Methodology and Philosophy of Economics:
A Tale of Two Biases*

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Abstract

This article comprises an up-to-date critical review of the field known as *Economic Methodology* or *Philosophy of Economics* (EM/PE). Two edited volumes (Kincaid and Ross 2021; Heilmann and Reiss 2021), a special issue of the *Journal of Economic Methodology* (2021), and a recent bibliometric analysis of the field (Claveau et al. 2021) constitute the basis of the review. Drawing on these sources, we identify a number of problematic trends in current EM/PE research. We claim that these trends could be interpreted as two kinds of biases, namely a micro-level bias and a mainstream bias. We discuss the respective details of these biases and their normative implications for the discipline.

JEL classification numbers: B29, B41, B59

I. Introduction

Economic Methodology, or Philosophy of Economics as it is more commonly termed these days (henceforth we will use the acronym EM/PE), has been expanding rapidly and thriving as an independent academic discipline for more than four decades now. But what kind of discipline is it? And what are its main goals? Let us begin our exploration of such questions with the following two ideal-type images about EM/PE.

* We are very grateful to Magdalena Małecka, D. Wade Hands, and Sheila C. Dow for their valuable comments on an earlier draft of this article. We also thank the feedback from an anonymous referee and the *HET* editorial board member Norikazu Takami. Some of the ideas of this article were presented at the 15th Biennial Conference of the International Network for Economic Method (INEM). This research is funded by the Academy of Finland (Mireles-Flores, project No. 330524; Nagatsu, project No. 294545). We are equally responsible for the contents of this article.

> *Philosophy first*: as a sub-discipline of philosophy of science, EM/PE is a manifestation of the philosophical interest in analysing science as an epistemically privileged institution or practice, the aim being to apply existing philosophical research programmes to the case of economics.
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> *Economics first*: as a sub-discipline of economics, EM/PE represents a self-reflective and methodologically critical practice aimed at assessing and helping to improve economic science in relation to its epistemic and practical goals.

Obviously these two images would imply different target audiences, different research focuses, and different ultimate goals for EM/PE. Admittedly, they do not exhaustively capture all the varying motivations behind existing EM/PE. Nor are they mutually exclusive, in the sense that some current research in EM/PE may reflect a combination of both images. However, having carefully considered the narratives in the material that we will summarize and discuss in the sections below, it will become clear that a significant proportion of the recent research in EM/PE is more in line with, or could be taken as closer to, *Philosophy first*, whereas only a small proportion of it could be said to be in accordance or closer to *Economics first*.[1)]

In addition to helping us characterize the descriptive overview of EM/PE that we offer in the first part of this article, the two ideal images also allow us to formulate our main critical point succinctly: the disbalance leading the research too close to *Philosophy first*, and far away from *Economics first*, has generated at least two detectable trends or biases within EM/PE that could be harmful to the development and relevance of the discipline, namely a 'micro-level' bias and 'mainstream' bias. We will explain the details of these biases, and how they are potentially harmful, in the discussion below.

Before moving on to the first section of the article, we will make explicit and briefly elaborate on our motivations to embark on a critical evaluation of the state-of-the-art of EM/PE. First, we were influenced by a recent movement entitled *Philosophy of Science in Practice* (PSP). According to the mission statement of its society,[2)] PSP promotes research that focuses on: (i) the co-production of knowledge and its use; (ii) the roles of artefacts such as models and experiments in mediating between theory and the world; (iii) balanced attention to a range of scientific disciplines; and (iv) productive interactions among historical, philosophical, and scientific reasoning. On a more programmatic level, the PSP movement purports to study the sciences as historically and materially conditioned, socially embedded, organized activities, with epistemic and practical goals.

Endorsing this perspective, we believe that EM/PE should address questions such

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1） The situation of individual researchers in relation to their motivations is complex, and we are not claiming anything concrete about it. Here, we simply consider whether the 'research outcomes' (about which we can read in academic journals, books, and edited volumes) broadly offer an image closer to *Philosophy first* or to *Economics first*.

2） https://www.philosophy-science-practice.org/about/mission-statement

as the following. Where did economics come from, and where is it headed? What kind of worldview does it presuppose and reproduce? What kind of and whose interests does it serve as a science? Does it contribute to the advancement of society and humanity as a whole, and if so, how? Although specialized philosophers of science would find it difficult to answer such wide and admittedly coarse-grained questions individually, they can at least recognize them as relevant research agendas, such that EM/PE researchers could start addressing them collectively and organizing their disciplinary activities accordingly.

Second, we were motivated by the expanding literature in the philosophy of science on 'values in science' (see Małecka 2021 for a concise survey with a focus on its implications for EM/PE). This body of literature, which belongs to the larger research programme on 'objectivity in science,' has analysed several ways in which values permeate through science, one of which is the so-called argument of inductive risk: namely, that non-epistemic values (political, ethical, and so on) play crucial roles not only in hypothesis testing but also in epistemic decisions concerning theoretical framing, statistical modelling, variable and parameter setting, experimental paradigms, measurement practices, and other methodological nitty-gritty issues (see Douglas 2000).[3] The inductive-risk argument clearly expands the well-known underdetermination thesis—that theory choice is underdetermined by evidence and thus must be guided by competing epistemic values, such as simplicity, scope and empirical accuracy—to also include the unavoidable (and potentially legitimate) role of non-epistemic values in affecting the direction of scientific practice.[4]

However, instead of addressing 'values in science' using economics as a case study, we reflexively apply the insights from this literature to EM/PE research practices. If the inductive-risk argument is sound, then it must also apply to EM/PE as a goal-oriented knowledge-producing activity, which also proposes and evaluates hypotheses on the basis of evidence. Such reflexivity is a prerequisite for beginning systematically to think about the policy or social relevance of EM/PE. What are the inherent values of EM/PE? On what values could we base a claim that EM/PE may be of any practical relevance to society? Given the current increasing external pressure to justify research in terms of its societal relevance, philosophers who otherwise take the pursuit of knowledge as self-evidently justified may find it useful to engage more heavily in internal—i.e., reflexive and systematic—assessment of its true practical and social value.

In line with these two motivations, our main goal in writing this critical survey is to raise concerns that some trends in what is now a more 'mature' EM/PE might be contributing to the amplifying of some potentially undesirable ethical and political consequences that are already clearly recognizable in economics. Two of these trends, we claim, are

3) In what follows we simply use the term 'values' to refer to non-epistemic values when the meaning is clear from the context.

4) See Harvard et al. (2021) for model-based pandemic policy; and Intemann (2015), Pindyck (2017), Stern and Stiglitz (2022) for model-based climate policy.

precisely the 'micro-level' and 'mainstream' biases in EM/PE that we categorize in this article.

We wish to make it clear that our choice of the term 'biases' does not presuppose deviation from any value-neutral ideal equilibrium or norm, for as the literature on 'values in science' implies, there is no such value-free vantage point. We rather use the term more loosely: (a) to refer to certain unreflective relations between economics as an activity and EM/PE as a meta-discourse on it, and (b) to express the idea that explicit value-laden viewpoints might illuminate certain potentially problematic ethical or political consequences of such a lack of reflectiveness. In this sense, we follow Dow (2021) in using the term 'bias' "in a negative sense if [certain presuppositions are] not recognised and justified but treated as if absolutes" (50).

The article proceeds as follows. In the next section, we provide an overview of recent trends in EM/PE based on a table-of-contents analysis of three edited volumes published in 2021 (Section 2). Then we summarize the highlights from a recent bibliometric survey of the EM/PE literature (Section 3). The bulk of our discussion comes in Section 4: we identify two potentially harmful trends, tendencies, or biases manifest in recent and current EM/PE research, which we label "micro-level bias" (Section 4.1) and "mainstream bias" (Section 4.2), respectively. We offer some concluding remarks in Section 5.

II. Current Trends and Narratives in EM/PE

This section comprises an overview of the state-of-the-art EM/PE, based on the two latest anthologies in the field (Kincaid and Ross 2021; Heilmann and Reiss 2021) and one special issue of the *Journal of Economic Methodology* (2021, which we refer to as Davis and Hands 2021), and how they are organized and represented. We selected these three volumes not only because they were recently published, but also because of their somewhat contrasting editorial policies.[5] Instead of providing a detailed content analysis of all the articles—16 in Davis and Hands, 35 in Heilmann and Reiss, 14 in Kincaid and Ross, all without the introductory chapter—we focus on the editorial policies explained in the introductions. The intention is to provide second-order perspectives on EM/PE and to see what research is selected as representative of it, rather than to describe the kind of research being done in EM/PE (for this, see Section 3).[6] We will show some convergent and divergent narratives on how EM/PE is developing and how it should develop, according to the editors, who are all active researchers in the field.

In sum, Heilmann and Reiss (2021) seem to be concerned (and content) with the

5) As a disclosure, one of us (Nagatsu) contributed to all three, and the other (Mireles-Flores) to Heilmann and Reiss (2021) in Claveau et al. (2021).

6) For a recent first-order perspective on some of the main trends in EM/PE, see Mireles-Flores (2018); and for a broader classic overview, see Hands (2001).

development of EM/PE *as a field of philosophy* for philosophers, which they reflect in their volume. Hence, their position, at least in this edited volume, seems to be more in accordance with that of *Philosophy first* in the introduction. Kincaid and Ross (2021), in contrast, are more explicit about the normative stance on how best to develop EM/PE, emphasizing that the latter must be relevant to economists, judged by economists. Their stance thus is explicitly closer to *Economics first*. Davis and Hands (2021) do not explicitly state what they believe to be the main aims of the discipline, but rather reflect the diversity in the field. We shall review them in this order. See Table 1 for the titles of the articles from these three sources, thematically categorized.

1. Heilmann and Reiss (2021)

The Routledge Handbook of Philosophy of Economics was published in November 2021. Of the 44 contributors, 34 (77%) are affiliated with philosophy departments, eight with economics-related departments (one with a double affiliation in economics and philosophy) and two with PPE (Philosophy, Politics and Economics) and interdisciplinary institutions). The exceptions are two authors from the fields of biomedical science and public health, and computer science, respectively. The handbook contains 35 chapters divided into eight thematic segments: *rationality*, *cooperation and interaction*, *methodology*, *values*, *causality and explanation*, *experimentation and simulation*, *evidence* and *policy*. This thematic structure is somewhat similar to Reiss's (2013) introductory textbook of the philosophy of economics,[7] reflecting how the subject is taught in philosophy graduate programmes. Of these themes, rationality (centering around decision theory), cooperation and interaction (game theory), and policy are specific to the philosophy of economics, whereas other topics are of interest to philosophers of science in general. These themes roughly correspond to Daniel Hausman's (2021) three-part division of the philosophy of economics into branches of philosophy, namely (a) rational choice (=>action theory), (b) the appraisal of economic outcomes, institutions and processes (=>moral and political philosophy) and (c) the ontology of economic phenomena, and the acquisition of knowledge about them (=>philosophy of science).

Heilmann and Reiss (2021) highlight two developments in the field. First, the philosophy of economics has gained "mainstream status" and it is "now a field in its own right" (2). They identify various philosophical research strands, such as the philosophy of science, rational and social choice, PPE (politics, philosophy and economics): all these contribute to the contemporary "philosophy of economics" broadly construed, in addition to "economic methodology" as its original core. Second, this trend signifies a "philosophical turn," namely the fact that much education and research in the philosophy of economics nowadays happens in philosophy departments, through journals and at con-

7) According to Don Ross (2014, xi), "[t]he only truly up-to-date such book currently on the market is Julian Reiss's *Philosophy of Economics* (Routledge, 2013). I recommend it, though noting that there is much in it with which I disagree, and that I am less sympathetic than Reiss is to the style of philosophy called 'analytic'."

Table 1: A table-of-contents comparison of the three anthologies in EM/PE published in 2021.

We allocated the articles in Kincaid & Ross (2021) and David & Hands (2021) to the eight categories made by Heilmann & Reiss (2021), based on our judgement about contents. We assigned numbers to the articles in Davis & Hands (2021). Since the categories are not mutually exclusive, a given article may belong to more than one category.

Categories	Heilmann & Reiss (2021)	Kincaid & Ross (2021)	Davis & Hands (2021)
Rationality	**2** *History of Utility Theory* (Ivan Moscati) **3** *The Economics and Philosophy of Risk* (H. Orri Stefánsson) **4** *Behavioral Welfare Economics and Consumer Sovereignty* (Guilhem Lecouteux) **5** *The Economic Concept of a Preference* (Kate Vredenburgh) **6** *Economic Agency and the Subpersonal Turn in Economics* (James D. Grayot)		**12** *On the recent philosophy of decision theory* (Ivan Moscati)
Cooperation and Interaction	**7** *Game Theory and Rational Reasoning* (Jurgis Karpus & Mantas Radzvilas) **8** *Institutions, Rationality, and Coordination* (Camilla Colombo & Francesco Guala) **9** *As If Social Preference Models* (Jack Vromen) **10** *Exploitation and Consumption* (Benjamin Ferguson)	**9** *Modelling Homo sociologicus: social influence and inter-dependent behaviour in economics* (Michiru Nagatsu)	
Methodology	**11** *Philosophy of Economics? Three Decades of Bibliometric History* (François Claveau, Alexandre Truc, Olivier Santerre & Luis Mireles-Flores) **12** *Philosophy of Austrian Economics* (Alexander Linsbichler) **13** *Representation* (Hsiang-Ke Chao) **14** *Finance and Financial Economics: A Philosophy of Science Perspective* (Melissa Vergara-Fernández & Boudewijn de Bruin)	**6** *Are economists' self-perceptions as epistemically superior self-defeating?* (Jack Wright)	**1** *The field: tasks, pasts, futures* (Uskali Mäki) **2** *Philosophy of economics: past and future* (Daniel M. Hausman) **3** *What are we up to?* (Jack Vromen) **4** *Economic methodology in 2020: looking forward, looking back* (Don Ross) **5** *On letting serious crises go to waste* (Francesco Guala) **6** *Economic methodology, the philosophy of economics and the economy: another turn?* (Sheila Dow) **7** *Back to the big picture* (Anna Alexandrova, Robert Northcott & Jack Wright) **8** *Retreat from normativism* (Marcel Boumans) **9** *Economic methodology: a bibliometric perspective* (Alexandre Truc, François Claveau & Olivier Santerre) **10** *The Helsinki approach to economic methodology, or, how to espouse the mainstream?* (Aki Lehtinen) **13** *Economics and community knowledge-making* (Julie A. Nelson)

Values	**15** *Values in Welfare Economics* (Antoinette Baujard) **16** *Measurement and Value Judgments* (Julian Reiss) **17** *Reflections on the State of Economics and Ethics* (Mark D. White) **18** *Well-Being* (Mauro Rossi) **19** *Fairness and Fair Division* (Stefan Wintein & Conrad Heilmann)	**7** *Gender biases in economics* (Julie A. Nelson)	**11** *Values in economics: a recent revival with a twist* (Magdalena Małecka)
Causality and Explanation	**20** *Causality and Probability* (Tobias Henschen) **21** *Causal Contributions in Economics* (Christopher Clarke) **22** *Explanation in Economics* (Philippe Verreault-Julien) **23** *Modeling the Possible to Modeling the Actual* (Jennifer S. Jhun)	**3** *Making progress on causal inference in economics* (Harold Kincaid)	**14** *How-possibly explanations in economics: anything goes?* (Till Grüne-Yanoff & Philippe Verreault-Julien)
Experimentation and Simulation	**24** *Experimentation in Economics* (Michiru Nagatsu) **25** *Field Experiments* (Judith Favereau) **26** *Computer Simulations in Economics* (Aki Lehtinen & Jaakko Kuorikoski) **27** *Evidence-Based Policy* (Donal Khosrowi)	**2** *Utility measurement: some contemporary concerns* (Nathaniel T. Wilcox) **4** *Experimental design and Bayesian interpretation* (Glenn W. Harrison) **5** *Randomised trials in economics* (Seán M. Muller) **8** *On the foundations of behavioural and experimental economics* (Andreas Ortmann)	**16** *Co-production and economics: insights from the constructive use of experimental games in adaptive resource management* (Michiru Nagatsu)
Evidence	**28** *Economic Theory and Empirical Science* (Robert Northcott) **29** *Philosophy of Econometrics* (Aris Spanos) **30** *Statistical Significance Testing in Economics* (William Peden & Jan Sprenger) **31** *Quantifying Health* (Daniel M. Hausman)	**14** *Theory and evidence as drivers of economists' opinions regarding the impact of fiscal stimulus* (Edward E. Leamer & Sumit Shinde)	
Policy	**32** *Freedoms, Political Economy, and Liberalism* (Sebastiano Bavetta) **33** *Freedom and Markets* (Constanze Binder) **34** *Policy Evaluation Under Severe Uncertainty: A Cautious, Egalitarian Approach* (Alex Voorhoeve) **35** *Behavioral Public Policy: One Name, Many Types. A Mechanistic Perspective* (Till Grüne-Yanoff) **36** *The Case for Regulating Tax Competition* (Peter Dietsch)	**10** *Welfare economics in large worlds: welfare and public policies in an uncertain environment* (Guilhem Lecouteux) **11** *Poverty measurement and mitigation: a case study of contestation and compromise in South Africa* (Julian May) **12** *Core models in macroeconomics* (Aki Lehtinen) **13** *The nature of DSGE macroeconomics* (Alex Rosenberg) **15** *Everyday economics* (Don Ross & Matthew Townshend)	**15** *Theories of well-being and well-being policy: a view from methodology* (Roberto Fumagalli)

ferences, not in their economics counterparts, and not even as interdisciplinary interaction between economics and philosophy. They state this as a fact without explicitly endorsing it, but the overall tone of their introduction is celebratory of the gaining momentum within the heterogeneous but autonomous philosophy of economics, with less concern about the potential loss of contact between EM/PE and economics. One reason for this is that the authors evaluate the question of relevance in terms of the conceptual overlap in the nature of profound economic and philosophical questions, rather than whether economists would read or cite philosophers. Kincaid and Ross (2021), to which we now turn, adopt the latter criteria.

2. Kincaid and Ross (2021)

A Modern Guide to Philosophy of Economics (Elgar Modern Guides) was published in August 2021. The same editors edited *The Oxford Handbook of Philosophy of Economics* (Kincaid and Ross 2009) "with a view to advancing the post-Kuhnian naturalist stance by encouraging a philosophy of economics closer to the practice of economic research" (Kincaid and Ross 2021, 4). This volume is an updated version, taking the same stance. The authors attest to this in noting that "ten of the fifteen chapters are by authors based in economics departments, with the remaining five being by scholars who mainly identify as philosophers of science" (4).[8] This number is indeed in sharp contrast to Heilmann and Reiss (2021), in which economists contributors are in a clear minority. Philosophers of action and ethicists are not included in Kincaid and Ross (2021), either.

What is "the post-Kuhnian naturalist stance" by means of which Kincaid and Ross (2021) commissioned the chapters? It holds that "philosophy of economics ought to be close to and useful for the practice of economics" (1). The first component ("close to the practice of economics") is the same as the requirement of the philosophy of science in practice (PSP), which we reviewed in the introduction. This is post-Kuhnian in the sense that it pays attention to "experimental practices, skills and heuristics for applying abstract theories, scientific norms and social influence" (3), which tended to be dismissed by the positivists who focused on extracting the abstract logics of explanation and evidential reasoning from episodes of high theory testing. However, focusing on how tacit knowledge and context-specific factors affect scientific practices does not automatically produce the kind of knowledge that practitioners recognise as useful: for that, the type of knowledge must be consciously used to sharpen scientists' *normative* methodology (concerns about epistemically good ways of doing science). The second component ("useful for the practice of economics") thus reflects the editors' commitment to normative methodology as the "core inspiration from positivism" (3) that philosophers of science ought to share with scientists.

8) If we apply the same approach as before and count the authors, there are 16, of which 12 are based in economics departments, and four in philosophy. Kincaid is based in the economics department, but probably self-identifies as a philosopher of science.

The topic selection was based on the lead question: "Which controversies that recurrently arise in contemporary economics seminars and panel debates have important philosophical aspects?" (Kincaid and Ross 2021, 4). The intention was apparently to prevent philosophical questions that do not pertain to economist practice from entering their EM/PE. However, most of the topics covered by the 14 chapters still fall within the eight topical clusters in Heilmann and Reiss (2021), suggesting a convergence on the topic level between economics and philosophy.

Nevertheless, there are several differences worthy of note (see Table 1). First, there is a weaker focus on 'rationality' and 'values,' reflecting the editorial decision to concentrate on the philosophy of science and to exclude action theory and ethics (two other branches of EM/PE, according to Hausman 2021). Second, there is a stronger focus on the issues categorized as 'experimentation and simulation' and 'policy,' reflecting their emphasis on these practices. Third, there are differences in the treatment of macroeconomics. Although Kincaid and Ross (2021) note that "[t]he logic of the book's organization is loosely micro [rather than] macro, both with respect to the way in which that distinction is reflected in economic theory, and with respect to the scale of policy applications" (5), they include three chapters (12, 13 and 14) dedicated to macroeconomics.[9] In contrast, Heilmann and Reiss (2021) do not even explicitly refer to the micro-macro distinction in economics. In fact, the book contains only two chapters with an explicit reference to macroeconomics, namely Chapter 20 entitled "Causality and Probability" by Tobias Henschen, and Chapter 21 entitled "Computer Simulation in Economics" by Aki Lehtinen and Jaakko Kuorikoski.

These three differences broadly reflect the contrasting editorial/philosophical outlooks of the two anthologies, namely EM/PE as a field occupied by philosophers attracting philosophy audiences (Heilmann and Reiss 2021) vs. EM/PE as an interdisciplinary field for philosophers and economists who share methodological interests (Kincaid and Ross 2021).

3. Davis and Hands (2021)

"Special Issue: Economic Methodology and Philosophy of Economics: Past, Present and Future" was published in March 2021 in the *Journal of Economic Methodology* (JEM), with two guest editors, John Davis and D. Wade Hands, who had served as the co-editors of the journal for 15 years (2004–2019). The symposium in question was intended as a fixed-point observation of the field's development, in which the contributors addressed similar questions as in the "Millennium symposium: The past, present, and future of economic methodology" (2001, JEM, guest-edited by Mark Blaug, Roger Backhouse, Kevin Hoover, and Uskali Mäki).

9) The Oxford Handbook by the same editors (Kincaid and Ross 2009) distinguishes 'microeconomics' (the title of Part II) and 'modeling, macroeconomics, and development' (Part III). The latter is a kind of hybrid categorization based on economists' logic (macro, development) and philosophers' (modelling).

Davis and Hands (2021) had "the goal of producing a diverse collection of papers" (1) with a less explicit editorial policy. Accordingly, the editors provide neither a summary of the trends nor individual summaries of the contributions. However, reflecting also on their 15 years of JEM editorship and noting the increasing diversity of the ideas and approaches in the field, they note that "saying what economic methodology and philosophy of economics involved [twenty years ago] seemed to be a more manageable task than it does today" (2). Their conclusion, in other words, is that the field has become more heterogeneous, and we infer that the editors' pick of the contributors was intended to reflect that—as does the different titles of the two special issues—"Economic Methodology" (2001) and "Economic Methodology and Philosophy of Economics" (2021).

Of the 21 authors, 16 (76%) are affiliated with departments of philosophy or science and technology studies (two of them used to be based mainly in economics departments and moved to philosophy recently), whereas five are based in economics-related departments. In terms of their contents, 12 articles reflect in various ways on EM/PE in general, whereas four focus on specific topics or sub-fields in EM/PE. Among the first category, some articles reflect familiar concerns about the relevance of EM/PE to economics, whereas others do not seem to have this as a primary focus, even when they advocate that EM/PE should turn to more big-picture questions about the social organization of economics (Alexandrova et al. 2021). Boumans (2021) even suggests a retreat from normative methodology and instead advocates the empirical study of economics as a messy practice.

4. Summary

The question concerning the relevance of EM/PE to economics mentioned in the previous paragraph is a useful dimension along which to summarize the heterogeneity of EM/PE highlighted in this section. In other words, researchers in EM/PE may have different target audiences in mind, as is clear in the contrasting editorial policies of the two anthologies reviewed above. Three very broad types of audience can be identified: (i) economists, who could benefit from the methodological insights of EM/PE; (ii) philosophers of science, historians and STS scholars who study economics as well as other sciences with their own particular disciplinary questions in mind; and (iii) moral or political philosophers interested in fields such as action theory, ethics, or PPE.

Many methodologists acknowledge that they have had very little impact on economists. In fact, Claveau et al. (2021) show that even contributions on economic methodology published in economics journals other than those specialized in the philosophy of economics (*Economics and Philosophy* and the *Journal of Economic Methodology*) do not cite EM/PE very much (see Section 3 below). Given the lack of impact on economists, Mäki (2021) suggests an alternative target-audience category, namely (iv) the wider intellectual public and (science) policy makers with an interest in, and influence on, economics as an institution of knowledge production. Indeed, Dow (2021), Alexandrova

et al. (2021) and Nelson (2021) also seem to have such a general audience in mind.[10)]

However, targeting a more general intellectual audience could have some implications for how EM/PE should be practised. For instance, (a) in terms of the research contents, its focus would have to be more on societally urgent and contested issues and less strongly on abstract methodological topics, and (b) in terms of publication venues, EM/PE would have to be published more in interdisciplinary and non-academic contexts and non-specialized philosophy journals. However, if what Heilmann and Reiss (2021) call 'the philosophical turn' in EM/PE is really taking place, it may be difficult to implement either of these adaptations. A closer investigation into the topics and questions that guide the research could give a clearer understanding of the current state of the field. With this in mind, we now turn to a recent bibliometric analysis of EM/PE (Claveau et al. 2021).

III. Bibliometric and Network Analysis

The quantitative account of the trends in EM/PE we provide in this section draws on a recent bibliometric study, namely "Philosophy of economics? Three decades of bibliometric history" (Claveau et al. 2021). One of the motivations behind this study was to conduct an empirical investigation into existing, well-informed "qualitative" accounts of the evolution and the status of EM/PE as a discipline, and to compare them with the results of a quantitative bibliometric analysis. A further motivation derived from an insight from the sociology of science, namely that any scientific field and subfield is a product of subjective "social processes of inclusion and exclusion" (Claveau et al. 2021, 151). This does not mean that bibliometric data is necessarily more 'objective': the decisions of journal editors and reviewers to accept or to reject, as well as the decisions of authors to cite or not, are also embedded into social processes. The idea is rather that comparing the qualitative survey-type articles with bibliometric data may allow the highlighting of certain characteristics of narratives about the field of EM/PE.

1. Philosophy of economics in the main specialized journals

The bibliometric study conducted by Claveau et al. (2021) analyses two distinct sets of publications that could be considered EM/PE. The first set or "corpus" represents what the authors label "Specialized Philosophy of Economics," and contains publications from 1990 to 2020 in what are considered to be the two main journals in the discipline: *Economics and Philosophy* (E&P) and the *Journal of Economic Methodology* (JEM).

Using bibliographic coupling to detect clusters in a network of co-citations (see Claveau et al. 2021, 152–54) within the corpus of Specialized philosophy of economics,

10) Economists may also play two roles, as first-order practitioners, and as second-order commentators/members of the profession who reflect on how economics is taught and researched, and consciously intervene. Those in the latter role could be considered part of the wider intellectual public and policy makers (iv).

the authors detected five clusters. They took these clusters to correspond to five thematic communities that they labelled as follows:

> **Behavioural economics (BE)**: philosophical issues concerning behavioural economics, neuroeconomics, and experimental economics.
> **Moral philosophy (MP)**: moral and political philosophy of economics.
> **Decision theory (DT)**: methodological issues related to decision and game theory.
> **Small m**: most articles related to empirical topics such as econometric methodology, statistical significance, causal inference, evidence and prediction.
> **Big M**: methodological concerns about general philosophical topics such as demarcation problem, theory choice, realism, modelling, abstraction, explanation and the scientific nature of economics.[11)]

The evolution of these five clusters from 1990 to 2020 proceeded roughly as follows:

There was a clear and constant increase in publications concerning the philosophical underpinnings of behavioural economics (BE) throughout the whole period under study. BE evolved from around five per cent of the total number of publications in "Specialized philosophy of economics" journals in the 1990s to around 30 per cent in 2010. Research on the moral philosophy of economics (MP) remained relatively constant, oscillating within the 25-35-percent range of the total "Specialized philosophy of economics" for the whole period studied.

Small-m methodology of economics also remained relatively constant, moving within a five-to-ten-percent range during the whole period. There was a first boost in this cluster from 1990 to 2000, which reached a peak at around 13 per cent in 2000. This increasing trend seemed mainly to be connected to methodological discussions on econometric issues, such as data mining and model specification (see Leamer 1983; Mirowski 1989; Morgan 1990; Hoover 2001). There was a slow decline during the following decade, then again a boost between 2010 and 2020 up to 13–14 per cent of the total number of publications. The increase in this cluster during the last decade reflects the growing body of research related to design-based methods of causal inference and evidence-based economics, produced as a consequence of the so-called "empirical revolution" or "credibility revolution" in economics.

As the authors point out, Big M peaked in popularity in the mid-1990s at around 35 per cent of all publications, and then began a constant decline to around 15 per cent of publications in the Specialized Philosophy of Economics by 2020. Decision theory (DT) shows a clear declining trajectory from an initial 25 per cent on average during the

11) The labels "Small m" and "Big M" refer to McCloskey's distinction between ordinary methodology (with small 'm'), which refers to discussions about the usual techniques and formal tools of economics, and "Methodology" (with capital 'M'), which has been typically concerned with philosophically "big questions" about the status and nature of economics as a science (see McCloskey [1985] 1998, 160; Claveau et al. 2021, 163).

decade 1990–2000 to between five and ten per cent by 2020. However, as the authors point out, the most probable cause of the decrease was that this type of work moved to other more specialized journals. They therefore conclude that "the philosophical study of decision and game theories is alive and well, but it has become peripheral to the core journals of Specialized Philosophy of Economics" (Claveau et al. 2021, 160).

The following two observations relate to our own argument. First, according to these bibliometric results, by the year 2020, articles dealing with topics related to behavioural economics (BE) or moral and political philosophy (MP) constituted around 65 per cent of all contributions to the two main journals devoted to publishing work on the philosophy of economics. Second, it is interesting that, of all existing topics within the discipline of economics that are recognized and represented by JEL-code categories (20 general thematic categories in total), only two sub-categories, namely: behavioural economics (BE) and game theory (GT), have expanded sufficiently as research topics of interest in the philosophy of economics to evolve into separate clusters in this bibliometric analysis. Why are all the other subfields of economics not researched as much?

2. Economic methodology outside the main specialized journals

Claveau et al. (2021) labelled the second corpus of publications "JEL Economic Methodology". It contains articles published in journals categorized by the American Economic Association as being in the JEL code "B4, Methodology of Economics," but excluding all the articles published in the two journals labelled as "Specialized philosophy of economics" sources, so as to make the two corpora mutually exclusive.

The data on the publications in the JEL Economic Methodology derive from 165 journals published between 1990 and 2018, the three journals with the larger shares being the "*Cambridge Journal of Economics* (13.1%), *Journal of Economic Issues* (6.7%), and *History of Political Economy* (6.5%)" (Claveau et al. 2021, 153). The authors also point out that 77.5 per cent of the articles in this set were published in economics journals, the rest appearing in journals that use the JEL codes, but with less clear and non-exclusive concerns with economics.

Using bibliographic coupling methodology, the authors detected six clusters in the network of co-citations, which they have labelled as follows:

Institutional Economics: methodological issues concerning institutional economics, evolutionary economics, "old" institutional economics, and "new" institutional economics.

Critical Realism: comprising the methodology of several heterodox views such as, critical realism, post-Keynesianism, constructivism, and collective intentionality.

Political Economy: topics related to Marxian concerns, but also some connections to social ontology issues, such as, collective intentionality.

History of Economics: mostly references to the pre-1940 history of economic thought.

Small m: issues concerning econometric, statistical and experimental methods.
Big M: issues related mainly to traditional "big-M" methodology such as realism vs. instrumentalism, falsificationism in economics, demarcation and rhetoric in economics.

The first thing of note is that the topics of research characterizing the thematic clusters of the "JEL economic methodology" documents differ widely from the central topics studied within the "Specialized philosophy of economics" research. In particular, the clusters with a focus on institutional economics, political economy, critical realism and other heterodox methodologies, as well as the history of economics constitute 75–80 per cent of the publications in this corpus. Conversely, the same thematic clusters are totally absent, or at least not visible as significant topics of research within the corpus concerning the Specialized philosophy of economics.

The other two clusters, "Small m" and "Big M," show an apparent overlap in some of the main research topics with the homonymous two clusters in the Specialized philosophy of economics corpus. They also show roughly similar tendencies throughout the whole period: Small m remains relatively stable during the three decades, whereas Big M decreases from more than 40 per cent in the 1990s to around 10 per cent of all publications by 2020. This decrease in the Big M cluster confirms the well-acknowledged fact that traditional Big M methodology has been going out of fashion in the philosophy of economics, apparently both within and beyond specialized EM/PE research (see, e.g., Hands 2015).

IV. Discussion

In this final section we will present our own reflections on the current state of EM/PE, drawing partly on the literature that we have summarized in the last two sections, and partly on our own empirical, idiosyncratic, and normative assessment. We could speculate widely about and discuss the two significantly different bodies of literature identified by Claveau et al. (2021), but we focus here on the literature they refer to as 'Specialized Philosophy of Economics' and discuss the other, 'JEL Economic Methodology,' only indirectly. We observe two clear patterns in the recent development of the discipline that are worth noticing, and that we believe should be made explicit and emphasized in case they have gone relatively unnoticed. We present these two broad patterns as two types of inclinations, dispositions, or biases in relation to the parts of economics that are selected as research topics in EM/PE.

As we note in the introduction, however, we do not imply that there is a perfectly neutral or a perfectly balanced way of doing EM/PE. It would be absurd to claim that a neutral EM/PE should proportionally reflect all the interests and activities of economists. Researchers would probably not be able to reach an agreement on what proportions to

consider at the outset. For instance, normative methodologists may well wish to focus mostly on what economists seldom address but should do. Even proponents of a very descriptive type of methodology may have specific reasons for concentrating on a particular topic in economics rather than on the others: those who are interested in comparing experimental practices in physics, biology and economics, for instance, will naturally focus on experimental aspects.

As a meta-discourse on economics, EM/PE has its own epistemic and non-epistemic agendas, both explicit and implicit, which are more or less justified on both instrumental and substantial grounds. In what follows we examine such justifications and critically engage with the social processes of inclusion and exclusion in the making of EM/PE. Hence, the term 'bias' used below simply indicates our critical assessment of the justification of focusing on certain local issues relative to others.

1. Micro-level bias

First, we wish to highlight a *micro-level bias*. As mentioned above, we are not concerned with the bias in the sense that EM/PE output does not exactly reflect the macro-micro ratio in economics research or education. In fact, there are several indications that the proportion of research in economics categorized as microeconomics is increasing, whereas the macroeconomics counterpart is decreasing (Angrist et al. 2017).[12)] We simply intend to explore the possible justifications for the heavy focus on microeconomics in EM/PE, at the expense of seldom looking at macroeconomics.

Kincaid and Ross's (2021) micro-focused organization of their anthology reflects this bias (and they refer to this explicitly), as does Heilmann and Reiss´s (2021) volume, which contains only two macro-focused chapters, and Davis and Hands's (2021) special issue in which there are no articles specifically focused on macroeconomics. As we show in Section 3, topical clusters in EM/PE do not even reflect the macro-micro divide, showing instead the three-part division into action theory (rationality), ethics (normative and welfare economics) and the philosophy of science (see Claveau et al. 2021; Truc et al. 2021). Note that the first two branches of EM/PE focus on the individual, interactive, and aggregate theories of rational decision making. All this indicates that EM/PE research tends, implicitly or explicitly, to treat the foundational issues in preference theory and the theories of risky, intertemporal, interactive and social choice as central issues of

12) EconLit's documents are not categorized under mutually exclusive and exhaustive macro-micro labels. Nevertheless, the data shows a steady decline in the macro and somewhat U-shaped upward trend in microeconomics since 1990 (Thomas Delcey, personal communication). See also Georgios Karamanis's data on the proportions of papers distributed by the American National Bureau of Economic Research (NBER), by programmes and programme categories (https://github.com/gkaramanis/tidytuesday/tree/master/2021/2021-week39), which shows a similar trend, as well as (https://www.digitalhistoryofscience.org/economics/) and (https://homepage.univie.ac.at/maximilian.noichl/full/econ/econ2.html) for the visualized clustering of economics fields. We thank Thomas Delcey, Alex Truc, Andrés Álvarez, Max Noichl, Beatrice Cherrier, and Jeroen van Bouwel for the information and the discussion on Twitter.

economics in general. Let us be more specific on at least two ways in which this bias occurs in EM/PE research, which we take as potentially harmful.

One way in which the micro-level bias manifests itself is in the form of an *implicit* exclusion bias, or a quiet neglect of macroeconomic issues by philosophers, tacitly following the trends in economics. One might expect that the third branch of EM/PE, which is concerned with the philosophy-of-science take on economics, would pay more attention to the standard micro/macro division of economic practices given its self-proclaimed naturalist stance. However, philosophers of science seldom analyse macroeconomic issues, and when they do, they simply seem to treat macroeconomics like any other scientific material for case studies, for instance, focusing on methodological aspects of causal inference or on philosophical reflections about modelling.

Macroeconomic research dealing with issues such as unemployment, business cycles, growth, inflation, and financial crises is seldom perceived as displaying specific or central features of the practices of economists that are worth discussing from a methodological/philosophical perspective.[13] The recent albeit gradual demise of macroeconomics within economics has not been examined, either. As the bibliometric results reported in Section 3 imply, the sizable and growing cluster on behavioural economics in EM/PE (almost one third of the articles currently published in *JEM* and *E&P*) indicates that the attention of philosophers of science has been on issues related to anomalies in decision and game theory, rather than on economic treatments of macro issues.[14]

A second way in which the micro-level bias appears in EM/PE research can be characterized as a form of *normative individualism*. We have pointed out that some researchers could be treating economic theories of choice as a useful set of formalized models through which to conceptualize and analyse normatively sanctioned rational action, rather than as tools for studying market-level aggregate phenomena, or more complex macroeconomic phenomena. This is not necessarily a problem, of course, if one is either an action theorist or an ethicist who may legitimately take such an instrumentalist stance on economic theories and models, and simply use these formal tools for one's philosophical purposes. In fact, decision theorists in economics and in philosophy departments might share those purposes. However, philosophers of science who are explicitly interested in the practices of economists and their practical consequences for society should base their methodological analysis on how models are used in everyday practices of economics, a large proportion of which concern aggregate and macro-level phenomena. Such studies are rare, however (Cowen 2004).

We speculate that philosophers of science might also be biased in interpreting

13) Claveau et al. (2021) point out that the corpus of JEL Economic Methodology features discussions of Lucas's rational expectations whereas Specialized Philosophy of Economics does not. We should acknowledge that there are exceptions to this general trend, e.g., a recent special issue on The Lucasian Turn in Macroeconomics in *JEM* (Volume 29, Issue 1, 2022).

14) Claveau et al. (2021, 159) suspect that the behavioural-economics cluster also attracts the other branches (action theory and ethics) on issues such as irrationality and the ethics of nudging.

economic theories of choice as theories of individual psychology—attributable partly to the contiguous influence of action theory and ethics on EM/PE and partly to the default tendency of non-economists to interpret the concept of choice as an individual psychological process (Nagatsu and Põder 2019). In fact, there is no systematic methodological attention to broader microeconomic notions such as 'households', 'firms', and even 'markets', relative to individual rationality or irrationality (see the literature on Becker 1962; Gode and Sunder 1993; Satz and Ferejohn 1994). Although recent EM/PE literature makes progress in elucidating different notions of rational choice in economics and psychology through the analysis of experimental and behavioural economics (e.g., Hudik 2019; Dekker and Remic 2019; Ross 2022), the research has tended to give less methodological attention to the distinct aspects of economics as the study of aggregate or system-level phenomena, even when dealing with microeconomics.

2. Mainstream bias

Second, we wish to highlight a *mainstream* bias. One might think that the implicit micro-economics bias discussed above could also be interpreted as a type of mainstream bias. Uncritically following "hot" trends in mainstream economics may be behind the propensity among EM/PE researchers to focus on microeconomic topics. However, the data discussed in Section 3 comparing the non-specialized body of economic methodology (JEL Economic Methodology) with the specialized philosophy of economics illustrates a more systematic form of a mainstream bias.

Topics, theories, models, methods, or case studies that are dealt with in heterodox economics or in the history of economic thought are virtually absent in the two main EM/PE journals, and instead are addressed in non-philosophy journals such as the *Journal of Economic Issues*, the *Cambridge Journal of Economics*, *History of Political Economy*, and the *European Journal of the History of Economic Thought*. Hence, the first problematic manifestation of the mainstream bias that we wish to point out is the exclusion of heterodox accounts from the philosophical research agenda.

Hands (2015) characterizes the EM/PE focus as "pluralistic mainstream"—no longer obsessed with analysing neoclassical orthodox or heterodox alternatives and having moved on to engaging with diverse methodological developments in mainstream economics. Davis and Hands (2021) echo this judgement, emphasizing the diversity of contemporary EM/PE. The "mainstream" part of the characterization would be true if JEL Economic Methodology were conventionally excluded from the body of EM/PE. However, the fact that Specialized Philosophy of Economics outsourced, as it were, heterodox topics to non-philosophy journals reflects an implicit but social decision on the part of philosophers of economics not to engage with either first-order (substantial) economic controversies or debates on the organization of economics in terms of its diversity and plurality (see Alexandrova et al. 2021; Lari 2021). This is worth noticing given that scientific pluralism has been one of the major themes on the general philosophy of science agenda, with a recent lively discussion on the social organization of scientific disciplines

and its impact on knowledge production (see Ludwig and Ruphy 2021 for a review).

Referring to Hands's (2015) characterization of the focus of contemporary EM/PE as "pluralistic," Claveau et al. (2021) point out that even Specialized Philosophy of Economics clusters do not reflect pluralistic developments. Behavioural economics clearly dominates over other potential topics such as evolutionary economics, computational and agent-based modelling, and various new empirical techniques, which Hands (2015) mentions as part of the mainstream.

But what exactly is the problem with focusing on the most prominent, most publicly influential and, some would say, "most powerful" type of economics, namely topics coming from cutting-edge mainstream economics? Would not the post-Kuhnian naturalist stance (Kincaid and Ross 2021), as well as the philosophy of science in practice that we advocate, endorse such following of the mainstream precisely because it is the dominant practice? The problem, as we see it, again boils down to the question of the relevant research agendas and audiences.

If the main target group comprises peer philosophers and STS scholars, then the focus on the mainstream could at least solve a coordination problem: discussing well-known, salient, even stylized and narrow cases facilitates intricate methodological discussion by saving the amount of time and the number of words needed to describe complex and more marginally known scientific practices to peers who would be unfamiliar with them. We speculate that behavioural economics has provided such a focal point to EM/PE researchers, partly because of its psychological salience (Schelling 1960). There could be a counteracting incentive to diversify one's case studies in the interests of novelty, but given that the number of peer philosophers is not increasing, such diversification might be difficult, in particular when a certain topic is already gaining traction.

The resulting monist mainstream focus of EM/PE could then be an equilibrium of a process in which peer philosophers are simply trying to coordinate their epistemic activities. Such an equilibrium may eventually benefit economist audiences by providing them with ample methodological discussion on some relevant mainstream cases. However, if the main incentive of philosophers is to solve the coordination problem among peers, then the quantity of methodological papers would not necessarily guarantee their relevance or usefulness for practising mainstream economists. This is problematic if one takes the post-Kuhnian naturalist stance, and also problematic for those who explicitly take normative methodology as the main agenda of the philosophy of science in practice (PSP). In other words, the societal relevance of mainstream economics does not automatically 'trickle up' to the related meta-scientific discourses.

The monistic mainstream focus of EM/PE is also problematic if one considers the educated public and (science) policy makers as the main target audience. It is certainly important to let this audience know that philosophy of science has moved on from its traditional demarcation approach, and from the big M question of whether or not neoclassical economics is a science. However, such an audience might interpret the mainstream bias as a tacit endorsement by EM/PE that economics as currently practised

is epistemically, socially, or politically acceptable, or even desirable in terms of its topical focuses, favoured methodologies, and social organization. This impression would be enhanced in particular when philosophical research on mainstream topics is done from an allegedly noncommittal, merely epistemological perspective.

In fact, Colander (2013) suggests that EM/PE has failed economics and "the general public" by not being much more critical of the methodology used in mainstream economics. According to him, the problem is that EM/PE researchers do not see their job "as trying to affect economists' methodology or even to make judgments about whether it was good or bad. Instead, they [see] their job as trying to understand that methodology" (56), i.e., being *descriptive* as opposed to *normative*. In response to this criticism, it could be argued that many EM/PE researchers that focus on the mainstream are in fact engaged in a form of epistemological normativity. Lehtinen (2021) describes precisely this kind of normativity as "focussing on the epistemological arguments for and against particular methods. The key question is always: is this method reliable in getting at the truth?" (79–80).

Even though we agree that such epistemological assessments of mainstream economics are valuable and potentially eye-opening and useful to practitioners, we side with Colander in thinking that this is not enough. For instance, to normatively evaluate whether some mainstream economic account is socially relevant requires much more than simply checking whether its methods are truth-conductive. Also, that economic results are scientifically well-established as true does not guarantee at all their policy relevance.[15] More generally, being epistemologically normative about economics by critically evaluating its methodological practices given its epistemic goals is not enough, because those very goals might be unjustifiable upon ethical and political reflections.

Given that a wide range of concerns about the direction of economic science have recently been raised by both heterodox and mainstream economists (e.g., Hodgson 2009; Kirman 2010; Colander 2011; Romer 2015; Akerlof and Michaillat 2018; Akerlof 2020; Heckman and Moktan 2020; Raworth 2017; Skidelsky 2020; Aldred 2009; 2020), the relatively low normative engagement of EM/PE with critical societal issues may also make EM/PE irrelevant to the general public and (science) policy makers.

Another problem related to the mainstream bias concerns its social and political consequences. Literature on 'values in science' in the philosophy of science is becoming increasingly popular, but contributions from EM/PE researchers have been surprisingly few (Małecka 2021; see Part IV of Heilmann and Reiss 2021). This may not be a problem in itself if it is a product of the division of EM/PE into normative (action theory and ethics) and positive (philosophy of science) branches, whereby the former focuses on important normative (ethical and political) issues, and the latter on empirical and normative methodology. However, given that so-called 'positive' economics is anything

15) See Mireles-Flores (2021) for an illustration of precisely this point in the context of international trade economics.

but value-neutral, such a division of normative labour within EM/PE may be undesirable, making ethical and political critique less relevant to economists' practices, and methodological critique less relevant to major ethical and political issues. In other words, EM/PE might fail systematically to analyse subtle but substantive value questions in economics, such as the conceptualization and operationalization of welfare, because of its internal logic, namely the three-part division of cognitive labour into action theory, ethics, and the philosophy of science.

It is not known what ideological tendencies there may be in EM/PE as a field, because such surveys do not exist. Nevertheless, it is a real concern that non-epistemic values may passively amplify whatever ideological tendencies underlie mainstream economics, given the knee-jerk pursuit of certain mainstream topics in EM/PE. Dow (2021, 50) refers to this possibility when discussing a similar concern raised about the history of economic thought. Before one can begin to address such concerns, it is necessary to acknowledge that the philosophically interesting questions about values in science also apply reflexively to EM/PE as an organized activity of knowledge production. We are not claiming that EM/PE is ideologically biased in one way or another, but we do claim that simply purporting to avoid explicit value-based judgments does not licence its proponents to claim value neutrality concerning the methodology, practices, or social consequences of mainstream economics (see e.g., Steel 2010 for such a reflection on the philosophy of social science).

In fact, given how EM/PE is currently organized, many urgent, contested and persistent contemporary societal problems—which heterodox economists and non-economists do care about—are systematically underrepresented. Consider the following topics as examples: degrowth or post-growth economic proposals (from ecological and sustainability economics); the systemic exploitation of women's care and reproductive work (from feminist economics); global injustice, global financialization, extractivism and other problems of capitalism (from Marxist economics and heterodox political economy); alternative approaches to conceptualizing, interpreting and understanding global economic diversity (from postcolonial and decolonial approaches to economics and economic anthropology); and post-2008 debates on how to teach economics (from economics education). Given that none of these topics are typically studied, let alone form a recognizable cluster, in the EM/PE literature (in particular within the Specialized corpus), one might conclude that the researchers have indeed been "out of phase with experienced reality" of wider society (Dow 2021, 48).

The exclusion of the socially relevant topics just described could be the consequence of several concurrent problems of EM/PE, including (i) outsourcing heterodox issues to non-philosophers; (ii) organizing its own field according to the internal logic of professional philosophy; and (iii) coordinating its methodological resources within a rather narrow range of 'cutting-edge' technical developments in mainstream economics at the cost of excluding many substantial economic issues such as labour, trade, finance, debt, tax, regulation, privatization, natural resources and energy.

Finally, we wish to point out that, although some heterodox proposals involve the adoption of radically different theoretical and mathematical frameworks than optimization and equilibrium, such as systems dynamics, network theory, and complexity theory, some alternative models and theories work within formal frameworks that are not that different from mainstream counterparts in terms of modelling techniques and mathematical approaches. Examples include formal post-Keynesian accounts of the workings of the economy (e.g., Keen 2001; Rochon and Bougrine 2020), some heterodox approaches to growth and trade theory within political economy (e.g., Steedman 1979, Ocampo et al. 2009), and studies by ecological economists on the feasibility of degrowth and the steady-state economy within standard macroeconomic frameworks (e.g., Heikkinen 2015; 2018; Lange 2018).

Despite such formal isomorphism, EM/PE seems to have focused mainly on works coming from mainstream camps, taking for granted or simply ignoring all the background neoclassical assumptions that come with it, such as implicit commitment to free trade or the desirability of economic growth. At the very least, such a phenomenon, namely the divergence of policy recommendations despite the methodological convergence of modelling in economics, would seem to be of interest to philosophers of economics who are interested in how values influence scientific practices. For instance, historians and philosophers of economics could fruitfully collaborate in addressing topics such as the neoclassical origins of ecological economics. Adherence only to mainstream publications (e.g., using Nobel prize winners as a heuristic in selecting case studies) makes it difficult to ask such a question to begin with.

V. Conclusion

The first part of this article comprises an overview of the field of Economic Methodology and Philosophy of Economics (EM/PE), drawing on the three anthologies published in 2021 (Section 2), as well as a bibliometric analysis detecting topic patterns in a network of co-citations (Section 3). From this overview, we pointed out three salient features of EM/PE, namely: (i) contrastive research orientations with different target audiences in mind (philosophical insights relevant to different philosophical agendas vs. methodological insights useful for economic practice vs. policy insights relevant to the institutional design of economics as a social science); (ii) significant discrepancies between the two bodies of literature 'specialized philosophy of economics' and 'JEL economic methodology' (detected in the summarized bibliometric study) in terms of topical focus—the former focusing on mainstream mostly microeconomic development e.g., behavioural economics, and the latter on heterodox schools of economic thought such as institutional economics, critical realism, political economy, and the history of economics; and (iii) a common trend in both bodies, namely the demise of the big-M economic methodology.

In the discussion (Section 4), we framed some of the identified patterns in terms of

two kinds of EM/PE biases that we labelled 'micro-level' and 'mainstream' biases. We speculated on their social epistemological explanations, as well as on their potentially negative side-effects when one approaches EM/PE as a socially organized epistemic activity. These side-effects include: (i) the neglect of substantial economics topics pertaining to macroeconomics in particular; (ii) a tendency to consider economics as a science of individual and interactive rational choice, with less attention to how economists study market and complex phenomena in practice; and (iii) the delegation of heterodox issues to non-philosophers (i.e., heterodox economists publishing in JEL Economic Methodology). As a result of the last-mentioned side-effect, EM/PE could lose relevance not only to economics practitioners, but also to the general public: younger generations and marginalized members of society in particular might see mainstream (and perhaps also heterodox) economics as detached from urgent and wicked societal problems, such as the current ecological and social-sustainability crises that are becoming increasingly evident.

It is highly likely that such undesirable effects are unintended consequences of some dynamics within the field, as well as of interactions with neighbouring fields—such as the general philosophy of science, ethics, and political philosophy—and even developments in economics. In this sense, conscious and effective reorientation of EM/PE would not be easy, whichever direction one takes. Nevertheless, we suggest that at least the field is mature enough to reflect openly and critically on its core value commitments and the potential wider societal implications (if any), as several reflective articles in Davis and Hands (2021) exemplify. We have provided our own somewhat idiosyncratic reflections, which we hope researchers in the history of economics—a sister field of EM/PE—will also find relevant to the advancement of their own field. The identification of potential common interests and initiatives for re-inventing both fields could provide a more resistant vessel on which to navigate the tough times ahead.

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