

Amartya Sen as a Neoclassical Economist

Antonis Ragkousis

Abstract: Amartya Sen is often described as an insightful critic of mainstream economics, and in particular, his work in development economics, alongside the construction of the capabilities approach, has been associated with endeavors to revisit both the theory and practice of the discipline. Despite his in-depth criticisms of certain aspects of mainstream economics, Sen's extensive use of formal methods is suggestive of an ontological tension, one identified by Thorstein Veblen when commenting on some of his contemporaries and originally introducing the term "neoclassical." Veblen argued that the work of these economists involved both an implicit recognition of a causal processual social ontology he associated with modern, thoroughly evolutionary, approaches and a commitment to a taxonomic conception of science—the latter relying on a set of methods that presupposed an associationist ontology of event regularities. For Veblen, the adherence to taxonomic methods was the classical feature of their work, and the commitment to an evolutionary viewpoint was the neo aspect. This article argues that the same tension runs through Sen's contributions and that he is neoclassical in this specifically Veblenian sense. The assessment of the ontological inconsistencies in Sen's work is shown to shed light on its reception within the economics academy.

Keywords: Amartya Sen, Thorstein Veblen, capability approach, neoclassical economics, economic methodology/ontology

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Amartya Sen is among the most influential contemporary economists. His work on social choice theory (Sen 1970; 1982; 2002; 2017), the capabilities approach (Sen 1987a; 1999; 2009), and development economics is characterized by its multidisciplinary and incorporation of ethical, philosophical, political, and sociological insights. Despite the very high regard in which Sen's work is held and its endorsement by the mainstream (signaled by the receipt of the 1998 Nobel Prize), he is still considered by many as a contrarian and a prominent critic of economic orthodoxy (Alkire 2002; Robeyns 2003; Walsh 2003; Kuklys

Antonis Ragkousis is the Joan Robinson Fellow at Girton College, University of Cambridge and Research Associate at the Centre for Business Research, Cambridge Judge Business School, University of Cambridge. The author thanks this journal's editor and anonymous referees for their helpful comments in developing this article. The author is indebted to Stephen Pratten for his invaluable guidance and the countless hours he dedicated to reading multiple drafts of this article and making insightful suggestions. The author is also grateful to Yannick Slade-Caffarel and Tony Lawson for their detailed comments and to the Cambridge Social Ontology Group for their continuous support. The author would also like to thank the Alexander S. Onassis Foundation and King's Business School for their financial support at the time of writing this article.

2005; Comim, Qizilbash, and Alkire 2008). Sen's critique of rational choice theory is considered central to his rejection of mainstream economics.

Sen is understood as supplying a philosophically informed critique. He is seen by many as striving to revitalize "classical" economic theory (identified by them with a tradition rooted in the works of Adam Smith and Karl Marx) and as being inspired by the latter's capacity to offer a more "descriptively rich" account of the social realm and incorporate many ethical concerns overlooked by the mainstream or, in those authors' words, "neoclassical" tradition (Walsh 2003 and 2008; Putnam 2002). They view Sen's work as presenting an alternative to neoclassical economics with his contributions, especially on social choice theory, understood as depending "on a systematic rejection of the epistemology underlying the neoclassical theory of the canonical Arrow [and] Debreu models" (Walsh 2000, 18). Hilary Putnam (2002, 62) argues that a reluctance to incorporate ethical insights "penetrated neoclassical economics after 1932" which resulted in the "impoverishment of welfare economics' ability to evaluate what it was supposed to evaluate, economic well-being." Consequently, Putnam praises Sen's capabilities approach as an "impressive attempt to enrich the evaluative capacity of welfare and developmental economics."

In this spirit, Sen is understood as being inspired by the "classical" tradition's concern with evaluating economic outcomes and processes and wishing to incorporate its insights regarding human nature. While understood as a critic of neoclassical economics, he is also depicted as a synthesizer at the level of method, seen as someone who, in attempting to broaden the scope of economics, maintains a mathematically rigorous approach. On this basis, Kenneth J. Arrow (1999, 172) praises Sen: "the area where Sen's contributions have been truly unique is his extraordinary synthesis of economic and philosophical reasoning [. . .]. No one has combined different approaches, formal analysis, conceptual clarification, theory of measurement and empirical work as Sen." However, others see this synthesizing tendency as constraining his ability to move beyond conventional economics. Des Gasper (2002, 441), for example, notes that Sen "proceeds in ways accessible and credible to mainstream economists, his original and main reference group, and retains most of their assumptions and style."

The focus of this article is not Sen's work as an alternative to neoclassical economics. The question addressed is whether Sen's contributions are themselves neoclassical. In the literature that identifies Sen as a critic of the mainstream and postulates his work as an alternative to neoclassical economics, the issue of whether Sen's work is neoclassical is passed over. In the commentary, there is confusion not just on the nature and significance of Sen's contributions but also on what is referred to as "neoclassical economics." It seems likely that the former is, at least partially, the latter's outcome. In this article, Thorstein Veblen's meaning of neoclassical economics, formulated when he originally coined the term, will be deployed, and used to assess whether Sen's work is, in this particular and original sense, neoclassical. Coming at Sen's contributions with Veblen's characterization of neoclassical at hand not only enables essential features of Sen's work to be discerned but also explains how his work is endorsed by both segments of the mainstream and those seeking a compelling alternative to orthodox economics.

As shown by Tony Lawson (2013 and 2021), Veblen coins the category neoclassical to designate a fundamental tension in the work of certain economists of his era. This tension is identified at the level of the ontological presuppositions between those that can be discerned in an espoused *evolutionary*, or open systems, conceptualization of the social realm, and those implicit in an uncritically presumed *taxonomic* conception of appropriate scientific method.

Veblen noted that these economists tentatively endorsed a causal-processual social ontology of the kind that he identified with modern evolutionary approaches. However, they also remained committed to a taxonomic conception of science relying upon a radically different set of ontological presuppositions. It is precisely this tension that Veblen wished to capture by introducing this category (Mayhew 2016; Morgan 2015; Morgan 2016).

I initially present Veblen's definition of neoclassical economics and highlight its profoundly ontological character. Subsequently, I evaluate Sen's work following Veblen's criteria and the manner in which he originally assessed the work of the leading neoclassical economists of his era: Alfred Marshall and John Neville Keynes. I then assess whether an evolutionary vision underpins Sen's criticisms of mainstream economics, focusing on his views on rationality and self-interest and especially on how rationality becomes for him a precondition of freedom and the primary source of unpredictability in human behavior. I also discuss his views on the prevalence of partial orderings, the irreducibility of social structure to individual activity, the importance of process in his notion of "functionings," and his pronounced emphasis on the intrinsically diverse, yet interconnected, nature of humans. I argue that these views are compatible with the Veblenian notion of an evolutionary, causal processual, ontological conceptualization of the social realm as an open system.

An engagement with methodological aspects of Sen's work follows where I assess his commitment to the methodological principles of formalism and associationism. I explore Sen's views on what he calls the "engineering" (as compared to the "ethical") approach to economics which is identified with the employment of mathematico-deductivist methods. Sen persistently deploys and prioritizes methods Veblen would characterize as taxonomic. I show that Sen takes for granted the relevance of the methods he associates with the engineering approach. By doing so, he, in a rather Marshallian fashion, imports an ontology inconsistent with essential pillars of his own work. He is thereby revealed to be a neoclassical economist in the Veblenian sense.

I argue that this tension is sustained across Sen's contributions because he neglects ontology. It is shown that his neglect, and limited conceptualization, of ontology underpins his views on the necessity of adopting formal mathematical methods in the social sciences and encourages him to relegate vital aspects of his framework to the status of description. This neglect enables Sen to maintain a "pluralist" stance and endorse methods that presuppose an ontology that clashes with other aspects of his work that have a causal processual character. This inconsistency at the level of ontology explains how Sen's work remains attractive to both critics of and contributors to mainstream economics. Concluding remarks follow.

Defining "Neoclassical": Veblen and Ontology

The meaning of the term *neoclassical* has attracted much interest over the years. It is broadly agreed that the notion of "neoclassical" economics was first introduced by Thorstein Veblen (Aspromourgos 1986). In his essays on the *Preconceptions of Economic Science*, Veblen (1899a; 1899b; 1900) focuses on the "metaphysical" or ontological preconceptions underpinning the study of economics as a scientific endeavor. His objective is the identification of the specific form that the presentation of results must take for contributions in economics to be recognized as "scientific." Veblen (1900) maintains that the "changes which have supervened in the preconceptions of the earlier economists constitute a somewhat orderly succession" (240). As Lawson (2021) observes, Veblen argues that the

most noteworthy characteristic of this trajectory has been the gradual change over time in the received “grounds of finality” presupposed in economics when presenting research findings for public scrutiny:

The feature of chief interest in this development has been the gradual change in the received grounds of finality to which the successive generations of economists have brought their theoretical output, on which they have been content to rest their conclusions, and beyond which they have not been moved to push their analysis of events or their scrutiny of phenomena. There has been a fairly unbroken sequence of development in what may be called the canons of economic reality; or, to put it in other words, there has been a precession of the point of view from which facts have been handled and valued for the purpose of economic science. (Veblen 1900, 240)

A central feature of Veblen’s analysis in these papers, as noted by Lawson (2021), is a contrast between two different grounds of finality for science, both considered predominant among his contemporaries. These were related to two distinct conceptions of science that Veblen termed “taxonomic” and “evolutionary,” respectively.

Starting with the taxonomic approach, as observed by Stephen Pratten (2021), Veblen maintains that its most characteristic feature is that the “fundamental basis for the systematization of knowledge is something like a natural law, an association of phenomena, an empirical generalization or correlation with exceptions then typically interpreted as disturbing factors” (2021, 3). Its content was to a great extent preoccupied with states regarded as “natural,” “normal,” or “good,” grounded on the presupposition of a form of normality underpinning the course of events.

In Veblen’s time, the notion of the regular or normal in the taxonomic approach was mostly considered to apply at the level of the patterning of events. Methodology was the focus, with the taxonomic approach amounting to what Lawson (2003 and 2013) calls “deductivism.” In that regard, the mathematical modeling deployed in contemporary mainstream economics is one particular kind of deductivism. More importantly, Lawson (2003) claims that mainstream economics is characterized by an insistence that modeling methods, accompanied by the use of a formalized (instead of natural) language, are to be universally and indiscriminately employed across economic phenomena. For this view, the use of such mathematical methods is the defining feature of mainstream economics, effectively distinguishing what is regarded as proper “scientific” economics from non-economics.¹

This deductivism is an explanatory account that rests on a notion of closed systems, or systems in which event regularities (actual or constructed) occur as essential components. If the correlations (or associations in Veblen’s language) are to be conceptually supported, then theoretical entities postulated in relevant accounts are inevitably constrained to take the form of isolated atoms. Atomism is essential to this view since, for each entity under examination, in every instance that any specified conditions X occur, it must, on each occasion, respond

¹ To clarify, the emphasis on this kind of deductivism in the form of mathematical modelling, is a recent phenomenon as Marshall’s case, examined by Veblen, reveals. As Pratten (2021) notes, Marshall was cautious about the indiscriminate use of mathematics in economics. Consequently, in Marshall’s work the taxonomic tendencies did not manifest in an insistence on the deployment of formal mathematical methods but in his notions of which approaches were considered as the most appropriate scientific methods. Consequently, it is possible to be a taxonomic economist without deploying much mathematics. Indeed, in Veblen’s time many classical economists were not especially preoccupied with deploying mathematical methods.

in the same predictable manner *Y*. Moreover, each atomized entity must be conceptualized as acting in isolation. This is a necessary condition that ensures that in the context of a taxonomic exercise, nothing interacts with the atom's operation obstructing the effect *Y*, under conditions *X*, from being realized.

This is the antithesis of an evolutionary conception of science that presupposes nothing beyond cumulative causal sequence, which is identified with an open systems conceptualization of the social realm. For Veblen, an evolutionary orientation is characterized by its rejection of the assumption that outcomes adhere to some pre-ordained regularity or fulfill some predetermined purpose.² In contrast, it is simply maintained that they are caused by something that went before them. Evolutionary approaches adhere to an open systems conception in postulating that there are no inevitable outcomes in advance, with respect to a particular "starting point," as if determined by fixed laws of correlation. As Lawson notes, "the future is something always to be fashioned, through human agency drawing, in the specific moment, on contingent occurrences as well as understandings of operative mechanisms; it is never something that is predictable before it arrives" (2021, 6).

In an earlier paper on "Why is Economics not an Evolutionary Science?" Veblen (1898) suggests that the evolutionary scientist "is unwilling to depart from the test of causal relation or quantitative sequence" (377), asking of everything only "why?" and searching for an answer in terms of cause and effect. Conversely, the taxonomic economist presupposes that "this ground of cause and effect is not definitive" (1898, 378). The ultimate referent in the systematization of knowledge is something akin to a "natural law" as, for this taxonomic approach, the underlying presupposition is that there is a trend in the association of phenomena that is identifiable through empirical generalizations regarded as "natural" or "normal" while any exceptions are relegated to disturbing factors.

Lawson convincingly shows that Veblen considers all earlier approaches to economics to have adopted a taxonomic approach. As shown in the case of later taxonomic economists, labeled as "classical economists" by Veblen, scientific preconceptions of normality were preoccupied with identifying event regularities or correlations, though regularities about the "natural" or "normal" case, conceptualized as that which common sense dictates as desirable. Lawson demonstrates that Veblen's interest was in outlining how preconceptions of normality and regularity have evolved and been rationalized across time.

However, Lawson argues that Veblen's primary purpose was to examine whether conceptions of normality are preserved or discarded in a broader context where a distinctively modern evolutionary orientation is endorsed in other fields of scientific inquiry. To the extent that conceptions of normality and regularity are preserved, Veblen discusses how progress toward an evolutionary economics is obstructed. His concern to examine whether the taxonomic orientation will continue to shape the methods of economic science is transparent in his "Why is Economics not an Evolutionary Science?" and then further developed in his "preconceptions" essays:

The question of interest is how this preconception of normality has fared at the hands of modern science, and how it has come to be superseded in the intellectual primacy by the latter-day preconception of a non-spiritual sequence. This question is of interest because its answer may throw light on the question as to what chance there is for the indefinite persistence of

² On the implications of this view, see Samuels (1990); Hédoin (2010).

this archaic habit of thought in the methods of economic science. (Veblen 1898, 379).

Lawson observes that the term “neoclassical economics” is coined by Veblen towards the conclusion of the “preconceptions” papers after a historical analysis of the, primarily implicitly maintained, metaphysical presuppositions of earlier economists has been presented. The term is introduced as Veblen examines the possibility of an evolutionary approach to economics succeeding the taxonomic. In coining the term, Veblen sets his sights on potential developments in economics, especially on whether an evolutionary approach, with its causalist rather than associationist ontology, could prevail in the discipline soon (Lawson 2002).

In his quest to determine whether any progress in advancing an evolutionary approach among economists was made, Veblen focuses on contributions that appeared particularly advanced in promoting this approach. Interestingly, Veblen suggests that even the most sophisticated and advanced studies of that kind ultimately achieved limited progress toward a coherent evolutionary account. Lawson observes that Veblen concludes that, notwithstanding their significant contributions to promoting an evolutionary vision, these theories persist in endorsing methods that adhere to taxonomic conceptions. Methods that presuppose ontological commitments that contradict the evolutionary approach are maintained. Lawson argues that Veblen identifies a fundamental tension, one that Veblen considered a substantial constraint on the development of a thoroughly evolutionary approach in economics. Nevertheless, despite such obstacles, Veblen was optimistic that the evolutionary approach would soon prevail in the social sciences.

Lawson shows that Veblen’s deployment of the term neoclassical was intended to designate contributions in economics characterized by an inconsistency, particularly a tension at the level of ontological presuppositions. The category refers to studies that display a fundamental inconsistency between the ontological premises of methods conforming to a taxonomic conception of science and a causal processual social ontology implied by an evolutionary vision shared by their authors. Veblen concedes that these contributions are characterized by an extensive appreciation, as compared to contributions of classical economists, of matters that are essential to the evolutionary approach to which he subscribed.

Nevertheless, even in such contributions, the taxonomic nature of the methodologies applied remained predominant. This taxonomic element constitutes the “classical” part, as is identified in the extensive use of methods presupposing event regularities, closed systems, and an associationist ontology founded upon an atomistic conceptualization of the social realm. Conversely, the widespread awareness of evolutionary concerns pertaining to the causal processual nature of the social realm (resting on an open systems conceptualization) constitutes the “neo” component.³

This (original) meaning of the notion of neoclassical economics does not feature prominently within current debates. Lawson (2013) notes that the use of the term in the contemporary literature lacks clarity, indeed this encouraged him to return to its original meaning.

Characterizing the nature of some contributions as either “neoclassical” or “anti-neoclassical” (or “heterodox”) in context where the meaning of the term neoclassical remains opaque is only likely to generate further confusion (Slade-Caffarel 2019). In the remainder

³ The ontological discrepancy thesis in the works of Marshall and John Neville Keynes is only briefly addressed by Veblen but has been well-substantiated by Pratten (2021) in Marshall’s case.

of this article, Veblen's original meaning of neoclassical is deployed,⁴ and it is investigated whether Amartya Sen is a neoclassical economist in the Veblenian sense.

Sen's Evolutionary Outlook

Amartya Sen has been a critic of various aspects of what he characterizes as "mainstream" economics. His work on rational choice theory is seen by many as distancing him from the mainstream (Martins 2006; Robeyns 2003; Alkire 2002; Kuklys 2005; Comim, Qizilbash, and Alkire 2008; Walsh 2003), and it will be argued that it indicates Sen's endorsement of an evolutionary conception of the social realm. Sen's views on matters such as the profound unpredictability of human behavior due to the social diversity of the species and the capability of humans to act freely, as a consequence of their sentience, will be argued to be compatible with such an evolutionary conception. Finally, Sen's views on the intrinsic relationality of humans, the importance of social structures as a factor that directly affects human behavior, and his notion of process will all be shown to suggest the adoption of an evolutionary outlook.

Sen's Criticisms of Mainstream "Rationality"

As discussed, Veblen maintains that an evolutionary approach presupposes nothing beyond cumulative causation, identified with an open systems (or processual) conceptualization of the social realm. For Veblen, a key component of an evolutionary approach is the adoption of cumulative causation as an ordering principle that implies unpredictability and openness. Veblen's emphasis on cumulative causation speaks to a recognition of openness which will be shown to be shared by Sen. Sen's criticisms of rational choice theory point toward his own recognition of openness, with this being made especially clear in his insistence on the need to avoid characterizing humans in overly passive terms. This is an important commonality shared with Veblen, for whom a key feature of an evolutionary approach is the rejection of deterministic conceptions of humans. Consequently, Sen's (intertwined) views on the nature of rationality and the human agent will be shown to indicate his adoption of an evolutionary outlook.

Sen (2002, 225) identifies two predominant approaches to rational choice theory: (a) the "internal consistency," and (b) the "self-interest pursuit" approach. The "internal consistency" approach accounts for individual behavior by identifying regularities in observed behavior. These regularities facilitate the assessment of the approach's consistency without reference to anything other than (or external to) observed behavior. "Internal consistency" is used to describe that the consistency properties in question are internal to the choice function that describes behavior. Consequently, for this view, "rationality" is the property that renders observed behavior internally consistent.

The other variant discussed by Sen is the "self-interest pursuit" approach. In this approach, it is presumed that one incentive, "self-interest," dominates all other motivations in economic decision-making. An economic action will only be conceptualized as "rational" insofar as it is considered to be promoting an individual's self-interest. It is oftentimes presupposed that "self-interest" can be represented by a complete preference ordering. In this way, the application of utility theory in microeconomic analysis is enabled through the

⁴ This is contrary to Lawson's (2013) preferred strategy which is to abandon the term altogether.

introduction of the utility function. The utility function is conceptualized as an accurate representation of an agent's preferences and becomes a methodological device for explaining how preferences determine choices.

Sen's (1982; 1997; 2002) criticisms of the mainstream notion of rationality supply evidence pointing to his adoption of an evolutionary view. His first criticism is directed at both approaches and is that mainstream economic theory does not rely on a particular conceptualization of terms such as "utility," "preference," "self-interest," "choice," or "welfare" since these terms are often conflated or used ambiguously. He argues that mainstream theory is characterized by its reliance on modeling behavior with respect to exact regularities in decision-making with the objective to facilitate accurate predictions of outcomes. Sen shows this unclear and ambiguous interpretation of rationality employed in mainstream economics to be a mere means toward the objective of making accurate predictions at the level of economic decision-making. More specifically, and as Martins (2006, 681) shows, Sen maintains that this "is achieved by: first describing rational behavior in an exact and predictable way (for example, according to a complete preference ordering of competing options); and second, supposing that rational behavior coincides with (or at least approximates) actual behavior." Sen's criticism could be interpreted to be that mainstream economics instrumentally employs an ambiguous conceptualization of rationality simply because it serves its objective to make relevant predictions.

Sen proceeds with his specific criticisms of each approach, noting that identifying rationality with "internal consistency of choice" is problematic since the latter is neither a sufficient nor a necessary condition of choice. He argues that it is not sufficient because "[a] person who always chooses the things he values least and hates most would have great consistency of behavior, but he can scarcely count as a model of rationality" (Sen 2002, 20). Moreover, as Nuno Martins (2006) notes, Sen maintains that internal consistency of choice could not be suggested to be a necessary condition for rationality either, since there could be actions that may be rational (as per our common understanding of the term) but where the axiomatic conditions of consistency of behavior would not obtain (Sen 1987a; 2002). These criticisms of his point toward a conception of rationality opposed to overly passive accounts of human nature.

His criticisms have also been extended to the other predominant conceptualization, that which identifies rationality with a pursuit to maximize "self-interest." Sen criticizes its formal denial to account for behavioral motivations, which differ from a narrowly defined notion of self-interest. He (1982; 1997) argues that there are instances in which our decisions might not correspond to the most optimal ones concerning our welfare. Martins (2006) notes that Sen argues that social rules which emerge out of commitment can lead to a difference between personal choice and personal welfare and that the term "preference" is often employed with these two different connotations (both to describe the ranking of options according to our choices, and the ranking of options in terms of the welfare they provide). Nevertheless, there are instances in which a specific choice would increase an individual's welfare (hence being the option that their "self-interest pursuit" would lead them towards), but social or moral constraints restrain them from opting for the welfare-optimizing option. Hence, Sen argues that self-interest and rational choice might not always coincide, rendering the "self-interest pursuit" approach equally problematic.

Overall, the fact that Sen is consistently critical of these treatments of rationality points toward his acknowledgment of the intrinsically unpredictable and processual nature of the

social realm and his rejection of deterministic accounts of human nature. Such views are explicit in his accounts of the nature of rationality and the human agent and constitute further evidence of his endorsement of an evolutionary outlook.

Sen's Alternative Account of Rationality

For Sen, contrary to the mainstream, rationality should not be conflated with, or reduced to, some kind of a perpetual activity facilitative of self-interest maximization. It does not entail that choice is to be conceptualized as being internally consistent with a particular set of axioms either. Sen argues that rationality is the activity of assessing different options in the form of values, goals, and practical decisions, and subjecting them to reasoned scrutiny:

Rationality is interpreted here, broadly, as the discipline of subjecting one's choices—of actions as well as of objectives, values and priorities—to reasoned scrutiny. Rather than defining rationality in terms of some formulaic conditions that have been proposed in the literature (such as satisfying some prespecified axioms of “internal consistency of choice,” or being in conformity with “intelligent pursuit of self-interest,” or being some variant of maximizing behavior), rationality is seen here in much more general terms as the need to subject one's choices to the demands of reason. (Sen 2002, 4)

This view of rationality implies that behavior may reflect different preference orderings since they are subject to change and may be incomplete. Sen embraces openness by arguing that rationality does not necessitate that any particular motivation (such as self-interest) must dominate all others, and neither does it necessitate that actual behavior can be reduced to complete preference orderings. In fact, it does not necessitate the conformity of decision-making and social activity to any specific preference ordering at all; quite the contrary, his views on rationality formally integrate and conceptually enable the likelihood of revisiting and ultimately changing any given preference orderings. Sen's (1987a; 1997; 2002) conceptualization of human agents is another indication of his evolutionary orientation, as he considers the individual as being influenced by many incentives beyond a narrowly defined notion of self-interest.

Sen (1997) dedicates an entire paper to distinguishing the critical differences between the various values, goals, and motivations that become the object of rational examination. He maintains that even though motivations such as reputation and sympathy could be conceptualized as constitutive of an individual's “utility” or welfare (in cases where there is an impact on welfare from sympathy or cases where the incentive to preserve one's reputation is to achieve future welfare gains), different motivations such as moral imperatives, social commitment or conventional rule-following, are of a kind that “drive a wedge” between personal choice and personal welfare. Consequently, the motivation of self-interest fails to incorporate all relevant “reasons for choice.” This entails that the application of the term “preference” should be treated with caution, clarifying whether the intention is to designate personal welfare or actual choices. Sen argues:

The economic theory of utility, which relates to the theory of rational behavior, is sometimes criticized for having too much structure; human beings are alleged to be ‘simpler’ in reality. If our argument so far has been correct, precisely the opposite seems to be the case: traditional theory has

too little structure. A person is given one preference ordering, and as and when the need arises this is supposed to reflect his interests, represent his welfare, summarize his idea of what should be done, and describe his actual choices and behavior. (Sen 1982, 99)

In another, more recent, comment, Sen maintains that:

[Rational Choice Theory] has denied room for some important motivations and certain reasons for choice, including some concerns that Adam Smith had seen as parts of standard “moral sentiments” and Immanuel Kant had included among the demands of rationality in social living (in the form of “categorical imperatives”). (Sen 2002, 28)

His criticisms of rational choice theory, alongside his own views on rationality and the nature of the human agent, indicate the centrality of the notion of freedom in Sen’s (2002) work and constitute further evidence of his adoption of an evolutionary vision. The latter is made particularly apparent when comparing the nature of freedom, and its centrality to his work, to the overly passive and deterministic conceptualizations of humans, criticized by Sen.

Martins (2007) argues that Sen’s view of the human capability to critically assess and freely choose different objectives, options, and values could be interpreted as an elaboration of the more general category of freedom. Sen suggests that rational behavior cannot be constrained to the actualization of decision-making following our preferences, objectives, or values. Conversely, rationality should be conceived as the means to achieving freedom or the power to critically assess those preferences, objectives, and values. As argued, the evolutionary stance of Sen regarding rationality and its identification with the freedom of scrutiny of objectives and motivations is the antithesis of mainstream economic theory. This is evident after considering that for someone like Milton Friedman (1953), discussed by Sen (2008), among the latter’s primary objectives is the accurate prediction of actual behavior. The utilitarian conceptualization of rationality and the presumption that actual activity coincides with rational behavior ground the viability of pursuing such predictions. In contrast, Sen’s evolutionary outlook on rationality allows for the radical unpredictability of outcomes and constitutes a necessary precondition for freedom.

This openness of outcomes is possible since the emergence of incomplete preference orderings, as an outcome of rationality (constitutive of freedom), is central to the theory. Rationality is conceptualized as facilitating human unpredictability instead of being the primary driver of predictability in decision-making. Consequently, there could be instances where an individual could have opted for any of the alternatives that are not ranked in their preference ordering. As Martins (2007) notes, Sen’s conceptualization of rationality entails an openness of outcomes, or a conception of the social realm where predictable regularities are not ubiquitous and predicting actual behavior is most likely impossible. This crucial notion of incomplete preferences, indicative of a broader evolutionary outlook akin to Veblenian notions of cumulative causation, is the antithesis of a “closed systems” or a “mechanical” conceptualization of the social realm characterized by event regularities that underpin mainstream economics.

The Importance of Structure and Process

Sen’s evolutionary orientation can also be identified in his notion of “structure,” as developed in his analysis of social structures and norms. This is another aspect of his work

that points to an agreement with a Veblenian evolutionary outlook since Veblen's work is characterized by a distinct emphasis on the causal importance of social norms and structures as essential features of the life that humans lead as communal beings. Sen identifies social norms of practice as a fundamental aspect of reality that cannot be reduced to the atomistic interaction of individuals. His critique of mainstream microeconomic theory is substantiated as he rejects the reduction of all social norms of individual interaction to a kind of optimizing behavior. This is particularly evident in his explicit criticism of the atomistic methodological presuppositions of mainstream economics:

We shall find that the effectiveness of different rules of collective choice depends much on the precise configuration of individual preference orderings, and these configurations will, in general, reflect the forces that determine individual preferences in a society. Just as social choice may be based on individual preferences, the latter in their turn will depend on the nature of the society. Thus, the appropriateness of alternative rules of collective choice will depend partly on the precise structure of the society. The content of individual preferences is also an important issue. [. . .] The society in which a person lives, the class to which he belongs, the relation that he has with the social and economic structure of the community, are relevant to a person's choice not merely because they affect the nature of his personal interests but also because they influence his value system [. . .]. The insular economic man pursuing his self-interest to the exclusion of all other considerations may represent an assumption that pervades much of traditional economics, but it is not a particularly useful model for understanding problems of social choice. (Sen 2017, 50–51)

In addition to his work on rational choice discussed (Sen 1997), this is particularly evident in his discussion of ethical behavior and Adam Smith's conception of general rules of conduct.⁵

His evolutionary outlook is also evident in his use of "process," which further points towards the adoption of a Veblenian causal processual outlook. This concept is incorporated in his capability approach, specifically in his notion of functionings (Sen 1999). In the capabilities approach, Sen maintains that the space to evaluate well-being is not utility, resources, commodities, or primary goods. He argues that the latter are merely a means to well-being while utility is a subjective mental metric not representative of deprivation or real welfare. He claims that the same primary goods or resources will be subjected to different perceptions of utility according to the taste or circumstances of those involved. As such, to an individual with expensive tastes, free access to basic goods such as drinkable tap water may not mean much compared to an individual suffering from poverty (and would highly value such a good). Sen's point is that subjective preferences might become adapted to a worse situation or distorted by a privileged position. Consequently, well-being must be evaluated in the space of human functionings, these functionings being the individual's actual achievements, or what a person is or does. The term "functioning" is employed as a dynamic concept, designating the process of being in some way or doing something.

⁵ On this point, see Sen (1987a) and Walsh (2000).

Sen considers advantage and well-being to be distinct concepts. Advantage refers to potential achievement, while well-being refers to actual achievement. Consequently, the appropriate space to evaluate inequality and advantage is not that of actual or achieved functionings since these reflect only well-being. For Sen, the appropriate space is that of potential functionings, designated as “capabilities.” Capabilities are conceptualized as potentials, which may be actualized, while well-being rests on the particular actualized functionings. Sen incorporates the notion of process to designate that what satisfies the appropriate actualization of a capability is the manner in which an individual succeeds to function in a given social setting. For example, when discussing the well-being of a female employee in a developing country, Sen would not restrict his analysis to the fact that she has been included in the workforce and is remunerated accordingly. He would claim that such static notions would be misleading as they ignore the process which enabled her inclusion into the workforce in the first place; “process,” in this respect, is the manner in which this situation has come about, emerged, or been constituted. This is key since it might be that this process has been simultaneously preventing her from enacting other capabilities which are crucial to her self-actualization. In this example, it might be the case that the woman in question was included in the workforce as a manual worker in the textile industry through a process that necessitated her recruitment at a young age, thus, excluding her from basic education.

Sen maintains a critical stance from static welfarist approaches, which exhaust their analyses of inequality by seeking ways of reallocating specific resources uniformly across different individuals and ignore the structural character of inequality and the importance of relationality. For Sen, it is how an individual succeeds in functioning in a particular capacity that matters, which entails that “process” is a dynamic and relational notion that is not reducible to static categories such as income or GDP per capita. This is reminiscent of Veblen’s critique of the static and atomistic taxonomic categories that he sees neoclassical economists as continuing to rely upon.

For Sen, the notion of freedom incorporates not only the opportunity aspect but also the process aspect, highlighting the importance of process in his framework and its direct relation to structure. Process is a pivotal concept since it provides a conceptual bridge between his notions of freedom and structure, which enables him to holistically assess human well-being with respect to the conditions faced by the individuals in question. This is achieved by including in his framework insights on the (restrictive or enabling) effect of social structures (the “opportunity” aspect of freedom) and whether the manner of actualization of these capabilities is consistent with the well-being (or “flourishing”) of those individuals. This broader outlook is compatible with Veblen’s causal processual conceptualization of the social realm and, in particular, Veblen’s rejection of an overly passive view of humans and his emphasis on the importance of social norms and structures.

Overall, for Sen, “process” suggests both an acceptance of openness of outcomes, since he employs the term to designate the dynamic (instead of static) nature of social interactions, and an acceptance of relationality. Regarding the later use, he employs “process” when discussing inequality to designate that the relationality of the individuals (whose well-being is) assessed must be recognized as an essential feature of reality. Regarding the former use, Sen seems to suggest that process is that which takes place when individuals interact and designates how a particular situation (state of affairs) is manifested or has come about. This is closely related to structure, and so, it has been argued that “process” is a pivotal concept

for Sen providing a conceptual bridge between his notions of freedom and structure as all social activity is a process since it is both dynamic (related to openness and his notion of freedom) and relational (related to his notion of structure). Both aspects of “process” point to him adopting an evolutionary vision where agency and structure are preconditions of one another while not being reducible to each other.

Human Interconnectedness and Diversity

Two more crucial concepts in Sen’s work indicate his adoption of an evolutionary vision: interconnectedness and diversity. Contrary to atomism, the concept of interconnectedness features prominently when he argues that economic development must be conceptualized within a broader context of the intricate interactions between political, social, economic, and cultural factors. He also considers human diversity to be crucial when considering human well-being.

Sen’s emphasis on interconnectedness is compatible with Veblen’s view that an evolutionary outlook is characterized by a recognition that economic and non-economic factors are interconnected and jointly influence the emergence of economic and social outcomes. This is another aspect of Veblen’s thought that reinforces the importance of cumulative causation and openness since the interconnection of such factors renders social outcomes and individual behavior inherently unpredictable. Moreover, Sen’s views on diversity are compatible with Veblen’s views on the irrelevance of overly simplistic and deterministic conceptualizations of humans.

Starting from his view on the interconnections between political, social, economic, and cultural factors, as Martins (2007) argues, for Sen, these particular interconnections constitute an irreducible feature of reality since these factors are not isolatable from one another and could not be assessed separately. This is evident in Sen’s account of development as freedom since he argues that development must be conceptualized through the context of the complex “interconnections” between what he designates as different “instrumental freedoms” such as “political freedoms,” “economic facilities,” “social opportunities,” “transparency guarantees” and “protective security” (Sen, 1999, xii). In motivating his capabilities approach, he claims that such interconnections are essential:

What people can positively achieve is influenced by economic opportunities, political liberties, social powers, and the enabling conditions of good health, basic education, and the encouragement and cultivation of initiatives. The institutional arrangements for these opportunities are also influenced by the exercise of people’s freedoms, through the liberty to participate in social choice and in the making of public decisions that impel the progress of these opportunities. These interconnections are also investigated here. (Sen 1999, 5)

He consistently treats these interconnections as central to his framework, for these factors cannot be analyzed as if they could be isolatable from one another. For example, his discussion of the importance of culture (or “differences in relational perspectives”) is characteristic of this conception since he claims that intersocietal differences in customs and norms pertaining to the perception of value are an essential feature of reality which is incorporated into his framework:

The commodity requirements of established patterns of behavior may vary between communities, depending on conventions and customs. For example, being relatively poor in a rich community can prevent a person from achieving some elementary “functionings” (such as taking part in the life of the community) even though her income, in absolute terms, may be much higher than the level of income at which members of poorer communities can function with great ease and success. For example, to be able to “appear in public without shame” may require higher standards of clothing and other visible consumption in a richer society than in a poorer one (as Adam Smith noted more than two centuries ago). The same parametric variability may apply to the personal resources needed for the fulfillment of self-respect. This is primarily an intersocietal variation, rather than an interindividual variation within a given society, but the two issues are frequently interlinked. (Sen 1999, 71)

It is after all these interconnections that inform his recommendations for institutional reform conducive to human development, referring again to a process that has to be initiated:

The process of development is crucially influenced by these interconnections. Corresponding to multiple interconnected freedoms, there is a need to develop and support a plurality of institutions, including democratic systems, legal mechanisms, market structures, educational and health provisions, media and other communication facilities and so on. (Sen 1999, 53)

Regarding diversity, this concept is pivotal to his argumentation against John Rawls and his notion of primary goods. As Martins (2007) argues, for Sen, diversity is an essential and distinguishing feature of reality and should not be treated as an additional complication to be introduced in later stages of an analysis. Sen explains how an individual’s disability must be thoroughly considered when distributing resources, wealth, or “primary goods” (Sen 1999, 70). Different individuals will experience different levels of well-being when allocated an equal share of such resources and focusing exclusively on how equally the latter are distributed leads to neglecting human diversity. As discussed in the context of process, diversity renders the same sorts of primary goods as able to promote different levels of well-being to different people rendering welfarist analyses, founded on static categories such as utility, inappropriate for the task at hand. This is particularly evident in his criticisms of Rawls-inspired welfarist approaches to assessing inequality based on real-income or “primary goods”:

At the practical level, perhaps the biggest difficulty in the real-income approach to well-being lies in the diversity of human beings. Differences in age, gender, special talents; disability, proneness to illness, and so on can make two different persons have quite divergent opportunities of quality of life even when they share exactly the same commodity bundle. Human diversity is among the difficulties that limit the usefulness of real-income comparisons for judging different persons’ respective advantages. (Sen 1999, 69–70)

The broader emphasis on the value and importance of cultural diversity in Sen’s work, especially in the nature of functionings within the capabilities approach, indicates this view’s weight in Sen’s broader evolutionary outlook. However, Sen’s appreciation of

human diversity and his broader views on the intrinsic importance of structure, process, and freedom in human behavior, which he claims to be largely ignored by the mainstream conceptualization of rationality, will be shown to be at odds with his indiscriminate adoption of formal methods.

Sen and Mathematical Modeling: Committing to Formalism and Associationism

Sen's criticisms of mainstream economics alongside his notion of capabilities, emphasis on process, and recognition of social structure have been shown to be suggestive of a causal processual conceptualization of the social realm, compatible with what Veblen would describe as an evolutionary view of the nature of social science. As with the case of Marshall and Neville Keynes in Veblen's analysis, the question is whether he also adopts a taxonomic conception of science, particularly at the level of methodology. If this is shown to be the case, an important tension would be identified as his work will be relying upon a contradictory set of ontological presuppositions. If so, this would justify Sen's work being categorized as neoclassical, in the Veblenian sense of the term.

Sen's Views on the Origins of Methods: The "Engineering" and "Ethical" Approaches

This subsection will argue that there is evidence of the retention of a taxonomic view in Sen in the form of his discussion of a so-called "engineering" approach, which he persists in seeing as valuable. This "engineering" approach will be shown to be essentially taxonomic. Rather than perceiving the problematic ontological presuppositions associated with this approach, Sen claims it is relevant and supplies insights, albeit ones needing to be supplemented.

Sen suggests that there are two distinct origins of economics, one of them being "ethics-based" pertaining to questions on human motivation and social achievement, and the other being "engineering-based" pertaining to questions of a purely technical or logistical nature. Specifically:

In discussing a great range of practical problems, varying from 'building of villages,' 'land classification,' 'collection of revenue,' 'maintenance of accounts,' 'tariff regulations,' etc., to 'diplomatic maneuvers,' 'strategy for vulnerable states,' 'pact for colonization,' 'influencing parties in an enemy state,' 'employing spies,' 'controlling embezzlement by officers,' and so on, the attention is very firmly on 'engineering' problems. The motivations of human beings are specified by and large in fairly simple terms, involving inter alia the same lack of bonhomie which characterizes modern economics. Ethical considerations in any deep sense are not given much role in the analysis of human behavior [. . .]

Given the nature of economics, it is not surprising that both - the ethics-related origin and the engineering-based origin of economics have some cogency of their own. I would like to argue that the deep questions raised by the ethics-related view of motivation and of social achievement must find an important place in modern economics, but at the same time it is impossible to deny that the engineering approach has much to offer to economics as well. In fact, in the writings of the great economists both

the features are noticeable in varying proportions. The ethical questions are obviously taken more seriously by some than by others. For example, it has a greater hold on the writings of, say, Adam Smith, John Stuart Mill (despite what Bentley says), Karl Marx, or Francis Edgeworth, than on the contributions of, say, William Petty, Francois Quesnay, David Ricardo, Augustine Cournot, or Leon Walras, who were more concerned with the logistic and engineering problems within economics.

Neither kind is, of course, pure in any sense, and it is a question of balance of the two approaches to economics. (Sen 1987a, 6)

Except for general references to a “technical” and “logistical” nature, Sen does not discuss in detail the nature of the methods associated with the “engineering” approach, nor does he interrogate their ontological presuppositions. Nonetheless, the deductivist nature of the approach is revealed in Sen’s discussion of the development of formal “general equilibrium theory” and its mathematico-deductivist methods as an example of the engineering approach (Sen 1987a, 8).

Even though Sen concedes that the “ethical” and “engineering” origins cannot be considered entirely pure or separate from one another, he claims that there are two distinct “approaches” to economics that deal with different questions and have much to offer to the discipline in their own right. This suggests that for Sen, there are parts of social reality that could be treated by deductivist methods of the “engineering” kind, while other questions could be addressed through the “ethical” approach. It is his understanding of an engineering approach that indicates his views on the necessity of the retention of a taxonomic approach. Sen’s concern is not about the suitability of deductivist methods to assess social phenomena, as he does not explore the possibility of the ontological incompatibility of their assumptions with their object of study. Conversely, he takes it as self-evident that over a certain range, such methods are appropriate:

When we were young, there used to be huge and heated arguments, particularly in Cambridge, about whether mathematics is, or is not, useful in economics. It would be hard to find a sillier subject for debate. Math is sometimes very useful for economic analysis, and sometimes it isn’t at all. There is nothing particularly interesting to discuss here. (Sen, Deaton, and Besley 2020, 12) ⁶

Sen does not explore whether the ontological insights of the “ethical” approach bear implications regarding the suitability of certain methods to study the social realm. He treats the “ethical” and the “engineering” approaches as different but mutually supportive endeavors not recognizing the tensions between their respective ontological presuppositions. Ultimately, he downgrades the “ethical” approach seeing it as engaged in primarily descriptive exercises.

⁶ This is a bold statement. In other contributions (Sen 2004 and 2008), he considers the issue of the relevance of mathematics to economics in a more nuanced way. Even there though, his analysis is not at the level of ontology and does not consider the repercussions, regarding the viability of the mainstream project, stemming from the presuppositions of the methods employed in economics. Sen claims that the incorporation of a philosophical orientation is necessary in adding a layer of sophistication to mathematical methods but does not consider that a philosophical consideration of the ontological presuppositions of the methods could jeopardise the legitimacy of their use as an appropriate means of conducting research in the social sciences.

Sen claims that the study of modern economics has been “substantially impoverished by the distance that has grown between economics and ethics” (1987a, 7), indicating the supplementary nature of ethical concerns to economics, while he simultaneously claims that the “engineering” approach should be defended as it has been fruitful overall. He claims that there are many questions economists have effectively addressed via the use of such deductivist methods. He proceeds by arguing that such contributions have been possible despite the neglect of insights from the ethical approach because there are economic issues of a logistic nature that can be addressed efficiently through a format based on a narrowly construed nonethical view of human behavior and motivation (Sen 1987a).

Sen defends the use of deductivist methods by appealing to the benefits of developing the formal “general equilibrium theory.” In their attempt to deal with exchange and production involving market relations, such methods, Sen claims, have brought out important correlations that require the use of very sophisticated technical analysis. Despite the high level of fictionalization that characterizes these theories, not only in over-simplifying social institutions but also in viewing humans themselves very narrowly, Sen claims that they have undoubtedly made it easier to comprehend the nature of social interdependence while they have also been proven useful even in some practical issues. He claims:

First, it is not my contention that the ‘engineering’ approach to economics has not been fruitful. I believe it has often been very fruitful. There are many issues on which economics has been able to provide better understanding and illumination precisely because of extensive use of the engineering approach.

These contributions have been possible despite the neglect of the ethical approach, since there are important economic logistic issues that do call for attention, and which can be tackled with efficiency, up to a point, even within the limited format of a narrowly construed nonethical view of human motivation and behavior. To give just one illustration, the development of the formal “general equilibrium theory,” dealing with production and exchange involving market relations, have sharply brought out important interrelations that call for technical analysis of a very high order. While these theories are often abstract, not only in the sense of characterizing social institutions in a rather simple form, but also in seeing human beings in very narrow terms, they have undoubtedly made it easier to understand the nature of social interdependence. Such interdependence is one of the more complex aspects of economics in general, and the insights derived from these theoretical analyses have proved useful even in practical ‘bread and butter’ problems. (Sen 1987a, 8)

He is using the example of famines and the fact that they can be caused even in instances of increased food availability since the phenomenon could be usefully analyzed through patterns (or event regularities) of interdependence, which general equilibrium theory has emphasized and focused upon. His point in using such an example is not only to suggest that highly fictitious⁷ theoretical models are of practical relevance but, more

⁷ In the excerpt above, Sen characterizes general equilibrium theory as ‘abstract.’ As Lawson (1997, 227) shows, abstraction, understood as “focusing upon certain aspects of something to the (momentary) neglect of others,” is an indispensable method in science indeed. Nevertheless, mainstream economic theory does not rely

importantly, to emphasize that even the particularly narrow account of human motivation, with ethical considerations renounced, might nonetheless serve a purpose in understanding the nature of various important social relations in economics. He argues that the de-ethicized “engineering” approach may be productive when applied in economics.⁸

Sen’s concern is that due to the nature of these methods, certain critical ethical questions are not adequately considered, and certain normative factors that drive human behavior are not appropriately incorporated. In his words:

It is arguable that the importance of the ethical approach has rather substantially weakened as modern economics has evolved. The methodology of so-called ‘positive economics’ has not only shunned normative analysis in economics, it has also had the effect of ignoring a variety of complex ethical considerations which affect actual human behavior and which, from the point of view of the economists studying such behavior, are primarily matters of fact rather than of normative judgement. If one examines the balance of emphases in the publications in modern economics, it is hard not to notice the eschewal of deep normative analysis, and the neglect of the influence of ethical considerations in the characterization of actual human behavior. (Sen 1987a, 7)

In this way, his work on social choice theory (SCT), and his work in welfare economics, which employed similar methodologies, could be interpreted as exemplifying his notion of “balance” between the two approaches discussed, as Sen could be seen as seeking to incorporate certain insights from the “ethical” approach regarding human nature into the “engineering” approach. This interpretation is textually supported since he argues that modern economics can be made more effective by “paying greater and more explicit attention to the ethical considerations that shape human behavior and judgment” while he claims that his intention is not “to write off what has been or is being achieved, but definitely to demand more” (1987a, 9). Nonetheless, a more comprehensive exploration of Sen’s work is necessary to substantiate this claim further.

Social Choice Theory: Seeking a Balance between the Two Approaches

An appropriate starting point for such an assessment is one of Sen’s most recent contributions, the 2017 reissue of his first major book, *Collective Choice and Social Welfare*, originally published in 1970. Further to being his landmark contribution to SCT, this is a revised and expanded edition that includes eleven new chapters with Sen’s commentary on, and in some instances, further development of, his original ideas. Consequently, this book encapsulates Sen’s early research in SCT and his most recent views on his own work. Notably,

on abstraction but on fictionalization (Lawson 1997, chap. 16) since essential features of the phenomena under study are entirely excluded (such as the interrelatedness of human agents) and replaced by invented and unrealistic presuppositions (such as atomism). Consequently, the “very narrow terms” in which humans are seen in such models are not abstract, as Sen claims above, but fictitious.

⁸ His identification and positive assessment of the “engineering” approach is reminiscent of Marshall’s “statical” approach which refers to the application of methods presupposing event regularities in economics (see Pratten 2021). Marshall adopts similar arguments to defend the practical usefulness of abstract “unrealistic” models while Sen’s use of the general equilibrium theory as an example of an abstract model with useful practical implications is almost identical to Marshall’s (1898) assessment of equilibrium theorizing as a device that can inform applied studies of tendencies in the equilibrium direction. As with Sen, Marshall claims that equilibrium theorizing, regardless of its dangers, should be maintained since it remains an essential stage that an appropriate, scientifically conducted, economics should pass through.

most excerpts used are derived from either the preface or the book's new introduction and are illustrative of Sen's current opinions on the respective matters.

The setup of the book is indicative of Sen's total commitment to the use of formal methods since it, as with the original, is divided into chapters that adopt an informal stylistic presentation of the arguments developed (the unstarred chapters), which are then followed by chapters employing extensive formal language and mathematical reasoning (the starred chapters). Sen admits that he purposely confined the mathematical reasoning part to the starred chapters while the unstarred chapters employed exclusively ordinary language to render his work accessible to a broader audience. He claims that this stylistic experiment was successful since it allowed him to reach a wider audience given the technical nature of the content, but most importantly, this stylistic dichotomy also fitted in well with a view that he still subscribes to, "of social choice as a subject that demands both mathematical analysis and informal assessment" (Sen 2017, xxiv).

Sen's view that ordinary language needs to be employed to serve mainly purposes of accessibility, and not substance, is apparent through his claim that "our deeply felt real-world concerns have to be integrated with the analytical use of formal and mathematical reasoning" (Sen 2017, xxxiii). For Sen, the formal element of the analyses cannot be avoided since the subject matter of social choice includes logical and mathematical complications that must be dealt with. This is illustrated in this segment of the preface of his original 1970 book:

A nontechnical reader can get an intuitive idea of the main arguments from the unstarred chapters. However, for precise statement of results as well as proofs, the starred chapters have to be read. The partitioning of the book into formal and informal chapters is a stylistic experiment. Many problems of collective choice require a rigorous and formal treatment for definiteness, and informal arguments can indeed be treacherous, but once the results are obtained, their meaning, significance and relevance can be discussed informally. In fact, a purely formal discussion of significance would be unnecessarily narrow. The book attempts to cater to two distinct groups of readers, viz., those who are primarily interested in the relevance of the results rather than in their formal statement and technical derivations, and those who are also concerned with the latter. (Sen 1970, vii)

Put differently, a theory of social behavior whose purpose is to provide an account of the nature of social interactions is deemed to be reliant upon formal mathematical reasoning since these methods are considered the most appropriate to deal with the subject matter at hand and resolve any potential conflicts. Sen finds mathematics especially useful for analyzing possible outcomes of social choices and discusses ethical implications in light of that kind of mathematical analysis. Sen finds mathematics useful for conducting "prescriptive" analysis, but this does not necessarily mean he finds mathematics useful for "descriptive" analyses, conceding in the 2017 re-edition that specific prominent issues of social choice also demand "ordinary language" scrutiny and cannot do without it. Nonetheless, in the lecture that he gave upon the acceptance of the Nobel Prize, Sen made this revealing statement:

Those who are suspicious of formal (and in particular, of mathematical) modes of reasoning are often skeptical of the usefulness of discussing real-world problems in this way. Their suspicion is understandable, but it is ultimately misplaced. The exercise of trying to get an integrated

picture from diverse preferences or interests of different people does involve many complex problems in which one could be seriously misled in the absence of formal scrutiny. [. . .] In the process of discussing some substantive issues in social choice theory, I shall have the opportunity to consider various results which . . . are not easily anticipated without formal reasoning. Informal insights, important as they are, cannot replace the formal investigations that are needed to examine the congruity and cogency of combinations of values and of apparently plausible demands. [. . .] It is centrally important for social choice theory to relate formal analysis to informal and transparent examination: I have to confess that in my own case, this combination has, in fact, been something of an obsession, and some of the formal ideas I have been most concerned with [. . .] call simultaneously for formal investigation and for informal explication and accessible scrutiny. (Sen 1998, 353)

This implies that a method capable of providing any valuable insights in such matters would have to be of a mathematical nature, but its results and premises might (but not necessarily) need to undergo some non-mathematical scrutiny. This is consistent with Sen's quest to import insights from the "ethical" into the "engineering" approach or his project to "descriptively enrich" the discipline. This is reminiscent of Marshall's view that the "statical" methods should be retained since the problems caused by their abstract nature can be remedied by the subsequent inclusion of descriptive factors (originally excluded from the analysis) to assess their results realistically.

SCT has been one of Sen's primary interests, so a discussion of the nature of the theory and Sen's contributions would illuminate his retention of taxonomic methods in the form of mathematico-deductivist approaches and the subsequent importation of their ontological presuppositions into his work. Following mathematical social scientists such as Abraham Bergson and Paul Samuelson, Kenneth Arrow was interested in an aggregate "social welfare function" which would represent the interests of the individuals involved. He identified that aggregate function with the values of the individuals in a given society. The functional relation between social choice and individual values became the definitive formulation of the approach developed by Arrow (1951) in his landmark book, *Social Choice and Individual Values*.

Sen concedes that Arrow's contributions directly inspired his work. However, Sen claims that "the focus" of his 1970 book "was on normative social choice theory, instead of the primarily descriptive and predictive subject of voting theory" (Sen 2017, xiii). This statement indicates Sen's adoption of the same principles, methodology, and ontological presuppositions as Arrow and his claimed intention to focus on different aspects of the normative implications of the framework's application. The main problem in Sen's analysis is his insufficient acknowledgment of the atomistic ontology implicit in his ethical analysis, drawing on SCT. SCT takes subjective preferences as exogenous data and thus presupposes atomist human beings driven by subjective preferences, failing to consider the social structures that shape capabilities.

More specifically, Arrow's landmark contribution, the "impossibility theorem" (formally, the "General Possibility Theorem"), is a mathematical demonstration that illustrates that even certain mild conditions of reasonableness were not possible to be simultaneously satisfied by any social choice procedure that identifies a social ordering for each cluster of

individual preference orderings (Arrow 1951). The challenge he dealt with was moving from individual preferences over different potential states of affairs to a “social preference” over those states. The social preference would reflect an “aggregation” of the points of view of all atomized individuals who constitute a society.

Arrow identified individual preferences with complete orderings of states of affairs. A social choice procedure that facilitates the move from a cluster of individual preference orderings of isolated individuals (one ordering per person), also called a “profile” of individual preferences, to a social preference ordering constitutes a “social welfare function.” This “social welfare function” is grounded on the notion that if a state of affairs x is socially ranked above another y , then it can be inferred that state x yields more “social welfare” than y . The analogies with taxonomic concepts are evident.

Interestingly, the impossibility theorem uses formal logic to show that a particular set of mildly demanding conditions of reasonableness cannot be satisfied simultaneously by any resultant social welfare function or any such procedure of social aggregation. This was taken to indicate that an approach purely relying on a formal mathematical methodology proved some serious inherent problems with democratic procedures. Many interpreted it as an anti-democratic result carrying profound consequences, deducing that only a dictatorship could formally prevent social strife.

Unlike many of his peers, Sen was not discouraged by the results of this formal exercise, nor was he led to question the validity and relevance of its methodology. Instead, he was convinced that using such a methodology was necessary to resolve matters of common interest. He proclaims that the original version of his 1970 book was primarily concerned with redirecting SCT towards a more “constructive” direction, while the recent re-edition aims to promote Arrow’s “constructive” program further.

This is apparent in Sen’s contributions to SCT. One of his most important contributions was the introduction of “partial orderings” instead of the complete orderings, which formed the foundation of Arrow’s work. Complete rankings dictate that every pair of alternatives can be ranked firmly against each other, while partial rankings, even partial orderings which satisfy the demands of transitivity, allow for some pairs to be unranked. Sen argues that such a departure bears important implications. He claims that the classical framework of optimization used in standard choice theory could be conceptualized as a matter of choice amongst the feasible options available where the “optimal” alternative is that which is at least as good as every other alternative.

Conversely, a “maximal” alternative, formally defined, is one that is not considered worse than (or, at least, not known to be worse than) any other feasible alternative. In this way, Sen argues that when x and y cannot be ranked against each other, no optimal alternative can be identified in such a pair (x, y) . In contrast, both are, under such circumstances, considered maximal.

Sen offers a technical solution to the ethically undesirable results of the Arrowian framework. He claims that, given the predominance of partial orderings, the mathematical distinction between the “optimal” and the “maximal” is critical in the theory of sets and relations and offers a gateway from the paradox. Sen argues that the general discipline of maximization differs from the special case of optimization since it considers an alternative rational choice when it is not established to be worse than any other. An element of a set can be qualified as maximal if we can ensure that it is not worse than any of the other available alternatives, which entails that it is not necessary to demonstrate that it is better than, or at

least as good as, all other alternatives. The foundational difference between optimization and maximization stems from the possibility that the preference ranking R may be incomplete or that there might be a pair of alternatives x and y such that x is not considered (at least, not as yet) as being at least as good as y , and, further, y is not seen (at least, not as yet) as at least as good as x .

Sen's work is indicative of his views that scientific contributions in the social sciences should be made through formal mathematical methods. For him, measurement (and quantification in general) is based on rankings, and rankings (or orderings) are the basis for human thinking (Sen 2017, 365–367).⁹ He claims that the introduction of partial orderings expands the applicability of SCT decisively and suggests that his formal solution to the paradox enables the attainment of practical solutions despite some remaining disagreements. He is pessimistic about whether complete agreement over issues of global importance (the environment or pandemics) could be reached. Nevertheless, he claims that with adequate public discussion and active advocacy, agreement on partial remedies that need not await a complete resolution of all our differences is feasible.

His criticisms of mainstream economics and its reliance on a certain conception of rationality, which presupposes perfect orderings, have informed his own alternative proposition of imperfect or partial orderings. Despite his rejection of one of the most foundational premises of mainstream economics, Sen has replaced it with a less rigid notion of preference ranking, which still presupposes a social reality of atomized individuals whose actions can be predicted under given circumstances. When faced with the Arrowian impossibility paradox (an issue of an inherently social nature), Sen resorted to maintaining the same methodology and attempting to resolve it through the same set of formal mathematical methods as those used by peers he criticized.

Sen's methods are indeed taxonomic, and he has been shown to explicitly maintain that such methods are necessary for the conduct of social sciences. His adoption of a taxonomic methodology and the import of relevant ontological presuppositions is also made evident by the "social welfare function," which is maintained in his analysis and is not ontologically different from similar functions which represent different kinds of aggregations of individual preferences in mainstream economics. Evidently, the presuppositions of such methods adopted by Sen contradict his previously discussed evolutionary views on the nature of the social realm.

Sen praises the capability of Arrow's framework to predict the results of different social arrangements given the relevant social welfare functions (2017, 87), while he claims that "the solutions put forward by Nash, Braithwaite, and others in similar models, might be relevant for predicting certain outcomes of bargains and negotiations, but they seem to be very unattractive solutions in terms of widely held value judgments about principles of collective choice" (2017, 179). Sen endorses the importance of making accurate predictions in certain circumstances but seems to be critical of some of their ethical implications, which led him to question some of their premises and then form new models with more "ethically acceptable" ones. Sen is shown to endorse the use of formal economic modeling, viewing models as capable of being insightful regarding the way the real world operates (Sen 1999, 262).

In other contributions, Sen (1999, 346) hails the usefulness of economic modeling, despite their problematic presuppositions, claiming that "[t]he classic characterization of the

⁹ For more on this, see Martins (2018, 43).

competitive market by Kenneth Arrow, Gerard Debreu and Lionel McKenzie has provided much insight despite the parsimonious nature of its structural assumptions.” In a Marshallian way, Sen recognizes that the structure of a model might conceal some implicit assumptions that produce the regular relations that the models build on, but he does not consider the limitations of these assumptions as fatal for the modeling enterprise. Instead, he considers such simplifications as heuristically useful if they facilitate the attainment of good predictions, but he points towards some insights that may be obscured.

In the case of competitive markets mentioned, he notes that models may obscure the fact that “successful markets operate the way they do, not just on the basis of exchanges being ‘allowed,’ but also on the solid foundation of institutions (such as effective legal structures that support the rights ensuing from contracts) and behavioral ethics (which makes the negotiated contracts viable without the need for constant litigation to achieve compliance)” (Sen 1999, 262). Sen (2002, chap, 17) explicitly accepts the general equilibrium framework and suggests that a simple replacement of “utility” with “freedom” is sufficient to address any objections to the model.¹⁰

Overall, even though Sen talks piecemeal about choice being a process, the plurality of reasoning, the importance of institutions, and the relationality/intertwinement of humans, his reticence to explore ontological presuppositions means he still gives too much credence to rational choice theory, game theory, and to mathematical modeling in economics in general. This leads him to adopt a taxonomic methodological approach which is intrinsically inconsistent with his evolutionary contributions. In this spirit, Sen asserts that:

The uncompromisingly mathematical nature of formal social choice theory has also contributed to this sense of the remoteness of the discipline of social choice from applicable practical reason. Certainly, actual interactions between the theory of social choice and the pursuit of practical concerns have tended to be significantly discouraged by what is seen as a big gulf between exacting formal and mathematical methods, on one side, and readily understandable public arguments, on the other. [. . .] The mainstream philosophical theories of justice, therefore, appear to many to be much closer to the world of practice than social choice theory can aspire to be.

Is this conclusion right? I would argue that not only is this conclusion wrong, almost the exact opposite may be true, at least in an important sense. There are many features of social choice theory from which a theory of justice can draw a great deal, as will be discussed later, but I begin here by pointing to what is certainly one of the most important contrasts between social choice theory and mainstream theories of justice. As an evaluative discipline, social choice theory is deeply concerned with the rational basis of social judgements and public decisions in choosing between social alternatives. The outcomes of the social choice procedure take the form of ranking different states of affair from a ‘social point of view,’ in the light of the assessments of the people involved. This is very different from a search

¹⁰ Many thanks to one of the anonymous referees for bringing this to my attention. Moreover, as Sen himself notes (Sen, Deaton, and Besley 2020), he does not know anything about econometrics, so he is unable to see the problems with mainstream econometric analysis.

for the supreme alternative among all possible alternatives, with which the idea of justice theories of justice from Hobbes to Rawls and Nozick are concerned. (Sen 2009, 94-6)

Sen suggests that SCT is useful in resolving ethical matters precisely because of its mathematical methodology. This argument is problematic as Sen must know that ranking does not require (or even can arise from the use of) mathematics and that the alternatives he mentions are hardly the best contributions to moral thinking. Nonetheless, Sen criticizes the content of social choice theorizing in terms that are sufficient to undermine it, and these inconsistencies are shown in this article to be widespread in his work. The overall impression is that Sen is a profound intellectual producing much insight. However, he is also motivated to accommodate, or to appear not to challenge much, all the prominent contributors in economics and analytical philosophy he refers to, so much so that he is sometimes prepared to fall into logical contradictions.

This is once more made evident in Sen's discussion on the differences between the "engineering" and the "ethical" approaches. The absence of critical scrutiny of the ontological presuppositions of methods leads him to adopt the former's methods and apply them everywhere, even in ethics, via SCT. He suggests that:

The analytical—and rather mathematical—discipline of 'social choice theory,' which can be traced to the works of Condorcet in the eighteenth century, but which has been developed in the present form by the pioneering contributions of Kenneth Arrow in the mid twentieth century, belongs to this second line of investigation. That approach, suitably adapted, can make a substantial contribution, as I will discuss, to addressing questions about the enhancement of justice and the removal of injustice in the world. (Sen 2009, xvi)

Sen's fixation with the methods derived from the so-called "engineering" approach is apparent in his quest to extend their application into matters of a purely ethical nature. He claims that it is not just economics that has been impoverished from the growing distance with ethics but also that "there is something in the methods standardly used in economics, related *inter alia* with its 'engineering' aspects, that can be of use to modern ethics as well, and the distance that has grown between economics and ethics has also been, I believe, unfortunate for the latter" (Sen 1987a, 10).

To conclude, his insistence on the relevance and applicability of such methods on such matters is indicative of his neglect of the ontological presuppositions of these methods and their intrinsic inconsistency with their object of study. This is apparent in his employment of the language of mathematical modeling in the form of "variables" and "complex interdependencies" of event regularities revealed through such methods as applied to ethical matters. Sen claims that:

In fact, quite aside from the direct role of economics in understanding better the nature of some of the ethical questions, there is also the methodological point that some of the insights used in economics in tackling problems of interdependence can be of substantial importance in dealing with complex ethical problems even when economic variables are not involved. In recent years, a number of moral philosophers have emphasized—rightly in my judgement—the intrinsic importance of many considerations that are

taken to be of only instrumental value in the dominant ethical school of utilitarian thinking. But even when this intrinsic importance is accepted, the need for instrumental and consequential analysis is not really reduced, since intrinsically important variables may also have instrumental roles in influencing other intrinsically important things. As it happens, it is in the pursuit of complex interdependences that economic reasoning, influenced by the ‘engineering’ approach, has made very substantial strides. In this respect, there is something to be gained for ethics from reasonings of the type much used in economics. (Sen 1987a, 10)

This is also apparent in his definition of SCT, in which he outlines and clearly endorses (by nonetheless adopting its methods) its premises which presuppose a social ontology of atomized individuals whose actions are to be aggregated.

Social choice theory, [. . .], is concerned with the relations between individuals and the society. In particular, it deals with the aggregation of individual interests, or judgments, or well-beings, into some aggregate notion of social welfare, social judgment, or social choice. It should be obvious that the aggregation exercise can take very different forms depending on exactly what is being aggregated . . . and what is to be derived on that basis [. . .]. The formal similarities between these exercises in the analytical format of aggregation should not make us overlook the diversities in the nature of the exercises performed. In fact, the axioms chosen for different exercises are often quite divergent, and the general conception of aggregation in social choice permits such variation. (Sen 1987b, 382)

This is inconsistent with his views on the causal processual nature of the social realm, the importance of social structures, and the intrinsic intertwinement of humans. This further indicates that Sen’s work could be deemed distinctively neoclassical in the Veblenian sense. The question remains though as to why Sen adopts methods that are ontologically incompatible with his evolutionary insights. The following section will argue that this is an outcome of his neglect of ontology.

Sen’s Ontological Neglect

In the previous parts, Sen’s views on the distinction between an “engineering,” or “taxonomic” for Veblen, and an “ethical” approach have been presented alongside a discussion of his claims on the necessity of the “engineering” approach to any scientifically credible endeavor in economics. Sen’s commitment to such methods is evident from his indiscriminate adoption of them to undertake different research endeavors. It has been argued that the adoption of such methods has led to crucial inconsistencies within his work, while the latter have been shown to be the outcome of a failure to engage with ontology systematically. This part assesses Sen’s expressed outlook on ontology. It argues that his reluctance to engage with ontology systematically determines his narrow rendition of its study as a scientific field worth pursuing. His work on the capabilities approach, which could be considered perhaps the most ontological in nature, is of particular interest.

Capabilities and Ontology

Sen's work on the capabilities approach has been widely considered one of the main alternatives to mainstream welfare economics.¹¹ In the capabilities approach, human well-being is evaluated in terms of capabilities and functionings. What is novel with respect to mainstream economic theory is that the capabilities approach moves beyond perspectives that conceptualize and analyze well-being in terms of primary goods, resources, or utility. The capabilities approach can be characterized as an approach aimed at establishing not a criterion but a space for evaluating equality; the space of capabilities (instead of utility or primary goods). It has been founded upon Sen's disagreement with using the space of primary goods, as suggested by Rawls (1971), as the appropriate space for assessing inequality.

This departure stems from Sen's view that primary goods are only a means to well-being, not the end to be sought itself and that different individuals will attain different levels of well-being when endowed with the same level of primary goods. Consequently, due to human diversity, equality of primary goods is deemed to lead to inequality of well-being. Sen's criticisms of Rawlsian primary goods conceptualized as the appropriate space for evaluating well-being have been extended to other approaches that focus on resources, goods, material conditions, or commodities as the space for assessing inequality (such as that found in Ronald Dworkin's 1981a and 1981b).

Sen (1982) notes that the utilitarian approach might be a viable alternative since it accounts for such considerations as individuals can be viewed as having different utility functions. However, Sen argues that utilities constitute a reflection of an individual's mental metric and do not necessarily reflect the essential underlying needs given human nature. Moreover, Sen (1982 and 1999) maintains that equality should be evaluated, considering not just achieved functionings but, crucially, the potential to achieve. This entails that equality must be assessed in the space of potential functionings, designated by Martha Nussbaum and Amartya Sen (1993) as capabilities. Consequently, capabilities refer to what a human being can be or do.

Given the above, it has been argued that Sen's capabilities approach is indeed an ontological endeavor and that it is that feature of the approach which distinguishes it from the mainstream.¹² It is suggested that Sen's criticisms against utilitarianism and Rawls's emphasis on primary goods illustrate an ontological concern with what is essential to humans. Sen's argument that a disabled person is disadvantaged in comparison to others, or his view that an individual who is "hard to please" should not be entitled to a higher level of welfare by virtue of eccentric preferences, are seen as suggestive of some notion of what is deemed essential to human nature, which in turn suggests an ontological account of humans and human functioning. Moreover, as discussed, Sen refrains from using static categories such as utility functions, and his discussion on the importance of access to potential functionings instead of primary goods suggests an endorsement of an open system approach.

Nonetheless, Sen seems unconvinced regarding the value of any ontological endeavor. If anything, Sen seems to be consciously avoiding any attempt at ontological systematization altogether, as in the entirety of his work, he mentions the term "ontology" briefly and then

¹¹ See Alkire (2002), Comim, Qizilbash and Alkire (2008), Deneulin (2009), Kuklys (2005), Robeyns (2005), or Walsh (2000; 2003; 2008).

¹² See Martins (2006; 2007), Smith and Seward (2009), and Oosterlaken (2011). Recent contributions have noted, albeit briefly, Sen's failure to provide an adequate treatment of ontology (Martins 2018, 42; Martins 2020, 412).

just in order to signal a distancing orientation from a very specific (and highly implausible) ontological conception. One of the rare times that ontology is explicitly mentioned, Sen, in arguing that “objectivity is itself a rather difficult issue in moral and political philosophy,” notes:

Does the pursuit of ethical objectivity take the form of the search for some ethical objects? While a good deal of complex discussion on the objectivity of ethics has tended to proceed in terms of ontology (in particular, the metaphysics of ‘what ethical objects exist’), it is difficult to understand what these ethical objects might be like. Instead, I would go along with Hilary Putnam’s argument that this line of investigation is largely unhelpful and misguided. When we debate the demands of ethical objectivity, we are not crossing swords on the nature and content of some alleged ethical ‘objects.’ (Sen 2009, 41)

In support of the previous claim, it can be suggested that when an author uses a term only to refer to a very narrow and specific case that would be easily rejected, it is difficult to avoid forming the impression that there is an aversion to the field of study per se that this term is used to describe. This is especially so in the current case, as Sen seems to wholly reject the usefulness of an ontological endeavor by offering an extremely limited conceptualization of the term. More importantly, though, this conceptualization is misguided. Ontology is the study of questions such as whether ethical objects exist. In denying them, Sen is *doing* ontology explicitly, not avoiding it.

Being ontologically explicit does not necessarily entail accepting such objects as real. For example, Lawson (2015) also rejects ethical objects but in an explicitly ontological study (Ragkousis 2023).

In Sen’s most distinguished contribution on the subject, his *The Idea of Justice* (2009), it is apparent that Sen seeks to give the impression of avoiding any ontological discussion which would meticulously engage with issues about human nature. This is evident since he rejects the idea that solutions to real problems may stem from discussions about the nature of the things or beings involved. Most of the commentary seems to be designed to avoid acknowledging the centrality of questions of human nature and interest. Indeed, he purposely constructs illustrative examples which presume only diversity in human nature, which is a paradox given the nature of his project (aiming at determining the notion of “human justice”) and his emphasis on human capabilities.

Only on the last page of that book does Sen concede that we share much as humans, not least in connection to our feelings, concerns, and mental abilities, all clearly features of moral reasoning. Even at this stage, however, Sen seems concerned to appear to be not going too far in this direction:

In arguing that the pursuit of a theory of justice has something to do with the kind of creatures we human beings are, it is not at all my contention that debates between theories of justice can be plausibly settled by going back to features of human nature, rather to note the fact that a number of different theories of justice share some common presumptions about what it is like to be a human being. We could have been creatures incapable of sympathy, unmoved by the pain and humiliation of others, uncaring of freedom, and—no less significant—unable to reason, argue, disagree and concur.

The strong presence of these features inhuman lives does not tell us a great deal about which particular theory of justice should be chosen, but it does indicate that the general pursuit of justice might be hard to eradicate in human society, even though we can go about that pursuit in different ways. I have made considerable use of the existence of the human faculties just mentioned (for example, the ability to sympathize and to reason) in developing my argument, and so have others in presenting their theories of justice. There is no automatic settlement of differences between distinct theories here, but it is comforting to think that not only do proponents of different theories of justice share a common pursuit, they also make use of common human features that figure in the reasoning underlying their respective approaches. Because of these basic human abilities—to understand, to sympathize, to argue—people need not be inescapably doomed to isolated lives without communication and collaboration. It is bad enough that the world in which we live has so much deprivation of one kind or another (from being hungry to being tyrannized); it would be even more terrible if we were not able to communicate, respond and altercate. When Hobbes referred to the dire state of human beings in having ‘nasty, brutish and short’ lives, he also pointed, in the same sentence, to the disturbing adversity of being ‘solitary.’ Escape from isolation may not only be important for the quality of human life, it can also contribute powerfully to understanding and responding to the other deprivations from which human beings suffer. There is surely a basic strength here which is complementary to the engagement in which theories of justice are involved. (Sen 2009, 415)

Overall, explicitly systematized interpretations of human nature are not present throughout Sen’s writing, and they are usually left as overly implicit and under-elaborated. Sen’s notion of freedom, which is central to the capabilities approach, is an indicative example:

In noting the nature of human lives, we have reason to be interested not only in the various things we succeed in doing, but also in the freedoms that we actually have to choose between different kinds of lives. The freedom to choose our lives can make a significant contribution to our well-being, but going beyond the perspective of wellbeing, the freedom itself may be seen as important. Being able to reason and choose is a significant aspect of human life. (Sen 2009, 18)

Notice the “in noting the nature of human lives.” But oftentimes, Sen uses language that avoids objective grounding of an ontological nature, almost as if the relevant criteria are mere matters of choice. Consider how he introduces the capabilities approach and seeks to garner support:

Any substantive theory of ethics and political philosophy, particularly any theory of justice, has to choose an informational focus, that is, it has to

decide which features of the world we should concentrate on in judging a society and in assessing justice and injustice. (Sen 2009, 231)

Instead of acknowledging an ontologically informed orientation based on some account of human nature, Sen discusses the need to merely “choose an informational focus.”¹³ The question in such circumstances is why our informational focus should not be on the pecuniary well-being of the already well-off. Following his discussion on how an individual’s overall advantage is to be assessed in competing accounts, Sen presents his alternative, claiming that:

[I]ndividual advantage is judged in the capability approach by a person’s capability to do things he or she has reason to value. A person’s advantage in terms of opportunities is judged to be lower than that of another if she has less capability—less real opportunity—to achieve those things that she has reason to value. The focus here is on the freedom that a person actually has to do this or be that—things that the idea of justice he or she may value doing or being. Obviously, the things we value most are particularly important for us to be able to achieve. But the idea of freedom also respects our being free to determine what we want, what we value and ultimately what we decide to choose. The concept of capability is thus linked closely with the opportunity aspect of freedom, seen in terms of ‘comprehensive’ opportunities, and not just focusing on what happens at ‘culmination.’ (Sen 2009, 231)

However, the question remains, on what grounds should this approach be adopted? In virtue of what is this not a subjective preference? The answer is that Sen has to implicitly accept that such an account is preferable because of how the world is. Despite Sen’s explicit wish not to acknowledge this, an ontological orientation, alongside certain presuppositions regarding human nature, grounds his thinking.¹⁴ In making capabilities and freedom central to his framework, Sen cannot but accept reasoned argument that is concerned with bringing about conditions in which we can realize our capabilities and (or including) freedom. But given his explicit predominant resistance to ontological reasoning, Sen cannot bring himself to give clear support for reasoned argument. Instead, his response is to prevaricate systematically. Even though his illustrations presuppose a truth of the matter, every time he returns to the question of what the grounding of reason in ethics is, he avoids providing a clear answer.

As in most cases, the outcome of adopting a distancing orientation to ontology does not entail that ontology is thereby avoided since ontological presuppositions are inescapable. The result is that ontological reasoning is not appropriately done, and conflicting signals are sent. Oftentimes, the outcome is that central categories are inconsistently applied, allowing results to be derived too easily or generating an impression of greater novelty in some positions than is the case. Especially in Sen’s case, the lack of an explicit and systematized ontological account has led to much confusion over essential aspects of his work and to the eventual justification of the retainment of a taxonomic methodology.¹⁵

¹³ On informational focus, see Sen (1980).

¹⁴ Argued extensively by Martins (2006; 2007; 2014).

¹⁵ On a related note, Sen’s insistence on using mathematical methods is inconsistent not only with the methodology he found in the Cambridge tradition (Martins 2014) but also with the overall vision he initially had for the “Human Development” approach (a spin-off of the capabilities approach), which was inspired by a relational

Informational Focus and the Nature of “Rich Descriptions”

As discussed, Sen treats certain issues as being a matter of a mere choice of informational focus, and this position is a direct outcome of a lack of an appropriate ontological account. By neglecting ontology, Sen has adopted a position that demotes important ontological categories into aspects of the social realm, which can be the subject of “rich description.” In that respect, Vivian Walsh (1995, 564) gives the example of the labor theory of value and observes that “The importance of the labor theory for Dobb and Sen arises from the “descriptively rich” (Sen 1992, 118) account of human relationships involved in production which that theory alone offered. And for Sen, Dobb (1937) was “the classic exponent of the view of labor theory . . . as rich description” (Sen 1992, 119).

In response to Walsh, Sen clarifies:

The first point I want to comment on is Vivian Walsh’s discussion of my attempt to argue for the value of ‘rich description.’ Walsh (2003) rightly notes that I was led in that particular direction by my teacher Maurice Dobb, through both our conversations and his work (see Dobb, 1937, 1955). Dobb had seen the significance of the labor theory of value, as developed by Smith, Ricardo and Marx, not mainly in terms of prediction, nor primarily in terms of its direct ethical implications, but in the richness of the description of the world of work, production and exchange that it provides. I found that argument persuasive, and also argued that the need for richer description is quite pervasive in the subject of economics, despite the minimalist inclinations of contemporary economics. Indeed, ‘rich description’ is a general directional priority that, I argue, is both important and badly neglected in contemporary economics. (Sen 2005, 108)

Sen speaks about “rich description” but escaping this “minimalism” of economics entails a further step, that of conducting an ontological analysis of the categories upon which economic analysis is conducted. Descriptions in mainstream economics are not simply minimalist, they are reductionist. Indeed, the issue is not only one of description or of a choice of informational focus—such an understanding is ignoring the devastating ramifications of adopting deductivist methodological approaches for the discipline itself. Sen seems to ignore the fact that the methodologies employed in mainstream economics are not simply minimalist because they are characterized by a limited informational focus, which entails an impoverished description of reality at best; instead, mainstream economics and the relevant methodologies applied rest upon an ontologically impoverished conception of the social realm. In mainstream economics, the minimalist descriptions offered are a precondition for the relevance of the methods employed rather than an outcome of their application. This confusion informs Sen’s insistence on adopting taxonomic methods while also accommodating his profoundly ontological interests yet relegating them into mere “descriptive” features of reality.

ontology (Martins 2022). In this regard, there are significant implications for the Human Development approach, which is concerned with indicators that aggregate various components (or subjective interests) rather than with how capabilities as causal powers interact in a relational structure (Martins 2020 and 2022; Smith and Seward 2009). Given the enormous influence of the human development and capabilities approaches, this is no small detail.

Sen, as shown, has followed Putnam in his rejection of the value and relevance of ontology, and it is Putnam who, following Walsh, praises Sen for reintroducing ethical concerns and concepts into the discipline of economics. Walsh has identified this attempt to reintroduce such concerns as a key characteristic of what he refers to as the “enrichment” of present-day economics. Agreeing with this, Putnam (2002, 49) suggests that “Walsh’s term ‘second phase classical theory’ is thus the right term for the Senian program. That program involves introducing ethical concerns and concepts without sacrificing the rigorous tools contributed by ‘first phase’ theory.”

The “rigorous tools” referenced correspond to the taxonomic methods of the “engineering” approach perfected by authors such as von Neumann, as Putnam (2002, 48) clarifies, by purposely referencing Sen’s terminology. By “first phase” theory, Walsh and Putnam refer to contributions by authors such as Piero Sraffa, which sought to revive the “classical school” as they consider it to be exemplified by authors like Smith and Marx (whose ethical concerns Sen is praised for reintroducing into economics). This is, of course, a different understanding of the term “classical” from Veblen’s. Nonetheless, “first phase” theory is praised by Walsh (1998, 7) for addressing “the most critical need for the revival of classical theory: the most precise possible mathematical development of the structure of the theory.”

From the previous excerpts, it is apparent that for Putnam, Walsh, and Sen, the retention of “rigorous” methods of the “engineering” approach is necessary when engaging with matters pertaining to the social realm scientifically. Yet, there is a problem of an impoverished description of reality and neglect of certain ethical concerns (the outcome of applying these methods) that Sen seeks to rectify in reviving the classical school. It may be argued that this view is a direct outcome of a problematic ontological account (or the lack thereof) which enabled the relegation of important ontological categories into objects of description that are to be added as supplements to a reductionist methodology. This problematic ontological account has prevented these authors from recognizing that the features of the social reality they refer to as descriptive are indeed essential to the subject of inquiry and are at odds with the presuppositions of the respective methodologies employed to examine it, rendering their results and analyses inherently inconsistent.

In the attempt to descriptively “enrich” the discipline, Sen’s discussion of Smith, Marx, and other “classical” economists identifies important ontological concepts (further developing some of them) on the nature of humans, rationality, institutions, and the social realm which are indicative of an open systems conception of social reality. The lack of a systematic ontological account, though, prevents him from identifying the incompatibility between those concepts (he considers as being “left out” from modern economics) with the methods that he systematically employs and leads him to treat those insights as mere descriptions to be added to the application of formal methods. The concepts he identifies cannot only be reduced to their descriptive qualities since they bear important causal implications regarding the nature of the social realm, rendering their co-existence with the application of formal methods intrinsically inconsistent. Sen does not appreciate that it is precisely due to their ontological nature that these concepts have been “left out” by the economists that employ such methods since they are inconsistent with their presuppositions and irrelevant to the methods themselves. Being “left out” is not simply a matter of choice that may be rectified by adding more sophisticated descriptions. It is an outcome of the

forceful and indiscriminate employment of such methods to examine all kinds of social phenomena.

Overall, it is not argued that Sen is not engaging with ontology at all. Unlike most contemporary economists, much of Sen's contributions are grounded upon some critical ontological insights, which, in turn, have been the outcome of certain aspects of his work being of a profound ontological nature. What is argued, though, is that Sen's unequivocal refusal to engage with ontology explicitly and systematically, acknowledging indeed that rather than avoiding ontology many of his core notions are really ontological in nature, has been an important source of confusion leading him to a series of inconsistencies.

With respect to the latter, it is not a matter of Sen unknowingly engaging with ontology but not doing so formally or not using the correct terminology to describe his work, as might be plausibly suggested. As shown in this section, the lack of a systematic ontological account leads Sen to downgrade certain foundational and profoundly ontological aspects of the work of Smith and Marx into "rich descriptions." This then enables Sen to suggest that the taxonomic methods of the "engineering" approach are to be maintained and accompanied by certain descriptive insights of an "ethical" nature (associated with the "ethical" approach).

Sen's aversion to explicit and sustained ontological elaboration underpins his reading of "classical" authors, facilitates the mischaracterization of their insights as "descriptive" or pertaining to the "ethical" approach, and accommodates his insistence on his retention of taxonomic methods in conjunction with his undeniably evolutionary insights. Ultimately, this neglect prevents Sen from acknowledging that the methods should be adapted accordingly to fit the causal processual nature of their subject of study.

In all, it is argued that many aspects of Sen's work are ontological indeed, which render it insightful as compared to the ontologically impoverished work of many mainstream economists, but this has been the outcome of an interesting paradox since Sen seems to be genuinely interested in addressing questions whose answers are of an ontological nature while explicitly rejecting ontology as a valuable scientific endeavor. His limited conception of ontology as an area of study leads to his denial of the ontological nature of his work and ultimately renders it inconsistent when viewed as a whole. This crucial ontological inconsistency renders his reception within the economics academy intelligible. Sen is praised for his "open-mindedness" and "non-dogmatic" and "pluralist" stance. But ultimately, this ontological inconsistency enables his work to be relatable to both certain segments of the mainstream (those who relate to his taxonomic methodological approach) and certain critics of the mainstream (those who relate to the causal processual/ontological aspects of his work).

Concluding Remarks

Amartya Sen's contributions to economics have been unquestionably profound, have deservedly attracted much interest, and exerted significant influence on the discipline. Sen is often praised and embraced by the mainstream and yet is viewed by others as a critic of orthodoxy and seen as developing an alternative to it. The question addressed in the article is how this state of affairs could possibly have come about.

By deploying Veblen's original understanding of the term "neoclassical economics" and demonstrating that, in this particular sense, Sen can legitimately be characterized as a neoclassical economist, an explanation for this puzzling state of affairs has been supplied. Sen's work has been shown to be characterized by a tension at the level of ontology. By

retaining the taxonomic methods of the so-called “engineering” approach, he is committed to a set of rather implausible ontological presuppositions. At the same time, his contributions have been shown to indicate that, at some level, he has an evolutionary vision associated with an entirely different and more compelling (causal processual) social ontology.

Overall, mainstream economists praising Sen are impressed by his commitment to formal methods and welcome his faith in their value. Others, especially certain heterodox economists, are drawn to Sen due to his evolutionary vision but downplay or overlook how his deployment of taxonomic methods carries debilitating consequences for the coherence of his analytical framework. It has been argued that Sen neglects to engage with ontology explicitly, and that enables him to maintain a seemingly “pluralist,” but really an inconsistent, stance in which he endorses and adopts methods that presuppose an ontology that is at odds with other essential aspects of his work that have a causal processual character. This tension at the ontological level explains how Sen’s contributions have retained their appeal to both contributors and critics of mainstream economics.

In a recent interview reflecting on his contributions, Sen notes:

I have to confess that I’ve never liked neoclassical economics very much, but I could do neoclassical economics quite well, without having affection for it. James Meade noticed that, and when he was giving the mainstay ‘Principles (of Economics) lectures . . . he asked me to join him in giving the classes based on his Principles lectures. I said ‘But James I’m skeptical of it’. He said ‘I know very well that you’re skeptical of it, but you do it well. You don’t have to be in love to offer good classes’. I very much enjoyed teaching these classes jointly with James Meade. I guess I’ve not been entirely consistent in my life. (Sen, Deaton, and Besley 2020, 19)

Sen is not deploying the term neoclassical in a Veblenian sense here. But the awareness of his own inconsistency is revealing, and Veblen’s understanding of the term neoclassical enables a fuller appreciation of the ontological inconsistency that runs through Sen’s contributions.

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