the "definition of economics in terms of material goods is the narrowest and the least satisfactory. The definition of economics in terms of scarce means and competing ends is the most general of all."

[15] Cournot (1960, p. 14) registers that the "field of Political Economy" is traditionally restricted to the "material wants of mankind."

subject matter and original scope of political economy. This includes the increase of national (and individual) wealth and consequent power as its chief purpose.[16]

Alternatively, Smith does not propose that political economy as economic science is, say, also an "inquiry into the nature and causes of the non-wealth (i.e., non-economic) resources and dimensions of nations", for example, their political structure, law, ideology, morality, religion, art, science, culture, civil society, etc. In that sense, it is no public choice theory, economics of law, economics of religion, economics of art and culture, and generally the rational choice model of society and the economic approach to human behavior, contrary to the assertions or interpretation of the latter's exponents claiming Smith as the pioneer or precursor (Becker 1976; Buchanan 1991; Mueller 1993). At most, a single, partial exception involves Smith's anticipation or implication of the "economics of religion" (Anderson 1988; Ekelund et al. 2002; Iannaccone 1998; Iyer 2016). Still, even his religious "rational choice theory" is qualified (as well as ironical according to Rothschild 1994) as mostly a history of especially Christianity (the monopoly Catholic church and plural Protestant sects) and an Enlightenment-based desideratum for "pure, rational religion" never established in reality, by being inspired by and building on Hume's *History of England* that he greatly admired.

In Smith, political economy is a "branch" of broader political-social science, as well as placed within the framework of and emerging from moral philosophy (Bhagwati 2011; Sandel 2013; Sen 1995; Shiller and Shiller 2011), as in his *Theory of Moral Sentiments*. Counterfactually, if economics were something like the "inquiry into the nature and causes of the wealth and non-wealth resources and dimensions of nations", i.e., the rational choice theory of society and the economic approach to all human beings and behaviors, then it would not be a "branch" of this broader social science (plus moral philosophy). It would thereby make social science redundant and non-existent or devaluated and relegated to an inferior type of scientific theorizing, knowledge and method, simply epistemics (Shackle 1972), as precisely do contemporary economists expanding the economic model of society. By relating the "riches and power of nations", as in Smith's specification of its purpose, political economy is specific in the modern sense of an analysis of the interrelations between wealth/market and the polity/state (Acemoglu 2005). Conversely, it is not one-sided economics of politics construed as a marketplace, so far from being public choice theory premised on the notion of the exclusive pursuit of narrow self-interest, i.e., utility-maximizing (Mueller 1997), embodied by homo economicus (Sen 1995; Tetlock et al. 2017; Thaler 2016) as a purely selfish, materialistic "model of man" (Simon 1982).

In Durkheim's terms, like with respect to social institutions, such "genesis" of economics in Smith (and before) determines and predicts its "evolution" and "functioning", indicating path- or history-dependence (North 2005; also, Benabou and Tirole

[16] Smith (1937, p. 333) states that the "great object of Political Economy in every country is to increase riches and power of this country." He elaborates that "Political Economy proposes two distinct objects: first, to provide plentiful revenue or subsistence for people; second, to supply the state or commonwealth with revenue sufficient for public services. It proposes to enrich both people and sovereign" (Smith 1937, p. 375). Keynes (1930, p. 154–62) uses Smith's term the "wealth of nations" and proposes that it is "enriched" during (profit) inflation, however, regarded as "almost certain to bring about a more unequal distribution of wealth– unless its effects are balanced by the direct taxation of the rich." Schumpeter (1951, p. 1) also evokes Smith and especially Ricardo and Marx by acknowledging that the "distribution of wealth is important for determining values and shaping production (for) a country with one and the same amount of general wealth may be rich or poor according to the manner in which that wealth is distributed [sic]."

2011), though interfered with by what he (plus Ricardo) and Mill call some "disturbing factors" such as its rational choice extensions into the other social sciences. In short, as Mill (1968) puts it, its "subject is Wealth" only and economics develops and remains the science of "solely in acquiring and consuming wealth"[17]— nothing less, but nothing more.

In the words of his follower and "last important" classical economists (Stigler 1957), Cairnes[18] (1967), wealth represents the "proper and exclusive subject-matter of Political Economy" hence rendered a specific social science. Incidentally, Cairnes is virtually unknown and hardly mentioned in sociology, although he perhaps comes most closely to a conflict or dissenting classical economic theorist (excepting Marx), with even Parsons {1935) omitting to mention him alongside Smith, Ricardo and Mill. Still, Cairnes' final rendition of classical political economy is potentially relevant or interesting to economic sociology by certain substantive statements noted below. In particular, Cairnes seems relevant to the institutional or political-economy version of economic sociology by virtue of being the probably first classical economist to disassociate economics from the laissez-faire doctrine by, as Keynes (1972) puts it, undertaking "a frontal attack" on the latter. With this in mind, Cairnes by his empathically specified "proper and exclusive subject-matter" rules out "non-wealth" as not belonging to it and irreducible and not to be distorted into "wealth" and related economic categories—a reduction and distortion that classical political economy and even neoclassical economics decries or avoids. This subject matter therefore rules out economics as the science of phenomena not involving wealth and in that sense rational choice theory.

On this account, the domain and scope of classical political economy, just as neoclassical economics, is well specified and delimited by wealth. What Mill calls the "desire for wealth" is a primary materialistic end (along with its covariate profit), and wealth a scarce economic resource or means in relation to the "plurality" (also, Akerlof 2007; Etzioni 1999; Frederick et al. 2002; Sen 1995; Stiglitz 2002) of human ends, as well as social conditions and historical conjunctures (also, Giddens[19] 1984). Notably, Cairnes (1965) implies this societal relativity of the scarcity of wealth and thus of economic resources by observing that the "almost infinite" (also, Simon 1982) numbers of "desires, passions and propensities" that influence "mankind in the pursuit of wealth" and generally the "motives and principles of action" originate, evolve and change in the "progress of society."[20] Conversely, the scope of classical political economy does not consist of the category of "non-wealth" as a non-materialistic desire

[17] Mill (1968, pp. 138–40) expounds the opinion that economics "considers mankind as occupied solely in acquiring and consuming wealth" and that "there are also certain departments of human affairs in which the acquisition of wealth is the main end. It is only of these that Political Economy takes notice."

[18] Cairnes (1965, p. 36) elaborates that "it is the constant relations in economic phenomena that we have in view when we speak of the laws of the phenomena of wealth; and in the exposition of these laws consists of science of Political Economy."

[19] Giddens (1984, p. 35) implies that economic scarcity is socially and historically relative rather than universal by objecting that "there has been a tendency in economics to read back into traditional cultures concepts that have meaning only in market economies", such as "struggles for scarce resources" deemed "both logically wanting" and "empirically false."

[20] Except for these implications, however, this societal-historical basis of relative scarcity—i.e., the relativity of wealth abundance or rarity according to various societies and times–is overlooked or downplayed in traditional economics and even more in rational choice theory instead assuming absolute scarcity socially and historically isolated and independent.

and a non-material resource lacking "scarcity" relative to human desires and social-historical settings, contrary to rational choice theory that redefines and expands economics' domain (Hirschleifer 1985; Lazear 2000) to encompass also supposedly "scarce" *non*economic means in relation to ends (Becker 1976).

For example, Becker (1976, p. 4) contends that the definition (by "scarce means and competing ends") "defines economics by the nature of the problem to be solved and encompasses far more than the market sector or "what economists do". Scarcity and choice characterize all resources allocated by the political process (plus) the family (and) scientists (etc.). This definition is so broad that is often a source of embarrassment (and) usually is qualified to exclude most nonmarket behavior," signifying all economic and noneconomic resources or means. If so, then a rational scientific action is precisely to extinguish rather than regenerate such a "source embarrassment" by defining economics in a more accurate, specific and precise manner to exclude "scarce" non-economic means as a dubious presumption and "nonmarket behavior" and retain wealth as truly scarce and economic resource and the market. On this account, even orthodox economics is more sociologically minded and historically realistic—as with Cairnes (1965) linking the desire and pursuit of wealth with the condition and development of society—than rational choice theory, although with some "social economics"[21] qualifications yet retaining the standard economic (utility maximization and equilibrium) approach as an apparent panacea (Becker and Murphy 2000).

More precisely, traditional economics is the study of the production, distribution and consumption of wealth as its well-defined domain and relatively bounded scope. For instance, Smith's early most eminent (as described by Ricardo 1975) European follower J. B. Say (1964) proposes that political economy studies the process of producing, distributing, and consuming wealth, which hence excludes that of non-wealth and other non-economic processes from its subject and scope thereby well-defined and relatively limited. Even more explicitly than Smith, Say, as noted, suggests that the "proper name" of economic science is not as much "political economy" as is "social economy" by virtue of the existence of the "economy of society" rather than in isolation from the latter. Say's "social economy" precedes Mill's "science of social economy" and other conceptions of social economics (Akerlof 2002; Hodgson 2000; Knight 1958; Lewin 1996; Reisman 1987; Solow 1990; Weiller and Homme 1958) or economic sociology (Boulding 1970; Schumpeter 1954) within conventional and contemporary economics. A certain difference is that, unlike his predecessor, Mill incorporates "political economy" into the "science of social economy" he deems generally equivalent to Comte's "sociology".

[21] Becker's "social economics" (Becker and Murphy 2000) rather than the "economic approach to human behavior" may turn out to be his most enduring or substantive contribution to economics and (economic) sociology. The "economic approach to human behavior" appears as a formal extension of elemental economic models and principles ("economics 101") to non-economic domains providing a few, if any, substantially pertinent or new insights, but analogies and metaphors treating spouses and children as investment and consumption "goods", altruism as inverted egoism (Elster 1998; Etzioni 1999), addictions as "rational", religious as "economies", religious beliefs as "capital", etc. On account of such analogies, the "economic approach to human behavior" is just a "rational choice" equivalent of the old organismic sociology treating society as an organism, its institutions as organs and cells, etc., learning nothing from the latter's failure and discredit in social science. The long-term status of the "economic approach to human behavior" in social science hence may repeat the adverse fate of organismic sociology.

In turn, such a science is not, or does not lead to, rational choice theory. This is because it considers the economy to exist and operate within and as an integral element of society (the "economy of societies"), a key premise of social economics or economic sociology. Alternatively, it refrains from reducing the second to the first and the market, a reduction typifying the economic approach, including economics of politics (as objected by Friedman 1996; Green and Shapiro 1994; Miller 1997; Ostrom 2010; Sen 1995) that its dissolves into the political marketplace (Buchanan and Tullock 1962; Buchanan 1991; Hardin 1997; Mueller 1997). In sum, Say's rendition of economics as "social economy" represents the study of the production, distribution and consumption of wealth, treats the latter and the economy overall as existing and immersed in and an intrinsic part of society. It consequently prefigures social economics or economic sociology, and instead rules out rational choice theory with its addition of non-wealth processes to its domain and opposite society-as-market approach.

Therefore, building on Smith, Say in a way provides a canonical, relatively bounded definition of economics during its classical as well as later stages. Thus, following Smith and Say, Senior (1951) and Mill (1884) define political economy as the science treating of the "Nature, Production and Distribution of Wealth", and of the laws regulating the "production, distribution and consumption of wealth",[22] respectively. Alternatively, neither defines it as the science of the nature and operation of politics and law, religion and morality, art and culture and other non-wealth and generally non-economic elements and laws of society, and in that sense as public choice theory, economics of religion, and other rational choice theory. Mill (1884) condenses the classical view when noting that the writers of Political Economy only investigate the "nature of Wealth and Laws of its production and distribution"—i.e., this is what they "do" contra Becker[23] (1976). Mill thus implies they do not examine the nature and laws of non-wealth phenomena and in that sense do not construct rational choice theory.

For instance, Ricardo, the probably "ablest" in Parsons' (1967) view (also, Samuelson 2001) among the classical economists, contends that the "main problem" of political economy is precisely determining the "laws" regulating the distribution of wealth among the "various classes" of society (also, Bowles and Gintis 2000; Keynes 1930; Piketty 2014; Samuelson[24] 2004; Schumpeter 1951; Sen 1995; Stiglitz 2002). As regards sociological relevance, Ricardo is relatively known and partly relevant—though probably less than Smith and Mill– among sociologists since Parsons' (1935) identification of and emphasis on some "sociological elements" in Ricardian political economy such as "habits and customs of the people" and even some earlier analyses of its "sociological implications" (North 1915). In addition, contemporary economic sociologists

[22] Mill (1968, p. 133) elaborates describing political economy as the "Science which treats of the production and distribution of wealth so far as they depend upon the laws of human nature or the Science relating the moral and psychological laws of production and distribution of wealth."

[23] Becker (1976, p. 3) claims that the "definition of economics in terms of material goods [wealth] is the narrowest and the least satisfactory. It does not describe adequately either the market sector or what economists "do", yet Mill's statement suggests that it is precisely what they do–or at least classical and neoclassical economists did–except for Becker et al. as a relative minority even within mainstream contemporary economics.

[24] Even a typically pure economist like Samuelson (2004, p.114) objects that mainstream contemporary economists "have insufficiently noticed the drastic change" in "inequalities [of wealth and income] among different U.S. classes."

note Ricardo as an instance of the “original economistic” (Smelser and Swedberg 2005) and “abstract-deductive” (Granovetter and Swedberg 1992) approach. In turn, Ricardo elaborates that the “laws of production and distribution of wealth” should remain a “separate and distinct investigation” for economic science regardless of whether it is designated “political economy” as by Smith or “social economy” as a “larger inquiry” in Say’s sense of investigating the “economy of society”. As Ricardo (1975, p. 33) puts it, “even it should be possible to give the name of Political economy to the larger inquiry (social economy), it would be necessary to reserve for separate and distinct investigation the laws of production and distribution of wealth”.

While cautioning that the theory of production and that of distribution cannot be separated, Wicksell (1934) within his “social economics” points to the “social problem” of distribution of wealth as comprehending the “question of property rights of the various factors of production”. In sociological relevance terms, Wicksell is probably unknown and virtually never mentioned in sociology, so that even Parsons (1935) in his early writings on “sociological elements” in economics omits his theory, including “social economics”. Still, Wicksell’s conception and analysis of the “social problem” of wealth distribution and more broadly “social economics” is potentially relevant or interesting to economic sociology in its institutional or political-economy version, in particular the sociology of distribution and redistribution (Shanahan and Tuma 1994). In any event, by the “social problem” of distribution, Wicksell identifies an element of social economics identical to that which Schumpeter (1949a, b) identifies (i.e., private property) in Smith’s “economic sociology.” This is what Wicksteed (1933) also implies by stating that in economics the “only one” law and theory of wealth distribution is that of the market, thus ruling out non-wealth and non-market sectors from its subject and scope or dissolving them into material “goods” and economic “markets”.

Moreover, J. B. Clark (1961) suggests that theoretical economics represents the “philosophy of wealth”–converging with Simmel’s (1990) sociological “philosophy of money”–i.e., of its production, distribution and consumption, and related economic laws (Duke 1981). In terms of sociological relevance, like Wicksell, J. B. Clark is hardly known and noticed in sociology, with even early Parsons omitting his theory in the context of “sociological elements” in economics. Still, with ideas such as “sociological evolution” as the basis for creating divisions in economics, the dependence of labor, capital and other production factors on “social organization” and market value as a “social phenomenon” (Clark 1899), his theory could be potentially relevant or interesting to contemporary economic sociologists. In any event, J. B. Clark by suggesting the above specifies a well-determined domain and finite scope for economics versus all or most, including noneconomic, human actions and “scarce” means instead characterized with indeterminacy and infinity in this respect. By contrast, Robbins (1952, p. 145) pre-formulates this “rational choice” assumption of domain indeterminacy and scope infinity, by stating that “there are no economic ends, but only economic and non-economic ways of attainment of given ends.” This implies that all such means are “scarce” and thus extends the notion of scarcity conventionally attributed only or mainly to wealth as a finite domain beyond the latter into virtual infinity and almost devoid of meaning[25] (Hirschman 1984)–and if all resources and means are scarce, then perhaps none is.

For illustration, Jevons (1965) proposes that (the theory of) political economy should adopt an "exact theory of consumption" of wealth as a point of departure and thus become a "science of human wants and their satisfaction" on the ground that the process of consumption is the "sole end of production." His contemporaries Menger, Walras, Pareto, Wicksell and Marshall also argue this, just as do Smith, Say and Mill before; while alternatively, Jevons does not propose that it is the science of "all" human processes beyond the consumption and production of wealth.

Similarly, Wicksell (1934) suggests that Political Economy as a "practical science" represents the "theory of the way of satisfaction of human needs" through the production and consumption of wealth, resulting in the "most possible satisfaction to society as a whole". In a similar vein, Walras (1926) denotes the latter the "greatest possible satisfaction of wants", Menger (1950) the "fullest possible satisfaction of human needs", and Pareto (1927) the "maximum of satisfaction" for the "members of the community". Following Jevons and Walras, Wicksell regards the "general theory" of wealth consumption, by virtue of the latter being the "end of all economic activity," as the logical starting point of economics. He proposes no economistic theory of social processes as its premise, contrary to what the proponents of the economic approach and sociological rational choice theorists do, even if with late forced relaxations of what they also embrace as the canonical model (Ok et al. 2015) of homo economicus and utility maximization (Hedstrom and Ylikoski 2010; Kroneberg and Kalter 2012).

Marshall condenses the above view, just as resolves the opposition between classical cost of production and neoclassical marginal utility theories of value/prices. In respect of sociological relevance, Marshall is relatively well-known and to some extent relevant among especially theoretical and economic sociologists since Parsons (1931, 1932) introduced him to sociology in the *Structure of Social Action* and even earlier writings focusing on "sociological elements" in Marshallian economics. In addition, Schumpeter (1941) identifies in Marshall's main work (*Principles of Economics*), along with the "core" economic theory, "an economic sociology of 19th century English capitalism". In turn, contemporary economic sociologists implicitly include Marshall– as a neoclassical contemporary of Menger they include explicitly—into the neoclassical "return to economistic approach" and by including the first into the "intellectual tradition" of mainstream economics (Smelser and Swedberg 2005). For his part, Marshall states that economics constitutes on the "one side a study of wealth" and "on the other, and more important side, a part of the study of man" (Marshall (1961); also, Reisman 1990), thus following Mill in both respects and evoking and mentioning Comte in the second. Marshall defines economics as the "study of mankind in the ordinary business of life", only of that "part of individual and social existence" in the closest connection with the "attainment and use of the material requisites of wellbeing" (also, Benjamin et al. 2014), simply wealth as such a requisite (Friedman 2011; Phelps 2007; Sen 1995). In turn, he recognizes that noneconomic or nonrational, "nonselfish

[25] No wonder, Hirschman 1984, 93) objects that "because the "scarce resource" model has long been dominant, it has been extended (by the economic approach] to domains where its validity is highly dubious." For example, he adds that "once love and particularly public morality is equated to a scarce resource, the need to economize it seems self-evident. Yet a moment's reflection is enough to realize that the analogy is not only questionable, but a bit absurd–and therefore funny" (Hirschman 1984, 93).

motives" and similar preferences are also important in this respect (Bowles and Gintis 2000).

Conversely this signifies that economics is not a "study of mankind in all the business and aspects of life", total "individual and social existence", and both the material and non-material "requisites of wellbeing", contrary to what rational choice theory claims to be and economists exporting the economic approach and their sociological colleagues importing it do. In rational choice terms, Marshall's rendition of economics is the study only of that part of human behavior comprising activities and processes associated with wealth, and solely of those "scarce" means that are economic and so alone have genuine, meaningful scarcity, in contrast to non-economic ones having no such an attribute. This what his focus on the "material requisites of wellbeing" indicates, a conception that his neoclassical students adopt and elaborate, including Pigou's (1960) "economics of welfare" and J. M. Keynes' (1960) macroeconomics as well as the political economy of his father J. N. Keynes (1955). In passing, like Marshall since Parsons, Keynes the son has become familiar to most and relevant to many, especially economic and political, sociologists (Abbott 2005; Babb 2007; DiMaggio 2005; Korpi 2003; Smelser and Swedberg 2005), unlike other Marshallian economists, so that his father is virtually unknown or unnoticed in sociology, while Pigou receives only occasional notice (as in Rambo 1995). In sum, like all major classical-neo-classical economists, Marshall considers wealth in the sense of an aggregate of economic, "material requisites of wellbeing"—and not their non-economic, non-material forms—the sole and proper subject of economics, as do his disciples, including Pigou and J. M. Keynes.

More formally, Leon Walras (1926) classifies economic science into three "parts" termed "pure political economy", "applied political economy", and "social economy." With respect to sociological relevance Walras, while for Schumpeter (1954) the "greatest of all economists", is virtually unknown or unnoticed in sociology, so that even early Parsons is apparently unfamiliar (even though being proficient in French as in German) or unimpressed with Walrasian economic theory and even "social economy" and thus omits the latter from "sociological elements" in economics. However, among later sociologists Bourdieu (1998, 95) singles out the "Walrasian myth of "pure theory" "which he regards as originating economics' "arbitrary opposition between the specifically economic logic–based on competition and promising efficiency—and social logic subject to the rule of equity", apparently referring to Walras' distinction between utility and justice noted below (although citing his father Auguste). Especially Walras by his "social economy" or "socioeconomics" (Burgenmeier 1994) could become more relevant or better known to contemporary economic sociologists. Still, the latter would probably include Walras into the marginalist "return to economistic approach" (Smelser and Swedberg 2005) by analogy with the inclusion of Menger in view of both being near-simultaneous founders (Merton 1968) of marginal-utility economics (along with Jevons in Parsons 1935; Schumpeter 1954).

In any event, Walras notably defines each part of economics in terms of wealth as a sole scarce resource in contrast to its non-wealth, noneconomic opposites. The latter include what he calls "moral relations" and their law of "good or justice" that rational choice theory instead, like other noneconomic phenomena, including politics and religion, explicitly or implicitly lumps together under "scarce means" such as "scarcity" of political power, "religious capital", etc.). He defines pure political economy as the relatively limited "theory of social wealth", in conjunction with the "theory of the determination of prices under a hypothetical regime of absolutely free competition" (also, Akerlof and Yellen 1987; Arrow and Debreu 1954; Bowles and Gintis 2000; Hicks 1961; Samuelson 1983; Stiglitz 1979). He defines social economy as the "theory of distribution" and implicitly consumption of social wealth[26]–note the word "social" indicating what Parsons (1935) would call a case of "sociological elements" and applied political economy as the "theory of production' of it. social wealth", and.

Wicksell (1934) follows Walras and hence treats wealth it as the sole truly scarce resource and excluding what is non-wealth from such resources, thus attributing scarcity only to "economic means" and not to "noneconomic means" (Robbins 1952). Wicksell characterizes "pure or theoretical political economy" as containing a "statement of economic laws" such as primarily those of wealth, applied political economy as the "application of these laws to the concrete economic life of society". In addition, he describes social economy (or economic policy) as an "investigation" of the optimal application of "economic laws and practical precepts" in order to attain "the most possible social gain" and the necessary changes for that purpose in the "existing economic and legal structure of society."

Moreover, like that of Say, Mill and Walras, his social economy by recognizing that the economy exists and functions in and is conditioned by society is compatible with what Schumpeter (1954) explores and analyzes as economic sociology–recall Jevons' terminological invention–in the history of economics, or sociological economics (Knight 1958; Lewin 1996). Conversely, it is incompatible with rational choice theory so long as the latter construes society as (only or mostly determined by) "economy" and "market" despite some attempts at overcoming such incompatibility and linking it with "social economics" (Becker and Murphy 2000), while maintaining the "standard" economic approach, including utility maximization, plus equilibrium and stable preferences. The difference between Wicksell's and other social economics and rational choice theory is between the societal setting, operation and conditioning of the economy and markets—for example, the "economic sociology of the market" (Boulding 1970).

In short, it is a difference between a nonreductive, stochastic, realistic and a reductive, deterministic, unrealistic model of causation or influence (Akerlof 2002; Frank 1999; Gerrard 1993; Kahneman 2003; Thaler 2000; Young 1996). In addition, Wicksell divides "pure political economy" itself into several subdivisions defined in terms of the production, distribution and consumption of wealth. These are the previously noted "theory of human wants or general theory of consumption" proposed to "logically be placed the first", second, the "theory of production and of the factors of production", and third, the "theory of distribution" addressing the "social problem of distribution" such as the "question of property rights of the various factors of production." Walras-Wicksell's classifications conspicuously omit universal rational choice theory.

[26] Notably, Walras (1936, p. 121) wrote a separate book titled *Studies In Social Economy* (*Etudes d'économie sociale*) in which he defines the latter as the "theory of distribution of social wealth."

Similarly, Cairnes (1965) implies that political economy is "social economy" rather than rational choice theory by recognizing the societal and related causes and conditions of the production and distribution of wealth as its "proper and exclusive" subject.[27] In addition, within neoclassical economics Walras proposes (and writes an entire book on) *economie sociale* defined as the "theory of distribution of social wealth" influenced by the principle of equity (also, Burgenmeier 1994; Sandmo 2007), but no economic model of and approach to all human action and society as a whole, simply rational choice theory. As seen, Wicksell follows Walras in this respect and does the same, as do other neoclassical economists like Cassel and Wieser, while none among them expounds rational choice theory. In particular, Wieser conceives (and writes a book on) social economics (Schumpeter 1956; Swedberg 1998) as focusing on the "sociological problems of economic theory", but no rational choice theory.

Related to its conception as the science of wealth, classical-neoclassical economics is the theory of the market and monetary prices. It is not the theory of non-market and non-monetary social phenomena, thus no rational choice theory of spurious "implicit markets" and "shadow imputed prices" of noneconomic, monetarily "invaluable" (Arrow 1997; Sen 1995), "priceless" (Benabou and Tirole 2011; Roth 2007) human goods and interactions (children, family relations, etc.) construed as or reduced to "production", "investment" or "consumption goods" and market-style transactions. As classical-neoclassical economists suggest, and Max Weber[28] (1968), an historical economist-turned sociologist (Boulding 1957; Knight 1958; Parsons 1967; Robbins 1998) registers, it is the science of the operation of the market, including competition, rather than of all, including non-market, social processes. In rational choice terminology, classical-neoclassical economics represents the analysis only of the "market sector" (Becker 1976; Lazear 2000), but not the other sectors of society, with only a single partial exception discussed below.

More specifically, what Walras calls pure economics represents both the "theory of wealth" and the "theory of the determination of prices" in the market under the operation of free competition.[29] In this sense, economics is, primarily, in Schumpeter's (1954) words, "market economics", although combined with elements of economic sociology many of which he discovers and analyzes throughout the "history of economic analysis". Conversely, it is not, as a rule, the economics of non-markets, non-prices, non-money and related noneconomic phenomena, including politics and law, religion, morality and ideology, art and culture, family and children, and society as a whole. In addition, it does not do what rational choice theory tends to do such as the following. This is construing social phenomena as or dissolving them into fictitious "implicit markets", "shadow imputed prices", spurious religious "economies", imaginary "production", "investment", or "consumption goods", through dubious

[27] Cairnes (1965, p. 71) defines political economy as the "science which accepting as ultimate facts the principles of human nature and the physical laws of the external world, as well as the conditions, political and social, of the several communities of man, investigates the laws of production and distribution of wealth which result from their combined operation; or: As the science which traces the phenomena of production and distribution of wealth to their causes in the principles of human nature and the laws and events–physical, political and social–of the external order."

[28] Weber (1968, p. 636) remarks that the "discussion of the market phenomena constitutes essentially the content of economics."

[29] Walras" (1926, p. xi) full expression is "the hypothetical regime of absolutely free competition", also called pure or perfect competition by other neoclassical as well as contemporary economists.

equivalences or analogies, just as reinventing Spencerian social Darwinism by the notion of "genetic fitness" (Becker 1976; Rayo and Becker 2007) and "economic gene" (Hirschleifer 1978). In particular, as leading economists object, the economic approach reinvents social Darwinism even if the latter represents "a perverted borrowing from what can be validly established for biology" precisely because of the "important differences between genetic processes and economic or sociological processes" (Samuelson 1993, 145).

In terms of rational choice theory, classical-neoclassical economics constitutes the theory of rational choices and actions of economic agents rather than their noneconomic variants, including political, legal, ideological, religious, artistic, scientific, cultural, and other actors, so not of "all human beings". Specifically, it is the theory of rational choices and actions of only economic entrepreneurs and consumers,[30] in particular in its neoclassical version, entrepreneurial profit- and consumer utility-maximization and cost- and disutility-minimization (Friedman 1976; Samuelson 1983), but not of, say, politicians and voters, law makers and officials, religious leaders and believers, children and family relations, artists and scientists, and so on.

Any "Rational Choice" Exceptions?

So far, the preceding examination has identified or even approximated no single rational choice theorist, exponent of the economic approach to all human behavior among the major figures of classical and neoclassical economics from Smith, Ricardo, Say, and Mill through Jevons, Walras, Marshall and Pareto. Still, as always, some exceptions might exist especially among their relatively less prominent or original counterparts. The probably strongest candidate for such rational choice exceptions is Francis Edgeworth. This is due to his project for "Mathematical Psychics" through the "Application of Mathematics to the Moral Sciences", although he is widely regarded as less prominent or original and more obscure[31] than these above, especially as mostly restating and applying (and profusely citing) Jevons' economic theory, notably utilitarianism, hedonism, egoism, and marginalism (McFadden[32] 2006; Parsons 1935).

Concerning sociological relevance, Edgeworth is partly known or occasionally noted in sociology, although Parsons (1935) makes no pertinent reference to his theory apparently considering it less relevant in terms of both economics and "sociological elements" than those of his contemporaries Jevons and especially Marshall and Pareto. Thus, some contemporary economic sociologists (Swedberg 1998; White 1981), as well as rational choice and social-exchange theorists (Coleman 1990; Michener et al. 1977) refer to, imply, and even cite Edgeworth, especially emphasizing his utilitarian or hedonistic and market exchange theories. On this ground, contemporary economic sociologists implicitly regard Edgeworth as another example of the neoclassical "return to economistic approach" (Smelser and Swedberg 2005).

[30] Arrow and Scitovsky (1969, p. 1) suggest that "economics can be described as the theory of (rational) choice, of entrepreneurs" and consumers" choices and their implications".

[31] In addition to his obscure writing style, Edgeworth gained repute for his "wistful call in 1881 for a hedinometer to record pleasure" (McFadden 2006, p. 7).

[32] McFadden (2006, p. 11) comments that Edgeworth "proposed, following William S. Jevons, that the same objective time may correspond to different rates of thought and feeling in different periods, so that the utility of an experience will be the subjective time integral of the sensations involved."

At any rate, in particular, Edgeworth (1967) suggests the "applicability and application of Mathematics to Sociology" and in that sense mathematical sociological rational choice theory (Coleman 1990; Fararo 1989). Edgeworth proposes applying the law of diminishing marginal utility ("the decrease-of-a-rate-of-increase of quantity") to "mathematical sociology", just as of mathematical economics (Allais 1997; Debreu 1991; Samuelson 1983; also, Backhouse 2015). He does on the assumption that the "principal inquires in Social Science" represent "maximum-problems", just as do contemporary rational choice sociologists embracing the procedure of maximization of utility as indispensable for the "quantitative development of the theory" (Coleman 1990). He regards marginal utility theory termed the "Calculus of Variations" in utility as the "most sublime branch" of economic analysis. He resorts to none other than to Comte to support his view that precisely such marginalism is "most applicable to Sociology", although Comte, an able mathematician like his contemporary Cournot (1960), more likely would suggest that marginalist neoclassical economics forms part of sociology. Therefore, Edgeworth's marginalist economics assumes universal utilitarianism and hedonism treating pleasure as the "end of rational action." Relatedly, he postulates universal egoism and conceives humans as emanations of homo economicus (Bowles and Gintis 2000; Gneezy 2005; Handel and Kolstad 2015; Henrich et al. 2001; McFadden 2006; Sen 1995; Thaler 2017) by asserting that their invariant pursuit of self-interest is the "first principle of Economics",[33] and implies public choice theory arguing that politics is also "based on self-interest".

Still, Edgeworth qualifies, if not contradicts, his "proposal for proxy sociological rational choice theory by admitting that complexity is "so formidable in Social Science" in Comte's sense, more than in economics premised on marginal utility theory, presumably because the total social system is, as Pareto emphasizes, more complex than the economy as its part. Also, Edgeworth partly relaxes economics" "first principle" of universal self-interest and thus homo economicus, including economics of politics, by recognizing "benevolent" and thus altruistic, as well as "self-interested", actions in the economy and society, just as does Smith in his moral philosophy. On this account, his proxy sociological rational choice theory and thus its supposed basis marginal utility theory effectively becomes the branch of a more complex sociology a la Comte that he approvingly cites. Substantively, it fuses universal egoism with altruism, including public choice theory with a conception of politics through fusing "self-interested and benevolent" political actions–"benevolent" echoing Smith's *Theory of Moral Sentiments*, as well as John Rae's (1905) *Sociological Theory of Capital* (also, Frederick[34] et al. 2002)–and "benevolent preferences" manifesting "benevolent society" (Bergstrom 2006).

Prima facie, the above is far cry from their contemporary versions that prefer theoretical stringency and simplification to Edgeworth's qualifications and combination, and reassert exclusively self-interest and thus homo economics, including, as in public choice theory, only non-benevolent political actions (Sen 1995). And as an unexpected coup de grace Edgeworth even implies a proposition of what his precursor

[33] In Edgeworth's (1967, p. 16) words, the "first principle of Economics is that every agent is actuated only by self-interest."

[34] Frederick et al. (2002, p. 355) cite the "prevalence throughout the society of the social and benevolent affections" from Rae's 1834 *Sociological Theory of Capital.*

Jevons proposes as economic sociology by citing, as usual, the latter's statement that under some conditions ("dissimulation and the objectionable arts of haggling") market transactions "must be settled upon other than strictly economical grounds", namely bargaining and thus relative power between the participants.

In sum, Edgeworth may well be the probably single, well known, even if somewhat inconclusive and inconsistent (or insufficiently clear) prototype of a rational choice theorist in the sense of an exponent of the economic approach to noneconomic behavior within conventional economics. His stature and originality or influence remain lesser than those of his neoclassical colleagues such as Jevons do whose Benthamite utilitarian-hedonistic theory he enthusiastically embraces and essentially restates (with his main original contribution being the "Edgeworth contract curve", cf., Stigler 1957; Samuelson 1983; also, Schumpeter[35] 1954), Walras, Wicksell, Wicksteed, Marshall, Pareto, Menger, and Böhm-Bawerk. To that extent, contemporary rational choice theorists, exponents of the economic approach to noneconomic behavior in economics and sociology are left with the perhaps only one historical precedent and support for their theory among the major classical and neoclassical economists, as some of them unwittingly admit. Nevertheless, a single, even if relatively known and pertinent, exception[36] does not really invalidate what is a rule or pattern in this respect: conventional economics essentially is or has no rational choice theory, all (or most) things considered.

In general, conventional economics constitutes a well-defined and relatively limited science of the economy, in particular wealth and market, rather than of all human behavior and society. Therefore, it is or has no rational choice theory as the universal and unifying economic model and approach for all the social sciences, including sociology (Coleman 1990; Hedstrom and Ylikoski 2010), as well as political science where its invasion and influence is especially deep, strong and also counterproductive (Green and Shapiro 1994; Miller 1997; Ostrom 2010). Almost all of the most eminent and influential classical and neoclassical economists from Smith, Say, Ricardo and Mill to Walras, Jevons, Marshall, and Pareto are no rational choice theorists in this sense, with the inconclusive, partial exception of a relatively lesser, less original figure like Edgeworth. To that extent, rational choice theory has no solid theoretical foundation, justification, and salient precedent in these classics and neo-classics, which does not make it necessarily an invalid endeavor as instead, the result of its reported empirical disconfirmation by evidence (Ermakoff 2017; Ok et al. 2015; Stiglitz 2012).

Limited Economic Rationality— Rational Action in Economy Versus Society

As a corollary of focusing on the economy, particularly wealth and related economic resources, the market, and monetary prices, as its exclusive and proper subject, classical-neoclassical economics posits limited economic rationality in terms of its field

[35] Schumpeter (1954, p. 1036) describes Edgeworth's economic theory as "simply revived Benthamism—or rather, Benthamism in the armor of a better technique."

[36] Another possible exception is Cournot (1960, p. 14) by allowing the "field of Political Economy" to comprise the "organization of society" but he recognizes that it is typically confined to the "material wants of mankind."

of operation in society. It essentially limits economic rationality to the economy, including the market and monetary prices, and does not extend it to all society, namely its noneconomic and nonmarket spheres, contrary to what rational choice theory does in contemporary economics and sociology alike. This is an axiomatic, logical determination of the field of operation of economic rationality and to that, extent makes the economic approach purporting to expand it to noneconomic, nonmarket and nonmonetary domains an illogical or unfounded domain-expanding endeavor. If the natural home of economic rationality such as the pursuit of profit or wealth is economy, in particular the market, and its proper instrument money and prices, such an extension of economically rational choice beyond this well-delimited field is a non sequitur within conventional (Thaler 2017) and ungrounded claim in sociology (Boudon 2011; Bruch and Feinberg 2017; Ermakoff 2017).

Therefore, classical-neoclassical economics is a science of rationality but primarily in the form of a rational economy and economic agents, in particular of wealth, the market and money prices, and not of economically "rational" noneconomic, nonmarket and nonmonetary, including political, religious, artistic and cultural, domains and subjects. It is thus no rational choice theory understood as an ambitious, all-embracing economic model and method. For example, it rules out or is incompatible with the rational choice theory treatment of religion as an economically-like rational domain as if it were virtually equivalent to the economy, market and capital, namely religions, churches and beliefs as religious "economies", "markets", capital", and the like.

In a way, Smith perhaps anticipates or implies economics of religion by applying competition-monopoly market theory to Catholicism and Protestantism (Ekelund et al. 2002), even Presbyterian-turned deist (Friedman 2011; Kauder 1953). However, following Hume Smith laments that "rational" religion as the Enlightenment notion to overcome the Christian and Islamic Dark Middle Ages (Mueller 2009) has never existed because of pervasive and enduring "popular superstition and enthusiasm", with direct or indirect adverse effects on economic as well as scientific progress and innovation (also, Benabou et al. 2015). Instead what like Hume (Rothschild 1994), Smith observes with regret to exist in reality are religions with a "mixture of absurdity, fanaticism and imposture". He thus echoes Voltaire's "childish absurdities of the Bible" and generally reflects the non-religious, rationalistic time and spirit of the Enlightenment of which they were all the prominent figures, alongside Montesquieu, Condorcet, Diderot, Kant, Jefferson, etc. (Mokyr 2009; Mueller 2009; Phelps 2007; Tribe 1999). In particular, Smith acknowledges that his own ancestors Presbyterians cum "Puritans" ("the sect called Independents") form a "sect no doubt of very wild enthusiasts (as) in England towards the end of the civil war". He hence adopts Hume's depiction of Puritanism as "wild" and "wretched fanaticism" to the point of (as with Oliver Cromwell) "madness with religious ecstasies" (also, Mueller[37] 2009).

Similarly, J. S. Mill (1991) charges that the theological "theory of Calvinism" denies and eliminate rational choice ("you have no choice") and free will, thus human freedom as opposite to the unconditional obedience and submission, and sacrificed, alongside

[37] Mueller (2009, 382) suggests that, as "Hobbes noted when reflecting upon the English civil war, no (religious) war existed in the ancient world. One needed Christianity and goading of Presbyterian (Puritan) preachers to produce a civil war over religion."

humans themselves, to the "alleged will of God". Weber (1976) elaborates the latter element in his *Protestant Ethic and the Spirit of Capitalism* (also, Alesina and Giuliano 2015; Friedman 2011; McCleary and Barro 2006; Iyer 2016; Tawney 1962). In addition, Pareto (2000) pictures early Christian theological disputes after the image of the "cage for the insane" and particularly identifies the ascetic and moralistic "insanity" of Calvinism, especially Puritanism (e.g., Presbyterianism in Smith's Scotland).

Hence, for them and most other economics classics-neoclassics, such a rational choice treatment and so economics of religion and of related non-economic domains either makes no logical sense given the domain of traditional economics. In addition, for them it does not do justice and instead does violence to the reality of society beyond the relatively bounded realm of the economy, i.e., wealth, market, money, prices, material goods, and the like. In short, traditional economics is the theory of economic rationality and thus, if one wishes so to describe it, of economically rational choice only, i.e., of rational agents and actions in the economy, including the market, and of wealth and monetary prices, but not beyond this. Therefore, it recognizes noneconomic, nonmarket, non-wealth and non-monetary domains and relations of society as distinct from and thus irreducible to their economic, market, wealth and monetary forms, in stark contrast to rational choice theory construing the first as mere extensions of or reducing them to the second.

For instance, Walras (1936) posits two distinct laws or principles of relations between individuals and groups in society, one economic and another non-economic. First, he proposes that the "law of economic relationships of people in society or the principle of labor and industry" consists in rational elements such as "utility or interest", specifically wealth expressed in monetary prices in determined in the market, consequently "pure" economics being the science of wealth and price formation under free competition. Second, he acknowledges another "law" of noneconomic, more specifically, "moral relations of people in society or the principle of morals" consisting in the non-rational form of "good or justice", and by implication other social science focuses on society governed by such a law. Hence, Walras treats moral and other noneconomic relations in society and "good or justice" and related non-rational principles as distinct and autonomous (also, Arrow 1950; Burgenmeier 1994; Sandmo 2007; Sen 1995) in relation to their economic and rational forms like "utility or interest", including wealth and prices as the sole and proper subject of "pure" economics. Accordingly, Walras' treatment is contrary to rational choice theory that proceeds, and its exponents "do" the exact opposite.

The latter involves construing noneconomic relations and non-rational forces as (or dissolving them into) economic and rational, in particular moral "good or equity" as "utility or interest", including wealth, altruism as inverted egoism, "invaluable" human goods and "priceless" humans into material "goods", "commodities" and "imputed prices", politics and religion as "economies" and "markets", religious faith and experience as "capital", etc. Even more categorically, his successor Pareto (1963) suggests that only the economy, in particular the market, involves logico-rational actions induced by material "interests" and "appetites". However, he emphasizes that the rest of society, especially politics and religion, constitutes primarily the realm of illogical and irrational actions driven by sentiments, emotions and instincts and their false justifications (also, Benabou and Tirole 2016; Kranton 2016; Morishima 1998; Rubinstein 2016; Schumpeter 1956).

As a corollary, in most of classical-neoclassical economics there is primarily the theory of economic rationality as delimited, but no such thing as the rational choice theory of politics, with the secondary exception of Edgeworth, religion, except for Smith with qualifications, culture, and society as a whole. Moreover, Pareto (1963) in his sociological work effectively preempts such rational choice theory as fundamentally invalid, unrealistic and even an absurd non sequitur, "like non-Euclidian geometry", stating that social science premised on the "hypothesis" of universal rationality would result in a "general (conception) of the social phenomenon" with "little or no contact with reality." He does on the ground that what primarily determine "social equilibrium" are irrational "residues" (classified into six classes) and spurious "derivations". This is in contrast to the economy whose determinants are mostly rational "interests" and material "appetites", but not totally, in that he observes the strong influence of "collective emotions" in stock markets and associated economic crises.

Generally, when assuming rational behavior, traditional economics focuses on the economy, in particular the realm of wealth, market, money and monetary prices, and as a rule does not extend in noneconomic realms, including politics and religion (with some exceptions), thus preempting rational choice theory. In short, it posits and emphasizes rational action for the economy, notably the market,[38] but not for society as a whole, in particular politics, religion, morality and culture. Since Smith and Mill through Walras and Pareto, for classical-neoclassical economics the economy, in particular wealth, market, money and prices, is axiomatically the domain of economically rational choice and action such as pursuit of material interest, i.e., profit making by producers and utility seeking by consumers. By contrast, noneconomic systems of society, including politics, religion, morality and culture, are also self-evidently the sphere of mostly non-rational forces like moral and other social sentiments, emotions and passions, for example, altruism, sympathy, reciprocity, benevolence, compassion, justice, etc. (Sandel 2013; Sen 1995).

For illustration, just as did ancient Greek economic philosophers like Xenophon (Myerson 2008) in regard to the oikos, neoclassical economists like Menger and others[39] treat the process or act of "economizing", a prototype and essence, of economic rationality, as natural, intrinsic to the economy, including wealth, market and prices, and not necessarily to all society. Equally, they treat the inherent object of economizing, economic goods, of which wealth is the aggregate and monetary prices a measure of value, as the only scarce resources in contrast to non-scarce, i.e., what Menger (1950) and his followers in the Austrian School call "free" noneconomic goods aggregated in the category of non-wealth and expressed in non-monetary measures. By contrast, rational choice theory distorts "economizing" and thus economic rationality through extending it from the economy (so its original form the Greek oikos), the field of wealth, market, money and prices, to the non-economy, non-wealth, nonmarket and non-monetary fields of society ("economizing" on political ideologies and relations, religious beliefs and experiences, morally right conduct, etc.). Relatedly, it distorts "scarcity" by the notion of "scarce means" generalized beyond economic goods to

[38] Robbins (1952, pp. 126–7) argues that only the market contains a "regime of law" and in that sense rationality", and Lange (1971, pp. 142–3) suggests that "what enforces the rationality principle is market competition, so that the law of supply & demand is the "law of economic rationality"".

[39] Following Menger, Mises (1960, p. 148) contends that every rational action is an "act of economizing".

incorporate Menger's "free" noneconomic, including political and religious, forms, thus doing what the supposed authority and precursor, classical-neoclassical economics as a rule does not.

In addition, what neoclassical and contemporary economists call "maximization of some sort" (Arrow 1950) such as utility or profit and minimization of disutility or cost (Samuelson 1983) defining economic rationality is typically confined to the economy, thus wealth, market, money and prices, and rarely extended beyond. Rational choice theory distorts the concept of maximization of utility or profit and of minimization of disutility or cost, briefly of optimization and so economic rationality by generalizing it from economy involving, wealth, market, money and prices to the noneconomic spheres of society, encompassing an impermissible wide range of phenomena even for some contemporary economists (Thaler 2017). For illustration, in this view rational choice theory underestimates by its concept of perfect rationality and information—that its sociological version embraces from Coleman (1990) to some recent formulations (Kroneberg and Kalter 2012)–the difficulty of solving the "utility maximization problem" as instead the "problem of bounded rationality" that is limited by cognitive and social factors (Thaler 2017). More broadly, due to its economic determinism through the emphasis on instrumental rationality rational choice theory is admittedly incapable of solving "many" problems in sociological theory and research (Boudon 2011).

Furthermore, traditional economics acknowledges some important elements and forms of what some neoclassical economists like Wicksteed 1933) identify as "irrational choice" and action in the economy[40] itself, including the market, as Pareto (2000) suggests for stock markets, just as more so (as he emphasizes) in society, but this question is beyond the scope of this paper. Suffice it say that it sharply differs from the economic approach. The latter tends to deny such elements not just in the economy and markets but in society overall, or if it recognizes them at all, it construes them as rational. An illustration is construing altruism as inverted "egoism" (Elster 1989; Margolis 1982; Rabin 1998; Rose-Ackerman 1996; Samuelson 1993; Sen 1994), (drug) addictions and other irrational behaviors and emotions as "rational" (Elster 1998; Etzioni 1990; Frederick et al. 2002; Gruber and Köszegi 2001), and so on.

Conclusions

At the end, the genesis and evolution of economics is and has no rational choice theory. Suspicion arises that in their attempt at justifying their theory by economic classics and neoclassics rational choice theorists such as economists expanding the economic paradigm (Ok et al. 2015), as well as sociologists receptive to this expansion, do not accurately know and understand and do fully justice to, or deliberately distort conventional economics, at least some relevant parts of it. It may well be that in their excessive desire to theoretically and methodologically base and legitimize an evidently dubious,

[40] Robbins (1952, p. 126) admits that economic laws while postulating "inevitable implications" have definite limits precisely as an "effect of irrational elements in human behavior". Mises also (1960, p. 94) allows that the forces influencing market actors include "also non-economic and irrational factors, such as misunderstanding, love, hate, custom, habit and magnanimity".

incongruous approach to and theory of all human beings and behaviors and of society as a whole, they precisely express the first or commit the second.

Arguably, they would not need to do so if this theoretical and methodological economic universalism were beyond doubt, debate, and controversy in social science. Yet, instead, this universalism growingly fails at least since Comte's rejection of a single, universal—be it economic or non-economic—conception and explanation of society "by a single law". Weber's (1949) also implies this by his cautionary remark of the diminishing theoretical "marginal utility" of neoclassical marginal utility theory if extended indefinitely even within the scope of economics, let alone beyond. This make a non sequitur the economic approach to human behavior extending this (Becker 1976; Becker et al. 2005; Coleman 1990; Rosen 1998; Stigler and Becker 1977) and other elemental economic laws or principles and methods to sociology and other social sciences (in particular, political science).

Moreover, many classical and neoclassical economists are influenced by or attentive to Comte's project of sociology and scientific rationalism (positivism). They include especially Mill borrowing the concepts of statics and dynamics from Comte and Rae due to his "sociological theory of capital" in classical political economy. Additional instances within neoclassical economics are Wicksteed with the Comptean prologue/credo of his main work, and Pareto (as a sociologist), as well as to some degree Jevons, Marshall, and Edgeworth, whom the proponents of the economic approach often invoke as its precursors and thus extant authoritative support. On this account, it is worthwhile to cite Comte's preemptive admonition against an all-encompassing rational choice" and any theory and method: in social science especially the "attempts at the universal explanation of all phenomena by a single law are highly chimerical."

Prima facie, most classical, neoclassical and contemporary economists and sociologists would probably concur with this statement as theoretical and methodologically plausible and reasonable for their disciplines and social science as a whole, if not even physical scientist for their sciences (as suggested by Merton 1968). This would apply even to the exponents of rational choice theory and the economic approach in economics and its adopters into sociology and political and other social science *unless* this universal explanation and method happened to be theirs and that "single law" was utility maximization, including diminishing marginal utility self-interest, egoism, profit and wealth seeking, and the like. In the latter scenario they claim that all the "attempts at the universal explanation of all phenomena by a single law are highly chimerical" except if such explanation is rational choice, its approach the economic, and this law utility, claiming an exceptional, theoretical and methodological status for their theory and method and an ontological privilege for their assumed law. Such "mental gymnastics" looks "depraved" (Samuelson 1983), a non sequitur not only for Comte and later sociologists, but to most classical and neoclassical and many contemporary economists. It is, for example, a mere pretension for Mill admonishing, as seen, that economics "does not pretend" that its theories or conclusions apply beyond the economy defined by the desire and pursuit of wealth. In this respect, by so pretending and expanding into virtually infinity of scope, rational choice theory becomes more encompassing ("bigger") than economic theory proper (Arrow[41] 1998), and thus misconstrues and distorts, rather than continues and develops, classical-neoclassical economics.

[41] Arrow (1998, p. 93) remarks that rational choice theory "is broader than economic theory."

In addition, many neoclassical and contemporary economists, including Wieser, Schumpeter, and Mises (Swedberg 1998), Knight and others (Akerlof 2007; Phelps 2007; Boulding 1957), not to mention Parsons (1967) initially an economist, are influenced by or respectful of Weber, an historical economist-turned sociologist. For illustration, even some "pure" neoclassical economists (Robbins 1998) suggest that any serious economist ("anybody who takes social science seriously") "should make the acquaintance of Max Weber (as) the most powerful sociological mind of his period." To that extent, it is also noteworthy Weber's statement that the "theory of marginal utility is not exempt from the law of (diminishing) marginal utility itself."

No doubt, this statement seemingly looks more debatable than that of Comte, but still many neoclassical and contemporary economists probably would agree with it, and only few of them treat marginal utility theory as an absolute or panacea, except for its original hardline exponents and their followers in the economic approach and rational choice theory. And if marginal utility theory is subject to the law of diminishing "marginal utility" or "decreasing returns" in terms of theoretical, explanatory value, so is the conception of utility maximization of which it is an element (total utility is presumably maximized when marginal utility reaches zero) and consequently the economic approach and rational choice theory premised on the utility principle. Like with Comte's admonition, the latter's advocates claim that any economic and sociological theory is subject to the law of diminishing "marginal utility" in theoretical terms, except only for their own, universal rational choice, including their rendition of marginal and total utility, theory and the all-encompassing economic approach, as the single exception to the rule. As before, such claims probably appear as a "mental gymnastics", non sequitur or pretension both for Weber and most early economists, who, as Mill suggests, do not pretend to postulate rational choice theory or apply an economic approach to noneconomic phenomena, as well as to probably the majority of modern economists not doing so either.

In this respect, rational choice theorists probably feel to rationalize what is or becomes increasingly non-rationalized in social and even in part natural science. This is a single, universal theory and explanation of all human subjects and activities, and the whole society by using with inadequate knowledge or understanding the authority of and in the process "rationally" distorting much of conventional economics, at least those relevant elements considered here, which probably is or has nothing of sorts that they claim. Thus, that is what Schumpeter's historical account of conventional economics suggests, which hence can be instructive to, besides contemporary economists spreading or endorsing economic determinism, economic sociologists for his rediscovery of economic sociology within it, and their rational choice counterparts for the opposite reason, the missing link or origin of their theory.

What holds for their economic counterparts' reconstruction of conventional economics does also for rational choice sociologists. A certain difference is that sociologists, as normal and expected, probably less completely know or accurately interpret conventional economics (including Schumpeter's and other pertinent historical accounts), than economists. Alternatively, they perhaps less "rationally" distort it if they attain its fuller knowledge and understanding due to likely having a lesser rationale for doing so than do economists, who apparently are more prone to base and rationalize their economic determinism in and by the high an enduring authority and legacy of their "fathers" from Smith and others.

Lastly, this analysis and finding has multiple relevance and potential benefits or interests for contemporary sociologists. First, it is likely relevant and interesting for rational choice sociologists by suggesting that classical/neoclassical economics constitutes or comprises no rational choice theory, and hence they cannot plausibly invoke it as their respectable theoretical foundation, authority and precursor. Second, it is probably relevant and beneficial for economic sociologists by reaffirming that traditional economics has origins of economic sociology and in particular more of these than those of rational choice theory. Third, it may be relevant or interesting for contemporary sociologists to become more familiar with or retrieve conventional economics' original theories and to distinguish them from their dubious interpretations by contemporary economists advocating the economic approach and rational choice theory.

In sum, the argument of this paper and especially the supporting finding will be relevant and beneficial or of interest to contemporary rational choice and economic sociologists although in different ways. It will be probably revealing and perhaps disappointing for the first that traditional economics is or has no rational choice theory, and confirmatory and encouraging to the second that it has economic-sociology origins—seemingly, bad and good news, respectively.

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