Ricardo F. Crespo

The Nature of the Economy

Aristotelian Essays on the Philosophy and Epistemology of Economics

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Preface

There is a story behind every book. The story behind this one goes a long way back. My father held a Ph.D. and was a professional economist who worked at banks his entire life. However, he was also a part-time Economics professor. For some years, he taught “Economic Policy” at Universidad de Mar del Plata on Saturday mornings. We lived in Buenos Aires, 400 km away from Mar del Plata, and, every Friday after work, my father drove our family to Mar del Plata to deliver his classes the following day. We would enjoy the rest of the weekend there—a nice seaside city, though a bit windy, rainy, and cold in the winter (South Atlantic Ocean). I used to sit behind him in the car, and we would talk a lot about economics. Ever since, my ambition has been to ascertain the nature of the economic system, its components, motivations, institutions, and the scope and adequate methods of economics. Hence, after graduating from high school, I studied undergraduate economics. I was fascinated by economic logic. I used to study with a group of friends, and we would discuss the mutual influences of the great set of variables underlying economic events at length; we even role-played as representatives of the Central Bank, the Economics Ministry, the unions, the corporations, and consumers, and we designed economic policies. Once I graduated, I worked in the financial area for seven years.

Unfortunately, I found but a few answers about the nature of the economy during those years, and I remained unsatisfied. I realized that this was a philosophic matter, and thus I decided to study philosophy, starting with an undergraduate program. Then, I focused my philosophy Ph.D. dissertation on philosophy of economics. I understood that my questions were not easy to answer, and that the journey would be long. My further studies, including my Ph.D. dissertation on economics, have delved deeper into the nature and scope of economics, as well as into the meaning of the economy and its components.

My latest book (Routledge, 2020), *The Nature and Method of Economic Sciences*, includes a chapter on the nature of the economy, a topic that is also present in a chapter of an earlier book, *Philosophy of the Economy* (Springer, 2013). These chapters intended to deal with the economy in a broad sense, but, in fact, they discussed the nature and characteristics of economic actions. The work on the identity of the economic agent carried out by my advisor for my Ph.D. in economics, John B. Davis, has driven me to delve into this topic—the agent of economic actions—from the point of view of her actions and from the standpoint of the economic agent as a worker (a topic that I had partially developed as a chapter of the 2013 book). However, these advancements remain at a micro-level. Consequently, I also started asking myself about the nature of the macro-level and its relationship with the former. Another great component of the economy that deserved an inquiry into its nature was money. This has been my research subject for the past year (2020).

Then something happened. It dawned on me that I had explored some "components" of the economy: economic actions, the economic agent, workers, the nature of macroeconomic entities, and money. Thus, I decided to review my works on those topics, bringing them together with an ontological analysis. This is the path followed in the present book—it completes the review of the nature of economic sciences with the light shed by my earlier ontological studies. I proposed the book to Elizabeth Graber, Commissioning Editor of Economics at Palgrave-Macmillan, who enthusiastically supported the idea, and, after some interactions the proposal was approved. Elizabeth was promoted to Senior Editor on Sociology and Anthropology, and I continued working with Ruth Jenner, Commissioning Editor of Economics based in London, and Meera Seth. Geetha Chockalingam, along with Meera and Ruth, efficiently took the responsibility of the project coordination. I am very grateful to all of them.

My thanks also go to the people who read and commented on the chapters of this book. John Davis, as always, contributed with insightful remarks on Chapters 2, 4, and 8, respectively, dealing with metaphysical topics, the nature of the economy, and micro-macro relations. I presented a first version of the latter chapter at a seminar organized by the Centre for Humanities Engaging Science and Society (CHESS) at Durham University (October 14, 2020). I got valuable feedback from Nancy Cartwright, Peter Vickers, Richard Williams, and Omar El-Mawas. Another version was presented at the 15th Biennial Conference of the International Network for Economic Method, November 12–14, 2021, Arizona State University, Tempe, Arizona + Virtual, and at the LVI Annual Meeting of the Asociación Argentina de Economía Política (*The Argentine Political Economics Association*), November 17–19, 2021. I also met Daniel Heymann and Juan Carlos de Pablo, who provided valuable ideas about this chapter. Chapter 4 was presented at the XXVII Meetings of Economic Epistemology (Universidad de Buenos Aires, September 2021) and at the History of Economic Society Annual Meeting, Utrecht, December 2021. Robert Gallagher thoroughly commented Chapters 2 and 3. Geoffrey Hodgson read almost the whole book and proposed a modification of the title that I adopted.

J. F. Franck commented Chapter 5 on the identity of the economic agent. Chapter 6 touches on my work with my Ph.D. candidate (now Doctor) Omar Rodríguez and my co-author Belén Mesurado. Concerning Chapter 7 on the ontology of social collectives, I received useful remarks from Ivana Anton Mlinar, Frank Hindriks, Giancarlo Ianulardo, Dave Elder-Vass, Fin Collin, Brian Epstein, and Deborah Tollefsen. I presented an early version of this chapter at the 13th Biennial Collective Intentionality Conference, University of California, San Diego (online, August 16, 2021), and Matthew Baddorf, Giulia Lasagni, and Baris Kastas offered some comments and asked questions. I got interesting remarks about Chapter 9 on money from Alejandro Vigo, John Davis, Julián Giglio, Wade Hands, Rodrigo Laera, Carlo Natali, Fernando Tohmé, Eduardo Scarano, and three anonymous referees. I also presented a previous version at a Conference in Universidad de Buenos Aires and at the LV Annual Meeting of the Asociación Argentina de Economía Política. I am very grateful for all these contributions. As always, the entire responsibility lies solely on me.

I must acknowledge the use of some material and conceptual elements drawn from previously published works—specifically, from Chapters 2 and 9 of *Philosophy of the Economy. An Aristotelian Approach*, Springer, Dordrecht, 2013; "Two Conceptions of Economics," *Journal of Applied*

Economics, XIV/2, 2011, pp. 181–197; Chapter 2 of *Theoretical and Practical Reason in Economics. Capacities and Capabilities*, Springer, 2013; "Neurosciences, Neuroeconomics, and Metaphysics," in P. A. Gargiulo and H. L. Mesones (eds.), *Neurosciences and Psychiatry Update: Bridging the Differences*, Springer, Dordrecht, 2015, pp. 39–48; "Aristotelian Hylomorphism: A Framework for Non-Physicalist Philosophers About Philosophy of Mind," in Pascual A. Gargiulo and Humberto L. Mesones (eds.), *Psychiatry and Neuroscience Update. Vol. II: A Translational Approach.* Dordrecht: Springer, pp. 37–46; "Identity Theories in Economics: A Phenomenological Approach," co-authored with Ivana Anton Mlinar, in Peter Róna, László Zsolnai and Agnieszka Wincewicz-Price (eds.), *Words, Objects and Events in Economics: The Making of Economic Theory*, Springer, 2021, pp. 193–211; "Calling. Making the World a Better Place from Within Multinational Corporations," *Current Psychology*, co-authored with Belén Mesurado and Omar Rodríguez, 38/3, 2019, pp. 821–828, and "On Money as a Conventional Sign: Revisiting Aristotle's Conception of Money," *Journal of Institutional Economics*, 17/3, 2021, pp. 459–471. I appreciate the permissions granted by Elsevier, Springer Nature, Oxford University Press, and Cambridge University Press to use parts of these materials when it proved necessary, and I am also grateful to the anonymous reviewers of these published sections, who offered valuable advice.

I also want to convey my sincere gratitude to the academic institutions where I work for their support in my endeavors: IAE Business School (Universidad Austral, Pilar, Argentina); School of Philosophy, Universidad Nacional de Cuyo (Mendoza, Argentina), and Argentina's National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas, CONICET, by its initials in Spanish).

Lastly, it is only fair that my deepest gratitude goes to my family, to whom I dedicate this book. It would not have been possible without their support.

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Ricardo F. Crespo

Contents

About the Author

Ricardo F. Crespo is Professor of Philosophy of Economics at IAE, Universidad Austral, and Researcher at the Argentine Council of Scientific Research. He is a graduate in economics and philosophy and earned a Ph. D. in Philosophy (Universidad Nacional de Cuyo, Argentina) and another in Economics (University of Amsterdam). He has extensively published articles and chapter books on his research topics. Recent publications of him include articles in *Synthese*, the *Journal of Institutional Economics*, *Foundations of Science*, *Cambridge Journal of Economics*, and the *Journal of Applied Economics*. His last book is *The Nature and Method of Economic Sciences: Evidence, Causality, and Ends* (Routledge, London, 2020). His current research interests include explanation in the social sciences, economic rationality, and ethics in economics.

CHAPTER 1

Introduction: Does Economics Deal with the Economic Stuff? Or Is the Economic Stuff Explained by Economics?

> But from time to time it is probably necessary to detach oneself from the technicalities of the argument and to ask quite naively what it is all about. (Friedrich A. von Hayek, 'Economics and Knowledge,' Economica 4/23, 1937, p. 54)

> It is essential that we look occasionally at the map or model for scientific progress that each of us surely carries around, consciously or unconsciously, in his head. (James M. Buchanan 1987, p. 21)

> Whenever there is some significant, institutionalized, and intellectually intriguing or perplexing human activity in place in society, it is regularly accompanied by a higher-order activity that has the task of reflecting on the lower-order activity. (Uskali Mäki 2021, p. 3)

Physics is the science dealing with the physical world. Physical laws formulated by physics effectively apply to the physical world almost perfectly. The way physics works corresponds to the nature of physical reality. We can, for example, plan astonishing travels to Mars with amazing exactness.

This is not the case of the economy and economics: plans designed by economic theorists often fail. The paradigmatic proof of the mismatch

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between economic reality and standard economics is provided by experimental and behavioral economics, which prove that, in specific situations, most people behave in the opposite way that standard economics predicts. Unlike physics, it seems that the way economics works not always corresponds to the nature of economic affairs. The aim of this book is to investigate the nature of these matters to adjust economics to it.

Standard economics' "rationality" frequently does not apply. Peter Hammond defines standard economics rationality as preference maximizing by consumers and profit maximizing by firms (1997: 31). He adds, "There seems to be little evidence of rationality in actual behaviour. This is true even for special classes of experimental subjects like economics or business students, who are supposed to understand something of what it means to be rational" (1997: 32–33). In this book, I will use the term "standard" economics as Hammond does. The theories of rationality that standard economics usually adopts are the Rational Choice Theory (RCT) and the Expected Utility Theory (EUT), which rely on the notion of instrumental rationality. Just as Dani Rodrik (2015: 7) uses the term "economics," I use the term "standard" to mean a discipline focused on methods, a way of doing social science associated with formal modeling and statistical analysis.

Sciences start with principles, which are axioms or conclusions of other, more basic sciences. For example, developments in medicine are based on conclusions drawn from biology, chemistry, and physics. Rationality is a first principle of economics—but not just any form of rationality: only the forms mentioned above, which are forms of instrumental rationality. This means rationality construed as people's "logical" or reasonable behavior, or, as Catherine Herfeld (2021: S3333) describes it, "human agents behave reasonably, given the external circumstances they face." It is almost trivial, and, hence, it does not serve as grounds for explanations or predictions. I have proposed to refer to this principle as "metaphysical," as opposed to a specification of it that I have called "empirical," adopting a meaning of the term "metaphysics" that I will not use in this book: metaphysical principles, according to my former use of the term, are not falsifiable principles, while empirical ones are (Crespo 2013).

The rationality principle specified by "standard economics"—RCT and EUT—is frequently falsified by empirical evidence.[1] Economics has

[1] For a more detailed analysis on the specifications of the rationality principle, see C. Herfeld (2021: S3334ff.) and see Herfeld (2020) for the different versions of RCT.

increasingly become empirical. However, these first principles, though often falsified, have remained untouchable. As Kevin Hoover has recently suggestively stated,

> Contemporary economics is pace Robbins and Mill favorable to empirical research and to the feedback from empirical results to economic theory. However, the Robbinsian first principles themselves are not the target for any revision within mainstream economics, but are held immutable as something like a Lakatosian hard core. Recalcitrant evidence may result in a revision of the details of the structure of constraints hypothesized in a problem, but is not allowed to weaken the commitment to the framework of constrained optimization. (2021: S3322)

In the same vein, Herfeld (2021: S3337) states that "[d]espite recent developments in behavioural economics, either the general variant of the rationality principle or its special status is rarely questioned by economists," and she provides examples of this fact taken from contemporary introductory textbooks on economics.[2]

While physicists largely agree on physical theory, there are numerous economic theories, which is paradoxical given that they are built on the same principles. Many philosophers of economics attribute this difference between physics and economics to the greater complexity of the economic realm. Yet, when one studies the complexity of physical reality, one starts questioning this argument. It must be something more than a greater complexity that explains this difference. There should be some radical, ontological, differences between the nature of physical and economic reality that explain it. Or complexity has a different nature than physical complexity. As also Herfeld states (2021: S3344),

[2] George Chorakakis explains, "The neoclassical research program (NRP) in economics, namely the meta-theory that rests on the axiomatic assumptions of rational choice, individualistic utility or profit maximization and ex ante equilibration of aggregate demand and supply, has shown extraordinary resilience vis-à-vis epistemic anomalies identified in early days. These anomalies are either ignored or tackled with ad hoc extensions of its 'protective belt' of auxiliaries assumptions, leaving its 'hard core' intact, and effectively extending its life and safeguarding its dominant position in academia instead of enhancing its empirical content or its explanatory power" (2020: 240).

> The complexity of human motivation, the multiplicity of motives that lead people to act, and the complexity of the environment within which they act imply that the general version of the [rationality] principle is never realized in an undisturbed and pure way.

It is a pressing demand to ascertain these differences. The result of this exploration might be that we must rest content with approximate results in economic theory and that we will need to circumscribe our investigations to specific contexts to gain certitude for our conclusions. This would be an important step, because we would advance our awareness of the limits of economic theories, and this could drive us to be more prudent in our economic plans—when a lot of people are affected by them.

Ultimately, the root of the problem lies with the first principles of economics. Who should provide these principles? Let us hear from Aristotle (*Metaphysics* IV, 3, 1005b 5–11):

> Evidently then it belongs to the philosopher, i.e. to him who is studying the nature of all substance, to inquire also into the principles of syllogism. But he who knows best about each genus must be able to state the most certain principles of his subject, so that he whose subject is existing things qua existing must be able to state the most certain principles of all things. This is the philosopher.

Thus, at its final stage, the culpability for this mismatch lies not with economists but with philosophers. There is a problem in the specification of the rationality principle that has to do with philosophical ideas. Rather imperceptibly, philosophy influences science and life. Maynard Keynes, who was above all a philosopher, had a clear conviction about this, which he somewhat expressed in the famous last paragraph of his *General Theory* on the influence and power of intellectual ideas for good or evil. Standard economic theories are the offspring of the ideas conceived by past centuries' philosophers, like David Hume or Immanuel Kant, and of the prevailing metaphysic physicalist worldview. This statement may seem to oversimplify the problem. Yes, these phenomena are complex, but the three reasons mentioned—Hume's and Kant's thinking and the physicalist worldview—explain a significant share of the mismatch.[3]

[3] The central argument of Nitasha Kaul's (2008) book is that economics is a kind of modernist knowledge and a by-product of Modern Enlightened Philosophy.

First, standard economic rationality, instrumental maximizing rationality, is an offspring of Hume's idea of rationality. In fact, Hume's writings have been called by John Hill Burton, one of his nineteenth-century biographers, "the cradle of political economy" (Burton 1846: 354). Hume downgraded the relevance of practical reason, reducing it to a technical function: designing the best way to achieve the goals defined by passions (see Hume [1739–1740] 1968: 415-II, iii, 3). Defining ends is no longer a role of reason. Consequently, there are no true or wrong ends or preferences. This is economics. Indifference curves are given. Economists' role is to adapt the budget to those curves in the best possible way, assuming that they "behave properly" (they have a negative slope; they are convex; they do not intersect, etc.)—a technical task. However, the economic agent does not behave that way: actual indifference curves do not behave properly. They might or not… it all depends. All economists can say about "abnormal" indifference curves is, as a friend economist told me, that "they are not useful to build a theory of demand for the real world." Yet, one may harbor some doubts about the reality of this world…

Christine Korsgaard remarks that "the limitation of practical reason to instrumental reason does not only prevent reason from determining ends; it even prevents reason from ranking them" (2001: 104). This is why Hume famously affirms that "It is not contrary to reason to prefer the destruction of the whole world to the scratching of my finger" ([1739–1740] 1968: 416). Accordingly, economics cannot correct such preferences. This is the example offered by Terence Irwin: "If I could book a flight from New York to London on one airline for $600 and on another airline for $700 and airlines are otherwise equal, reason, as Hume understands it, is indifferent between them" (2007–2009: Volume II, 585). That is, if the traveler chooses to buy the $700 ticket, economics can only assert that, from an economic rationality perspective, this choice is irrational. However, there may be other reasons for the traveler to choose "irrationally," and buying a ticket for $700 is an economic action. Herfeld (2021) proposes we "consider the rationality principle as a functional a priori principle along the lines of a pragmatic theory of constitutive principles in science" (2021: S3356). Another possibility is to broaden the notion of rationality, reconsidering practical rationality not reduced to instrumental rationality as a principle for economics combined with the latter.

Second, standard economics' dismissal of the realism of assumptions, paradigmatically expressed by Milton Friedman (1953), is an offspring of Kant's transcendental philosophy. Kant declared that Hume had woken him from his "dogmatic slumber." He proposed infusing a Copernican revolution into reason. As described by Anthony Kenny, "Instead of asking how our knowledge can conform to its objects, we must start from the supposition that objects must conform to our knowledge" (2006: 102). As I will explain in the next chapter, this Copernican revolution perspective backfires, because it conditions the possibilities of knowing the "something" that lies behind sensorial appearances "of which we know nothing at all nor can know anything in general (in accordance with the current constitution of our understanding)" (*Critique of Pure Reason* A 250, 1999: 348). Hence, we do not know the ultimate reality—we just provide a structure for the appearances in our mind. "Reason has insight only into that which it produces after a plan of its own" (*Critique of Pure Reason* B xiii, 1999: 109). The consequence for economics is that we can only aspire to offer an explanation through models that predict a convincing explanation of facts—i.e., "to save the phenomena"—but we do not know if we are accessing the very nature of these phenomena.

Finally, the third reason stems from the predominant metaphysical view or *Weltanschauung*. Metaphysics—construed as a worldview—is always present in science. This idea has been developed and consolidated from Pierre Duhem to the present, through Karl Popper, Hanson, Quine, Kuhn, among others.[4] Philosopher of science Evandro Agazzi (1988: 19) states:

> Science […] cannot be pursued without one's using certain criteria of intelligibility which are prior to the specific tasks it involves. In fact, every advancement of some science which has been presented as a "liberation from metaphysics" has actually been tantamount to discarding a particular metaphysical framework and accepting (often unconsciously) a different one […] Therefore it is much more reasonable to be aware of the metaphysics one has, rather than have a metaphysics without knowing it.

[4] I explored this evolution in an earlier work (2015), from which I draw some material for this chapter. However, this dependence of science on the physicalist worldview should not be exaggerated (see Dilworth's criticism 1994: 138ff.).

His final advice is useful to spot the mismatch between economics and the economy. Today's the metaphysical view that impregnates science is physicalism. Craig Dilworth (2006) underscored that modern science applies specific, fundamental metaphysical principles which produce a physicalist, deterministic (though not rigid) view of reality that is not accepted without reservations by all scientific disciplines, depending on their subjects. Physicalism is the metaphysical worldview that everything in the world is ultimately physical. It correlates with the so-called thesis of the "causal closure of the physical world," which states that all causes and effects in the physical realm are physical. David Papineau explains the consequences of this idea:

> the causal closure of the physical does give rise to a powerful argument for reducing many prima facie non-physical realms to physics: for it indicates that anything that has a causal impact on the physical realm must itself be physical. This is because the causal closure of the physical seems to leave no room for anything nonphysical to make a causal difference to the physical realm, since it specifies that every physical effect already has a physical cause. (2009: 52)

This thesis bears a strong impact on the discussions about the relationship between mind and body. Nonetheless, it also bears an impact on social sciences, including economics. The economy is a human reality in which things like the mind, will, desires, and freedom play a leading role. Dilworth notes that physicalism introduces a tension in social sciences and particularly in economics:

> [T]here is a particular tension in the economist's conception of human nature. On the one hand, the notion of free will is integral to it, since without free will the rationality principle would make no sense. On the other hand, however, no economic actor has the freedom not to follow the rationality principle, which itself determines how he or she is to act. (2006: 135)

This tension does not only apply to standard economics. My book *Economics and Other Disciplines. Assessing New Economic Currents* (2017) looks at the new "reverse imperialist" economic theories to ascertain whether they have been influenced by this physicalist worldview. The conclusion corroborates that they have indeed been influenced by it, but that a tension remains between this physicalist worldview and the defense of freedom, creativity, novelty, values, and morality.

Let me explain what "reverse imperialist" economic currents are and why they are so-called. We need to know their opposites in order to understand them. Starting approximately in the 1980s or even before, standard economics has been "exporting" its logic—instrumental rationality—to other social sciences. In his article "The Expanding Domain of Economics," Jack Hirshleifer approvingly describes this process that has been known as "economic imperialism" (see also Lazear 2000):

> *There is only one social science*. What gives economics its imperialist invasive power is that our analytical categories—scarcity, cost, preferences, opportunities, etc.—are truly universal in applicability. Thus economics really does constitute the universal grammar of social science. (1985: 53, italics in the original)

This invasion is not at all "pacific." As George Stigler asserts, "economics is an imperial science: it has been aggressive in addressing central problems in a considerable number of neighboring social disciplines and without any invitations" (1984: 311). Ronald Coase (1978: 207) explains and complains about the double tendency associated with this process:

> The first consists of an enlargement of the scope of economists' interests so far as subject matter is concerned. The second is a narrowing of a professional interest to a more formal, technical, mathematical analysis. This more formal analysis tends to have a greater generality. It may say less, or leave much unsaid, about the economic system, but, because of its generality, [...] economics becomes the study of all purposive human behavior, and its scope is, therefore, coterminous with all of the social sciences.

Gary Becker's (1976, 1993) economic approach best exemplifies this perspective. The reductionist tendency of standard economics is actually an obstacle to the introduction of new ideas and approaches, thus constituting a kind of "protectionism" from empirical data and the possible contributions of other social sciences, as Stefano Zamagni notes (2021: 14 and passim).

The above-mentioned mismatch between the economy and economics as well as the distortion of the nature of the subject matters of other sciences produced by the conclusions of the "imperialist" tendency is slowly making room for a reaction embodied in this new process called "reverse imperialism." This new process consists in moving in the opposition direction, importing the *rationale* and other inputs of other social sciences into economics. Thus, a "mainstream pluralism" is emerging (Davis 2008, 2011).

However, the question remains, are these new currents escaping from the physicalist *ethos*? As stated above, they escape only partially. My book (2017) concludes that the impact of physicalism is strong in neuroeconomics, behavioral economics, some evolutionary theories, and hedonistic happiness economics. Concerning institutional economics, its impact depends on the concept of agency, habits, and institution adopted. Some new happiness theories adopting a richer concept of happiness than the hedonic, as well as the capability approach and civil economy theories stay outside the physicalist umbrella. This conclusion is somewhat paradoxical: physicalism partially remains, but is it an adequate perspective to analyze the subject matter of economics or not? It all depends on the nature of the economy.[5]

This pluralism of economic theories can prove positive if we have a clear understanding of the nature of its subject matter—the economic stuff, which possesses several dimensions. Are economic decisions and actions mere technical means to achieve some preferences? Discovering the nature of a thing is a metaphysical task that must be undertaken, because the meaning and nature of the economy and its fundamental components is a still unclear topic. Economists do not even share a consensus about the meaning of the economy. We need to know the nature of the economy to deal with it appropriately. As Israel Kirzner puts it, "Definitions of economic science have time and again required preliminary discussions revolving around the question whether the discipline concerned a kind of object, a kind of activity, a kind of man, or a kind of satisfaction or welfare" (1976: 6).

As Mäki (2021) explains these kinds of questions have to be answered by philosophy of economics because "these are questions that the lower-order activity itself [economics] does not customarily or regularly ask and answer in its ordinary mode" (2021: 3). A common purpose of the

[5] Geoffrey Hodgson, in a very philosophical book, complains about the inadequacy and misleading character of the physicalist metaphors underlying economic analysis (2015: 3, 18, 166–167, 266ff.).

higher-order reflection, Mäki states, "is to put forth a *programmatic statement*, an organized set of principles and guidelines telling how to do economics properly or better" (2021: 5).

Eric Schliesser (2015) has drawn our attention to an old criticism by Joseph Cropsey (1955) of the New Welfare Economics (NWE). Schliesser remarks that Cropsey was aptly qualified for this task since he had recently earned his Ph.D. in Economics from Columbia University, where the NWE was blossoming (2015: 848). Schliesser (2015: 847) also recalls that George Stigler (1943) had previously argued that this branch of economics adopted a question-begging consensus over society's values. For Cropsey, the NWE assumes metaphysically wrong conceptions underlying its mathematical analysis, its psychological assumptions, and its implicit political or institutional framework. Consequently, Cropsey affirms, "the entire structure of modern welfare economics rests upon a sandy foundation" (1955: 124). Thus, he states, we need to undertake its reconstruction upon a plan based on a substantive conception of human nature: "every logic presupposes a metaphysics" (1955: 118). Indeed, I agree with Hasse Ekstedt when he states that "In economics one has the feeling that the urge to understand and explain the short-run economic reality has overshadowed the important analysis of the used scientific concepts" (2013: 1).

Philosophy is useful for economists (and all scientists) because it does the prior work of discerning the nature of their subject matters. As Aristotle states in *Metaphysics*, "For those who wish to get clear of difficulties, it is advantageous to discuss the difficulties well; for the subsequent free play of thought implies the solution of the previous difficulties" (III, 1, 995a26–29). Philosophical definitions help to prevent mistakes as well as to save time by pointing directly to the kind of research that is worth doing and to adequate methodologies.[6] I am one of those philosophers of economics that thinks "that practicing economists would benefit from paying attention to our work" (Vromen 2021: 27).

Thus, the aim of this book is to ascertain the metaphysical nature of the "components" or "constituents" of the economy in order to appraise the epistemological statute that economic science should adopt. The second chapter defines the metaphysical theory that will be used throughout the book. There are different metaphysical theories, and I explain why I have

[6] However, as Hodgson states, "Lamentably few social scientists these days have a solid grounding in philosophy, including the philosophy of their own discipline" (2015: 10).

adopted the Aristotelian version of metaphysics. Chapter 3 introduces the metaphysical categories that will be applied to the components analyzed in this book. These categories embody the way of being or nature of entities. Aristotle establishes specific categories, and I have added the categories used by three scholars who also undertake a metaphysical analysis of the economy: Nancy Cartwright, Tony Lawson, and Uskali Mäki. Chapter 4 deals with the economy in general, actually focusing on individuals' economic decisions and actions. Aristotle, Cartwright, Lawson, and Mäki take the stage once again. Chapter 5 tackles the topic of the nature of the economic agent—a topic I have dealt with in two previous works: one written alone and the other co-authored with Ivana Anton Mlinar. Chapter 6 considers the economic agent from a different perspective, as a worker. There are precedents in two works—one I wrote by myself and another one co-authored with Belén Mesurado and Omar Rodríguez. Chapter 7 on social ontology serves as a preamble to Chapter 8 on the nature of macroeconomic entities and their relationship with microeconomic entities. Chapter 9 deals with the nature of money, and it is based on my 2021 article on the topic. Yet, I have introduced some significant changes. I thank Alejandro Vigo for his comments that prompted them. Finally, once the previous metaphysical characterizations of the components of the economy have been completed, I turn back to the nature of economic science itself.

I should make it clear from the start that not all the constituents of the economy will be analyzed: hence the subtitle of the book, "Aristotelian Essays on the Philosophy and Epistemology of Economics," which hints at its incomplete character. Some relevant pieces will be missing, including but not limited to the nature of the market, economic value, or capital. This work shall be undertaken in future investigations.

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