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Pluralism in economics: its critiques and their lessons

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Abstract

This paper starts with an evaluation of three common arguments against pluralism in economics: (1) the claim that economics is already pluralist, (2) the argument that if there was the need for greater plurality, it would emerge on its own, and (3) the assertion that pluralism means 'anything goes' and is thus unscientific. Pluralist responses to all three arguments are summarized. The third argument is identified to relate to a greater challenge for pluralism: an epistemological trade-off between diversity and consensus that suggests moving from a discussion about 'pros' and 'cons' towards a discussion about the adequate *degree* of plurality. We instantiate the trade-off by showing how it originates from two main challenges: the need to derive adequate quality criteria for a pluralist economics, and the necessity to propose strategies that ensure the communication across different research programs. The paper concludes with some strategies to meet these challenges.

Keywords: epistemology; pluralism; paradigms; interdisciplinarity; trade-offs

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1 Introduction

The call for pluralism in economics has gained a large number of supporters (e.g. Dow, 2004; Sent, 2006; Dobusch & Kapeller, 2009; Gräbner, 2017), yet it remains contested for various reasons (e.g. Hodgson, 2019a; Becker, 2017). A majority of the literature on pluralism in economics has been concerned with a *justification* of pluralism (e.g. van Bouwel, 2005; Garrett, Olsen & Starr, 2009; Guerrien & Jallais, 2009). The direct engagement with criticism has received less attention and is, therefore, the main focus of this paper. It begins with arguments against pluralism posed from ‘outside’ the pluralist community, i.e. from scholars that do not consider themselves advocates of pluralism. Notably, most of these outside critiques are not formulated in academic publications, but regularly posed in personal conversations, blog articles, or social media such as Twitter and Facebook.¹ Thus, this article tries to move some of the public debate on a more academic level, and to link conventional contentions to more precise arguments made in the philosophy of science.

Beyond this, the aim of this paper is two-fold: on the one hand, it summarizes relevant literature that can be used to refute less convincing arguments against pluralism (section 3). On the other hand, by scrutinizing the critiques, it aims to identify challenges for the pluralism program, which deserve further attention by its advocates (section 4). These challenges are related to the epistemological trade-off between diversity and consensus, which dates back to Polanyi (1962) and Kitcher (1993), and has recently been highlighted by Hodgson (2019a) for the *heterodox* movement in economics. We argue that this trade-off can be traced to two major challenges of pluralism, which grow more relevant the more pluralist a science already is: (1) that effective communication among different scholars gets more complicated the more diversity is involved, and (2) that quality assessment within a pluralist economics community with potentially diverging quality standards is not straightforward. By substantiating the sources of the trade-off between plurality and consensus, the paper not only contains a more fundamental explanation

of its origins, it also points to some constructive strategies to mitigate it (section 5).

2. Pre-considerations about pluralism

Since debates about pluralism frequently suffer from an ambiguity of terms and concepts (Sent, 2006), this section clarifies how central terms are used throughout the upcoming discussions. In particular, the term ‘pluralism’, its ‘dimensions’, ‘justifications’ and ‘degrees’, and the term ‘research program’ will be defined.

First, we follow Mäki (1997) and distinguish between plurality and pluralism. *Plurality* is understood as a descriptive category that reports the multiplicity of an item. *Pluralism* will refer to a prescriptive rather than a descriptive claim: it is a “theory or principle that justifies or legitimizes or prescribes a plurality of items of some sort” (Mäki, 1997, p. 38).

Second, we distinguish between various dimensions of pluralism and plurality. The dimensions of pluralism describe the areas within which a plurality of items could be prescribed or justified. While Mäki provides an extensive (yet non-exhaustive) list, the present contribution will be confined to the dimensions as outlined in Table 1.² Note that a person might hold pluralism about methods, but not about realities, and still call herself a pluralist.

Third, the same dimensions allow for categorizing justifications for pluralism. Since pluralism is a normative concept, it requires references to particular reasons for a certain level of plurality. These reasons can be, among others, epistemological, pragmatic, or ethical. We suppose that many misunderstandings in the debate about pluralism stem from the fact that authors are not clear about the dimension of plurality they are arguing for, and which kind of reasons they provide.

Fourth, plurality is not a matter of all-or-nothing. It is a matter of degrees. According to Mäki (1997) theories (and, we would add, methods, values, etc) can be *substitutive* or *complementary* towards one another. Tolerance (or even endorsement) of rival claims to truth is

¹ Some general citable examples include Bachmann (2012), Badinger et al. (2017), Becker (2017), or Gersemann and Grabitz (2018); more specific references are provided in the sections dealing with the respective critiques.

² Sometimes, these dimensions necessarily overlap, e.g. in the case of methods and theories. Yet we believe they provide for an illustrative distinction that is useful for structuring the debate.

Table 1: Dimensions of plurality – a non-exhaustive list.

Kind of plurality	Items referenced
Epistemological plurality	Criteria for what counts as a (good) explanation.
Methodological plurality	Methods used for inquiry
Ontological plurality	Assumed properties of reality
Personal plurality	Scholars (in terms of e.g. their gender, race, or political orientation)
Purpose plurality ³	Aims of inquiry, questions and problems considered worthy of inquiry
Theoretical plurality	Theories
Topical plurality	Topics addressed

more demanding than toleration (or endorsement) of complementary claims. Therefore, to endorse a plurality of substitutive items requires a higher degree of pluralism than endorsing a plurality of complementary items (Mäki, 1997, p. 45; for examples see section 3.1). This is not to say that a higher degree of pluralism in all dimension is always better. Maximizing plurality in all dimensions is not considered desirable by the majority of pluralists (Caldwell, 1988, 1997; Mäki, 1997; Marqués & Weisman, 2008) and the limits of plurality have already been discussed by advocates of pluralism themselves (e.g. Polanyi, 1962; Kitcher, 1993; Hodgson, 2019a; see also section 4 for a more detailed engagement with these arguments).

Finally, the Lakatosian term ‘research program’ will be used frequently throughout this article. As in the original, a research program in our use of the term (which does not come with an endorsement of Lakatos’ theory of scientific progress) is constituted by its core, which not only includes concrete hypotheses and axioms, but also conventions about the dimensions mentioned above, such as purposes, theories and methods. More specifically, the core of a research program specifies the questions worth investigating as well as the admissible (meta-)theoretical assumptions and methods for these investigations. It includes an agreed upon summary of the *pre-analytic Vision* (Schumpeter, 1954) of the scientists operating within a given research program.

3. Structured literature review: outside critiques of pluralism and pluralist responses

This section provides a structured literature review along the lines of three common criticisms of pluralism. As pointed out above, many of these criticisms are articulated in public forums rather than in academic publications. Many *defenses* against these critiques, however, were published in academic outlets.⁴ Our aim is, hence, to provide a structured review of these *outside* critiques and pluralist responses. The survey is organized in a way that it might serve as a general reference point for readers who want to get an idea about critiques and possible responses. This is relevant since despite not being regularly debated within the journal discourse, these outside criticisms are regularly articulated in the public debate about pluralism and enter the political discourse about necessary changes in the scientific institutions of economics. Moreover, at least in some countries the debate currently does have a momentum, and due to its practical relevance, we argue that it is crucial to have an academic engagement with this debate. Lastly, by providing a structured summary of the arguments and their potential rebuttals, this section also paves the way for the identification of the most relevant and constructive critiques in section 4.

³ This was originally referred to as ‘pragmatic plurality’ by Mäki, but since we use the term ‘pragmatics’ in another way below we decided to use ‘purpose plurality’ in order to avoid misunderstandings.

⁴ This is in line with the empirical claim of Aistleitner et al. (2017), who find a considerable engagement of heterodox economists with the mainstream but not vice versa.

3.1 Outside Criticism I: The discipline is already pluralist

Some argue that economics as a science is already pluralist and that the critique of pluralists addresses a strawman (e.g. Coyle 2010; Bachmann, 2017; Becker, 2017). Newly emerged research areas such as behavioral economics are often presented as examples. Yet, to assess the argument that ‘economics is already pluralist’, one has to be explicit about the *dimension* and *degree* of plurality (see section 2). While there are developments within economics that brought about an increase of plurality in one dimension, this is not necessarily true across the board. Whether the argument that the discipline is already pluralist is empirically correct, hence, depends on the dimension considered, as well as on the desired degree of plurality.

Considering the topical dimension of economics, for instance, the claim is most likely true: there is indeed a large plurality of topics – here understood as phenomena deemed worth investigating – within the current economic mainstream. Starting in the mid-1950s with the work of scholars like Gary Becker or Anthony Downs, economics was increasingly applied to a wider range of social phenomena than ‘the economy’, such as politics, family planning, crime or religion. This so-called economic imperialism (Lazear, 2000) is proposed as one prime feature of economics by its proponents and serves as another supposed piece of evidence for the ‘superiority of economics’ (Fourcade et al., 2015). In this context, Akerlof (2020) points out that the Webster’s dictionary gives two distinct definitions of ‘economics’: economics as the social science concerned with analysing the economy; or economics as a specific methodology, namely a specific style of mathematical modelling and statistical analysis (a definition also advocated in, e.g., Rodrik, 2015). If one follows the second definition, economics is not pluralistic in the methodological dimension *per definition*. In this case, a debate about the proper definition of ‘economics’ would be necessary. If one follows the first definition, the debate becomes more nuanced since *in principle* this definition would allow for a broader consideration of methods in economics. In *practice*, however, the set of accepted methods is constrained by the dominant core methodology of economics.

At his point, one first has to be clear about the terms ‘methodology’ and ‘method’. Methodologies are strongly entangled with certain *epistemologies*,⁵ i.e. with the ideas of how relevant knowledge about the economy can be created. Methodologies are hence considerably broader than methods. For example, RCTs and experiments are specific *methods* that are distinct from the standard economic methods of formal modelling, and yet made it into high-ranked journals. This, however, is because they fit the overall *epistemology* of economics, which – *in practice* – is defined precisely via its methodology: Explanations tend to be seen as good the more they fulfil standards of ‘hard science’ and are compatible with thinking and explaining in terms of individual optimization and equilibrium (Akerlof, 2020). While methods such as RCTs and experiments, thus, did extend the methodical toolbox of economics, they did not broaden the status of the discipline’s plurality on the methodological dimension.

This is also confirmed by defenders of the current situation, see, e.g. Coyle (2010, p. 266): “The elements of economic methodology, unchanged from the classical days, are the status of rational choice and the use of equilibrium as a modelling concept. If these are limitations, so be it” (see also Rodrik, 2015). The recent bibliometric work of Hodgson (2019a) supports this argument further by showing the pervasiveness of the concepts of ‘utility’ and ‘maximization’ in publication in the ‘top’ journals in economics. Modelling approaches that are incompatible with those concepts, such as dynamical systems theory or agent-based modelling, which are based on the idea of disequilibrium or non-optimizing agents, remain marginalized. Non-formalized and qualitative approaches are marginalized even more (Akerlof, 2020; for similar claims see, e.g., Sugden, 2000; Colander et al. 2004; Coyle, 2010; Lipsey, 2001). Yet, for economics (understood as the science of analysing the economy) to qualify as pluralistic in the methodological dimension, it would at least give room to (a) model approaches that go beyond the standard optimization-cum-equilibrium framework (such as models based on disequilibrium and non-optimizing agents), and (b) non-model-based approaches, such as historical analysis, qualitative interviews or discussions on economic morality. Excluding non-modeling approaches, as well as excluding formal models that do not adhere

knowledge. In this sense, methodology as we use the term is ‘narrower’ or ‘more applied’ than epistemology.

⁵ With epistemology we refer to a theory about what knowledge is and how it can be created. With methodology we refer to a theory of how certain methods create

to the twin concepts of optimization and equilibrium, is incompatible with pluralism in the methodological (and epistemological) dimension. Thus, if pluralism refers to the plurality of methodologies, then the current economic discipline cannot be considered pluralist.

Moreover, within each dimension of plurality, an assessment of the present argument also requires one to consider the *degree* of pluralism. As noted above, it is hard to classify a discipline as ‘pluralist’ or ‘not pluralist’ - the question should be *to what extent* a discipline is pluralist in a particular dimension. Here, it is helpful to use the distinction between complementary and substitutive theories or methods as introduced in section 2: the toleration of substitutive theories implies a higher degree of pluralism than the toleration of complementary theories. This is not to say that a higher degree of plurality is always what pluralists demand (Hodgson, 2019a). But if one argues about whether the discipline ‘is pluralist’ or not, one must ask whether existing plurality refers to complementary or substitutive items.

The following example illustrates this point. In behavioral economics, there is one ‘camp’, represented by people such as Ernst Fehr or Richard Thaler, that challenges the descriptive rationality assumption of economic models and integrates new behavioral assumptions into utility-maximizing models (Fehr & Schmidt, 1999; Fehr & Schmidt, 2010; Benartzi & Thaler, 2007). This research builds upon the work of Kahnemann and Tversky, who “provided a relatively friendly criticism that allowed expected utility theory a life under the rubric of the normative theory” (Heukelom, 2014, p. 127). According to Heukelom, this at least partly explains their success among economists: this type of research gets regularly published in top mainstream journals, has found its way into the economics curriculum and researchers working in this tradition occupy important positions at the top of the institutional hierarchy of the profession (e.g. Angner, 2019). Within a plurality of theories, but not of methods, their way of doing behavioral economics offers interesting complementary research insights, particularly as a facilitator for immunizing economic theory from empirical critique via the strategy of *axiomatic variation* (Kapeller, 2013): appropriately interpreted, these results only show the superiority of the

economic approach by explaining more and more empirical cases with models containing optimizing agents and a systemic equilibrium (see also Earl, 2010).

Another ‘camp’ of behavioral economics, represented by researchers such as Gerd Gigerenzer or Kumaraswamy Velupillai, argues that – inter alia – the concept of optimization itself is wrong (Velupillai, 2006; Gigerenzer & Selten, 2002; Berg & Gigerenzer, 2010; Gigerenzer & Gaissmaier, 2011; Selten, 2002). Gigerenzer and Selten (2002) are very explicit on this matter: “The theory of bounded rationality, as we understand it, dispenses with optimization, and, for the most part, with calculations of probabilities and utilities as well” (p. 3). Thus, these researchers propose a *substitutive* approach that is incompatible with one of the key elements of economic methodology (optimization). Consequently, their research is not published in high-rank journals, central concepts of their theory are not taught to economics students, and they do not occupy key positions in within the economics community, although the excellence of their work is recognized by many other scientific communities such as statistics, psychology or computer science.⁶

In all, the preceding arguments stress the importance to precisely state the dimension and degree of the plurality discussed. While there seems to be openness towards new, even potentially substitutive ideas within the topical dimension, there is limited toleration in epistemological or methodological dimensions, even for complementary approaches.

3.2 Outside Criticism II: If there were a need for pluralism, it would emerge on its own

Some argue that the meritocratic institutions of the economics community render pluralism as the demand for greater plurality superfluous since all (and only) promising approaches pass the ‘market test’ (Lazear, 2000) and are considered in the economics community (e.g. Bachmann, 2012, 2017; Badinger et al., 2017; Wambach in Gersemann & Grabitz, 2018). Thus, the right degree of plurality is exactly that degree produced by the scientific community.

This argument assumes that the academic institutions provide for a ‘perfect market for economic

⁶ These two different ‘camps’ are referred to as ‘old’ and ‘new’ behavioral economics by Sent (2004) and ‘classical’ and ‘modern’ behavioral economics by Kao and Velupillai (2013).

For an alternative classification of distinct ‘cultures’ in behavioral economics see Katsikopoulos (2014). For a more detailed and critical assessment of behavioral economics see Earl (2010).

ideas' that serves as a selection machine picking the 'good' theories/methods/etc. to the right degree. Such a selection process presupposes a 'level playing field': new ideas can always enter the academic discourse, they are always considered, assessed, and – if judged useful–respected within the economics community.

Many pluralists would indeed be in favour of such an intellectual free market (see e.g. the petition initiated by Hodgson, Mäki & McCloskey in 1992; for critical remarks on the market metaphor as such see Hodgson, 2019b). However, there is ample evidence that this presumption is not fulfilled for at least three reasons: (1) the path dependent development of research programs under current scientific institutions, (2) structural obstacles that hinder alternative approaches to enter the mainstream economics discourse, and (3) a monistic curriculum.

First, a level playing field requires scientific institutions that prevent the accumulation of academic power towards a single research program for purely structural reasons. Given the current institutions of the scientific system, however, different research programs accumulate academic power according to a path dependent and self-reinforcing process: those research programs with many adherents, much influence and greater power are likely to grow relatively faster – irrespective of their potential inherent quality, in whichever way the latter is determined (Sterman & Wittenberg, 1999; Dobusch & Kapeller, 2009; Gräbner, 2017). There are many mechanisms underlying this tendency to monopolization, all of which are empirically well documented. These include, but are not limited to, the provision of educational programs and teaching material (which tend to stress topics, methods and concepts of the dominant paradigm), occupation of editorial boards and commissions (which are then more likely to decide in favour of the currently dominant paradigm) and very standardized criteria for the promotion within academia, which are more difficult to meet for scholars working outside the currently dominant paradigm (see Gräbner, 2017, for a more detailed discussion of these and further points). The latter point is also stressed in Akerlof (2020), who criticizes the extensive reliance on journal metrics for promotion processes, which hinders the consideration of new (and, thus, often less formalized and more controversial) ideas and approaches (for this see also Heckman and Moktan, 2020). Thus, the current institutional framework of academic economics makes it hard for new research programs to break the

self-reinforcing cycle that reproduces the position of the dominant scientific paradigm.

Second, the idea of a perfect market of ideas presupposes that new ideas – irrespective of their origins – are outlined to the scientific community, discussed and assessed. Such an inclusive discourse does not happen in economics. In mainstream outlays less than 3% of total citations refer to heterodox publications (e.g. Aistleitner et al., 2017). Non-mainstream scholars, on the other hand, cite their mainstream colleagues regularly (see Figure 1). Of course, one might conclude that 'non-mainstream' outlets are simply of lower quality and therefore not worth being referenced anyway. Yet such an interpretation does not align with the fact that 'mainstream' papers citing non-mainstream publications tend to have higher impact than those which do not (Aistleitner et al., 2017, p. 17; see also Gräbner, 2017). The more adequate answer is given by Colander (2010, p. 47): "My honest answer to that question [What does mainstream economics think of heterodox economics?] was that they don't think about it" (for empirical evidence based on a citation analysis see e.g. Glözl & Aigner, 2017 or Aistleitner et al., 2017). A slightly different, but complementary point is made by Akerlof (2020), who argues that economics suffers from numerous 'sins of omissions' that produce a bias towards 'hard evidence'. This structural bias implies that numerous perspectives are overlooked if they either do not lend themselves as easily to formal modeling and quantitative empirical research, or do not align with core concepts in economics, such as utility maximization and equilibrium (see section 3.1). This focus on hardness implies also a very narrow definition of what economics is and, thereby, serves as a self-reinforcing selection mechanism, where the greater the bias toward mathematical analysis within the framework of utility maximization, "the greater will be selection into it of those with intrinsic tastes in that direction" (Akerlof, 2020, p.407). The narrow metric of success in economics may hence deter scholars with other perspectives on economics to publish in economic journals or apply to economic positions. Thus, the forum for a 'market of ideas' is simply not given to the extent claimed by proponents of this argument.

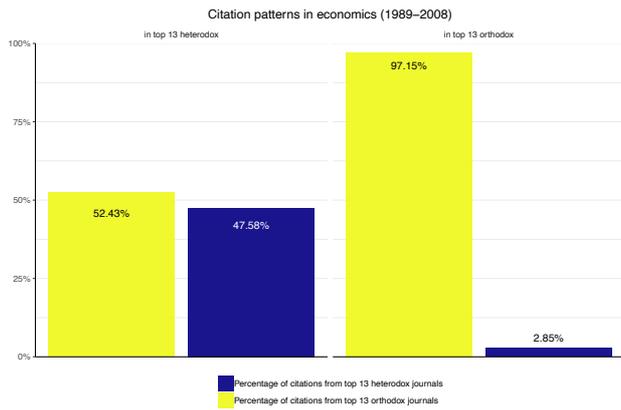


Figure 1: Citations from and to heterodox journals (Aistleitner, Kapeller, and Steinerberger 2017).

Finally, a perfect ‘market for ideas’ would also require that students in economics are exposed to a variety of research approaches. They only have a serious choice for what research orientation to follow if the diversity of distinct research programs is indicated to young economists right from the start of their career. Otherwise, junior scientists would be biased towards a dominant way of doing economics, even though the dominance of one approach does not necessarily indicate a substantial superiority. However, teaching material in economics is rather monistic, as not only numerous protests of students such as the ‘Exploring Economics’ program (Dimmelmeier et al., 2017) or the ‘Rethinking Economics Textbook’ (Fischer et al., 2017), but also empirical investigations (e.g. Lee & Keen, 2004; Beckenbach, Daskalakis & Hofmann, 2016) indicate.

Altogether, the level playing field assumed by proponents of the argument that pluralism would emerge on its own if there were a need for it does not exist and current academic institutions tend to accelerate a scientific monopolization (Gräbner, 2017). It is not clear at all how under such circumstances the scientific community should serve as a perfect selection machine of ideas and thereby establish a ‘market test’ à la Lazear (2000). From this it follows that we need to determine the level of plurality desired for ourselves: we cannot source out this discussion to something like the ‘scientific system’.⁷

⁷ Or course, one might evade the previous argument altogether and accept that a perfect selection of ideas does not take place and still argue that the current state of plurality is the adequate one. However, then one would need to provide some justification for this assessment.

⁸ There might be some proponents of pluralism indeed argue for an ‘anything goes’ in the strict sense. Even if there were

3.3 Outside Criticism III: Pluralism means ‘anything goes’, and is thus unscientific

The two arguments assessed above refer to the status of the discipline without questioning the concept of pluralism itself. The present argument challenges pluralism on theoretical and epistemological grounds by stating that pluralism would imply ‘anything goes’. This phrase has been used by critics of pluralism as a way of expressing their worry that opening the field to pluralism would result in anarchism, which, in turn, is considered non-scientific (e.g. Backhouse, 1998, p. 144; Bachmann, 2012, 2017; Badinger et al., 2017). The demand for more plurality and the (supposedly) concomitant broadening of quality standards, then, might stand in the way of the progression of economics as a science (Gintis, 2009; Colander, 2014; Gintis & Helbing, 2015). Only once the scientific community has agreed on a certain shared core, including a shared understanding of clear-cut quality criteria, a given scientific discipline develops. In drastic words: “That way lies the permissive chaos in which the principle that ‘anything goes’ will ripen into the dogmas of mob rule, and so usher in the dictatorship of some genocidal popular or ‘proletarian’ boss, such as ‘the great scientist’, Stalin” (Hutchison, 1981, p. 218).

Two clarifications are in order: firstly, pluralism does not necessarily imply a demand for anarchism in the sense of ‘anything goes’. Neither do influential pleas for pluralism demand this (Sent, 2006; Marqués & Weisman, 2008; De Langhe, 2010; Dobusch & Kapeller, 2012),⁸ nor is methodological anarchism without any shared standards practiced commonly among advocates of pluralism. Since ‘anything goes’ is neither practice nor agenda of the majority of pluralists, critiques that propose that pluralists demand the abolishment of all type of quality standards do not seem to be worth engaging with.

Secondly, however, the fear among critics that pluralists want to give academic resources to research programs that are ‘not scientific’ can also be interpreted as the worry about supposedly *diminishing* quality standards,

some convincing theoretical arguments for such a position, we hold it as untenable for practical reasons. This is also the view held by the majority of pluralists today (e.g. Caldwell, 1997; Sent, 2006; Marqués & Weismann, 2008; Dobusch & Kapeller, 2012).

which may put the success of the discipline as a whole at risk.⁹ The question is: can science be successful if there are no universally applicable and clear-cut quality criteria? A reference to Kuhn's account of the lack of clear-cut criteria in natural sciences – which surely everyone regards as 'real science' – serves as a point in case that science does not become science *qua* clear-cut criteria. Kuhn (1977) argues that the absence of an objective and clear-cut quality standards in natural sciences would not mean 'anything goes'. Even though there are, according to him, five main standards for theory choice (accuracy, consistency, broad scope, simplicity, and fruitfulness), he argues that these criteria are necessarily imprecise, as well as neither necessary nor sufficient for good science. Regarding accuracy, for example, Kuhn (1977) points out that Copernicus' system of planetary movement was "not more accurate than Ptolemy's until drastically revised by Kepler more than 60 years after Copernicus's death" (p. 323), nor was it consistent with existing scientific explanations at the time (see also Koestler, 1959). While such criteria are important, there are ample examples in the history of sciences where they did not hold for theories that are nowadays unquestionably considered 'better science'. Kuhn therefore calls these rules *values* instead of criteria, highlighting that (1) contradictions between them are possible without the whole system breaking apart, and (2) the

choice of standards used to choose one theory over another, at least in part, hinge on individual biographical factors (Kuhn, 1977). With Kuhn one might thus argue that clear-cut quality standards are neither necessary nor sufficient for the economics discipline to be a successful science.

Thus, while the fear that the absence of overall and clear-cut quality criteria necessarily undermines scientific success is unfounded. At the same time, the critique that greater plurality often makes it more difficult to ensure quality of research poses a challenge for pluralists and poses questions about the admissible *degree* of plurality. As will be explained below, this challenge is one symptom of a deeper trade-off, which has been subject to controversy within the pluralist community itself.

4. Lessons learnt and a more demanding challenge

The starting point of section 3 was to review and evaluate outside criticism posed in mostly informal settings against pluralism. We can now distinguish between critiques that can be easily refuted – and for which the refutations have been summarized above – and critiques that pluralists should take seriously. The critiques and pluralist responses are summarized in Table 2.

Table 2: Summary of the arguments and classification according to the object of criticism.

Argument	Object of critique	Response
The discipline is already pluralist	The movement	Depends on what you mean when you say "pluralist". Openness to new ideas but not to different methodologies.
If there were need for pluralism, it would emerge on its own	The movement	Evidence points to the contrary because of path dependencies in current institutions, uneven citing practices among heterodox and mainstream scholars, and a lack of pluralism in university curricula.
Pluralism means "anything goes", and is thus unscientific	The concept	Pluralism does not mean anything goes, but it does imply a broadening of research standards. While broad standards are no indicator of non-scientificness and do carry important epistemological benefits, they also bring certain challenges, specifically relating to the questions of quality control and of communication.

⁹ The reference to 'scientificness' in this critique is not useful: evaluating the 'scientificness' of a research program requires an objective criterion for scientificness. Yet the relevant philosophical literature on this 'demarcation problem' largely agrees that such a criterion does not exist (see Pigliucci &

Boudry, 2013 for a relatively recent review of the literature). Since we cannot meaningfully talk about scientificness or non-scientificness of research programs, accusing research programs of being unscientific is an unconstructive dead-end.

Critiques mainly targeting the pluralist movement – criticisms along the lines of the arguments discussed in 3.1 and 3.2 – hardly pose an intellectual challenge for pluralism. However, the argument about a potential reduction of research quality as discussed in section 3.3 – targeting the *concept* of pluralism rather than the movement – points to a deeper challenge that may indeed limit the degree of permissible pluralism.

Although discussed as an ‘outside’ criticism in section 3.3, there has in fact been a related debate about pluralism and scientific progress *within* the community of proponents of pluralism. Recently, Geoffrey Hodgson (2019a) took up this debate, which goes back to Philip Kitcher (1993) and Michael Polanyi (1962). These authors discuss an important *epistemological trade-off*, “a trade-off between diversity and consensus” (Hodgson, 2019a, p.151). While this trade-off is not a *refutation* of pluralism, it points to potential *limits* of plurality and highlights a number of difficulties that may deserve greater attention.

The remainder of this section addresses these difficulties by studying the deeper sources of the trade-off between diversity and consensus. The trade-off, it is suggested, emerges from the interplay between benefits and drawbacks of plurality. The forthcoming discussion of plurality abstracts, at least in the first place, from any specific type of plurality, such as topical, methodological or epistemological plurality. Rather, greater plurality of the discipline here refers more generally to a greater diversity of research programs, which all bring along distinct topics, methodologies, and epistemologies (see section 2). Hence, whenever epistemological drawbacks and benefits of plurality are discussed below, this does not refer to drawbacks and benefits of increasing a certain *type* of plurality, but of increasing the presence of a variety of different research programs as such, each bringing along different levels of greater plurality in different dimensions.

In a second instance, however, the type of research programs added does matter in shaping the economic discipline as it stands today. It was shown in section 2 that a stronger commitment to plurality is required to acknowledge *substitutive* rather than *complementary* approaches to economics. The discussion in section 3.1 indicated that there is already a large amount of plurality within the economics discipline when it comes to

the topical dimension – as long as these topics are analyzed within a relatively narrow methodological frame (especially relating to modelling and optimization-cum-equilibrium thinking). Hence, research programs that simply contribute alternative topics will not be conceptualized to increase overall plurality of the discipline, since they merely offer complementary perspectives. However, the consideration of research programs that use potentially substitutive methodologies, embedded in very different epistemologies, would require a greater commitment to overall plurality. So, even though this section abstracts from specific types of plurality, the assumption is that “an increase in plurality” refers to an increase in the acknowledgement of those research programs that propose substitutive ideas and different methodologies – rather than to those programs that simply add another topic to the repertoire of formal economic analysis.

While section 4.1 assesses two different conceptions of the epistemological benefits of plurality, section 4.2 focusses on the drawback side. Section 4.3, then, synthesizes the arguments and proposes a simple model that relates our description of the dynamics of benefits and drawbacks. Importantly, we will argue that the relevance of the drawbacks depends on how well a research community is equipped to address two fundamental epistemological challenges of plurality, namely *the challenge of quality control* and *the challenge of communication*.

4.1 The epistemological benefits of plurality: two potential stories

A clarification of the mechanisms underlying the trade-off between diversity and consensus requires a better understanding of the interplay between benefits and drawbacks of plurality (with regard to research programs). We begin with the benefits, which are well-documented in the literature (e.g. van Bouwel, 2005; Garrett, Olsen & Starr, 2009; Guerrien & Jallais, 2009). In essence, these contributions agree on the value of plurality for increasing one’s knowledge about the world. However, there are two conceptions of how this increase in knowledge may come about: a) via truly establishing a competitive ‘market for ideas’ in which the best theory will prevail; or b) via an inherent epistemological value of plurality that derives from the insurmountable complexity of reality.

The first perspective holds that diversity functions as an accelerator of scientific progress, since, if presumably sciences move from one mature paradigm to the next, then a plurality of approaches may facilitate this move (e.g. McCloskey, 2001). In this sense, it is an evolutionary argument that suggests that increasing diversity and selective pressure yields better overall results. The problem, from our perspective, is that this argument still presumes the existence of the ‘best’ research program that can be identified through the competition on the scientific market.

The second perspective derives the epistemological benefits of plurality from the fact that the fundamental complexity of reality implies that it is impossible to identify ‘the right’ research program (see also Longino, 2002; Kellert et al., 2006); or, even further, that there might not be one ‘right’ research program to start with, since reality is too multi-faceted to understand all of it under one paradigm. Similar to the absence of a single, objective yardstick for ‘scientificness’, we lack a single criterion for the ‘correct way of doing economics’, which is why the triangulation of distinct approaches becomes mandatory to avoid intellectual lock-ins.

This uncertainty exists *especially* for the discipline of economics because its object of investigation is not objective, external, and unchanging, but inherently constructed and context-dependent (e.g. Rodrik, 2015), such that choices regarding the questions asked, the methods used, and the theories referred to cannot be made on purely objective grounds. They are inevitably moulded by our worldviews, be it called *Weltanschauung* (Weber, 1922), pre-analytic vision (Schumpeter, 1954), prior beliefs (Peirce, 1958) or perspective (Giere, 2006). Because of the resulting fundamental epistemological uncertainty with regard to the optimality of any dominant research program, such programs must be continuously questioned to avoid an intellectual lock-in (see also Heckman et al., 2017) – there is, hence, an *inherent* value in plurality. The lack of a single dominant research program in a social science should therefore not be considered a bug, nor an accelerating strategy towards the ‘right’ paradigm, but rather an essential feature of any science that recognizes fundamental epistemological uncertainty.

Such an argument also implies that the benefits of increasing plurality depend on the current level of plurality: in the absence of any plurality, adding further perspectives to the discipline has a tremendously positive effect on our ability to gain knowledge about economic systems since this breaks up a situation of scientific monism. In a situation where a discipline is already quite pluralist, in contrast, adding further substitutive or complementary perspectives may not extend our epistemological capacities to the same degree.

4.2 *The epistemological costs of greater plurality: quality and communication*

There is a flipside to the benefits just discussed: plurality comes with drawbacks, which make scientific practice and interaction more complicated *the more pluralistic the scientific community becomes*. The drawbacks operate via two channels: that of quality controls and that of communication. Here, the type of plurality does matter. Increases solely in the topical dimension of plurality – which we argued earlier do not imply a very strong position of pluralism – can largely avoid these problems. If economics is mainly defined by a specific, formal method, then quality controls and communication are easier since they can be defined more objectively. However, as Akerlof (2020) points out, evaluating economic research only for its precision and not for its importance or novelty – simply because the former is better-defined – will lead to ‘sins of omission’ and, thereby, other kinds of epistemological costs. Along with the demand to read an increase in overall economic plurality as an increase in economic research programs with different epistemologies and methodologies – even substitutive ones – comes the need to face the challenge of quality controls and of communication. They will now be discussed in turn.

To start with quality controls: While a move towards more plurality in economics does not necessarily imply the *abolishment* nor a *reduction* of quality standards, it mostly comes with a *broadening* of the standards for ‘good economics’.¹⁰ Such broadening of standards provokes the legitimate question: how is quality of research

¹⁰ Akerlof (2020) provides an intuitive example: if research quality gets assessed mainly via reference to the ‘hardness’ of research, then research that builds mainly on qualitative research methods will be rejected by the scientific community

because it does not meet the required ‘hardness’. In this case, a broadening of the criterion for research quality beyond ‘hardness’ will become necessary. A broadening of quality standards would not be necessary if research programs were

assured? When does a broadening of quality standards come with epistemological costs?

To understand the cost dynamics, it helps to recall why having a clear-cut set of quality criteria is problematic in the first place: it assumes that there is an objective criterion according to which the scientificness of a social scientific research program could be determined. Such a criterion does not exist (Pigliucci & Boudry, 2013) and different research programs have different conceptions of what “explanation” means (Lehtinen & Kuorikoski, 2007). This implies that the more pluralistic the community, the more difficult to criticize the quality of another scholar’s work since, at the maximum of plurality, each scholar might have their own conception of what makes a good explanation. In this situation, epistemological costs are high, and it would be very difficult for scientists to cooperate and interact. Such excessive levels of plurality may also lead to practical problems, e.g. when allocating grant money or when a non-economist seeks to complement her work with economic insight. On the other hand, if plurality is very low, then an increase in plurality and hence a broadening of quality standards will not incur high epistemological costs, since a broadening of quality standards does not immediately imply ambiguity with regard to what makes up a good explanation.

The second channel through which the drawbacks of plurality operate is that of communication: too much diversity of terms and concepts complicates communication among scholars and research programs. Reasons for this complication include: (i) adherents of different research programs use different constructs to represent elements of reality (i.e. they differ in their ‘meaning structure’¹¹), (ii) even in case they do use the same concepts they often use different symbolic representations for these (i.e. they differ in their ‘surface structure’), or (iii) they differ in terms of their meta-theoretical vantage points (e.g. what counts as an explanation for an adherent of research program A might not count as an explanation for the adherent of research program B). Since science is a social practice (see also Kitcher 1993, Aydinonat et al. 2020), this complication

excluded because of reasons entirely independent of quality evaluation (such as race or gender).

¹¹ The *meaning structure* is the set of concepts understood as mental representations of external objects. The *surface structure*, on the other hand, refer to symbolic representations used to communicate concepts across individuals (for a concise

of communication also comes with epistemological costs for the scientific community at large – which is why the *communication challenge* can be seen as the second core challenge for pluralists. This challenge tackles the difficulty of effective communication among the distinct instances that make up plurality.

Not all advocates of pluralism would subscribe to the claim that interaction and communication is important: as pointed out by De Langhe (2010), there are at least three different kinds of pluralists, and only one would agree with our claimed benefit of mutual interaction. To start with, ‘consensual pluralists’ do not care much about communication across research programs since they assume that different models, theories or research programs are independent complements: for purpose A, adherents of research program X can make good contributions, for purpose B the adherents of research program Y are best-prepared. Because of this, communication among them is unnecessary. On the other end of the spectrum, the ‘antagonist pluralists’ claim that communication across different research programs is impossible anyway, so they may as well just co-exist.

The present paper takes the perspective of the ‘agonist pluralists’, who call for direct interaction, exchange and criticism across research programs. There are two reasons for this: First, while it is true that once the purpose of an inquiry is fixed, it is much easier to compare and judge contributions from different perspectives, this usually does not eliminate all but one remaining view. There are likely to remain various takes on the same problem, all geared towards the same purpose, and without effective communication among them, an alignment of these perspectives remains impossible.

Second, denying the possibility and necessity for communication across different research programs would automatically eliminate important epistemological arguments in favor of pluralism:¹² not only is effective communication among different research programs a pre-condition for mutual criticism, it is also the pre-condition to harvest the epistemological benefits of pluralism, according to which various perspectives on

explanation of their relevance for communication see, e.g., Jaccard & Jacoby 2010, pp. 16-18).

¹² Since there are other justifications of plurality (see section 2), a lack of communication would not necessarily mean the end of the pluralist program, yet it would do severe damage to its justification.

reality, and their triangulation, improve our understanding of the latter. Yet if people were not able to relate the perspectives to each other, and the perspectives could not enrich each other through direct interaction, the alleged benefit from the plurality of research programs could not materialize.

In all, the more plurality there is, the more difficult it will be to communicate with one another and the more difficult it will be to control for quality. At the same time, at lower levels of plurality, increases in plurality come with lower epistemological costs since the diversity of terms and quality criteria would still be manageable. We now explore the implications of this functional relationship in more detail.

4.3 The relationship between epistemological costs and benefits

This section formalizes the foregoing discussions to capture the mutual relationship between epistemological costs and benefits. In section 4.1 we argued that the benefit of additional plurality is proportionally larger at low levels of plurality. A ‘benefit curve’ would be strictly increasing but display decreasing marginal returns of plurality. The description of epistemological costs in section 4.2 implied that the costs of plurality relate to the degree of plurality in a strictly positive way with increasing marginal costs.

Putting this together, we advocate the following contentions, which are visualized in Figure 2 and Figure 3: (1) the two main sources for drawbacks of plurality are (i) the *challenge to ensure communication* among scientists and (ii) the *challenge to ensure the quality* of research; (2) the benefits of plurality increase with decreasing marginal benefits and take the shape of a concave function, as illustrated in Figure 2a; (3) the epistemological costs of plurality become more and more relevant the higher the current level of plurality is and can, therefore, be represented by a convex function, as illustrated in Figure 2a. From this it follows that neither full plurality nor full consensus are most beneficial to a scientific community (see Figure 2b).

The visualization of Figure 2 might, however, delude us into a false sense of certainty since – given the lack of an objective way to measure ‘epistemological costs and benefits’ – the exact optimal degree of plurality can hardly be identified in practice.

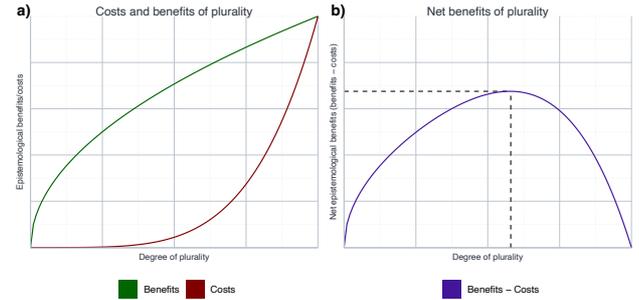


Figure 2: The functional interplay of epistemological costs and benefits of plurality.

More importantly, the costs also depend on how well the scientific institutions address the two challenges mentioned above: The benefits of diversity relative to consensus depend on the ability of the scientific community to address the challenge of communication and the challenge of quality control. Consequently, the right degree of plurality is not objective and independent, but depends on the institutions of the scientific system, and on the abilities of the scientists involved. Scientists that are well-trained in mapping different perspectives onto each other will be more successful in working with very distinct perspectives and suffer much less from a more diverse vocabulary and broader quality standards than those without such training. Similarly, if scientists get training in different modelling techniques, this makes it easier to use a plurality of models. Thus, harvesting the benefits of pluralism requires an acknowledgement of the limits of pluralism and calls for the implementation of strategies that address the two main sources for its drawbacks: the communication and the quality challenge. In effect, such strategies would allow for a, *ceteris paribus*, higher degree of plurality and the corresponding epistemological benefits (see Figure 3). In the following, we sketch some ideas of how such strategies could look like.

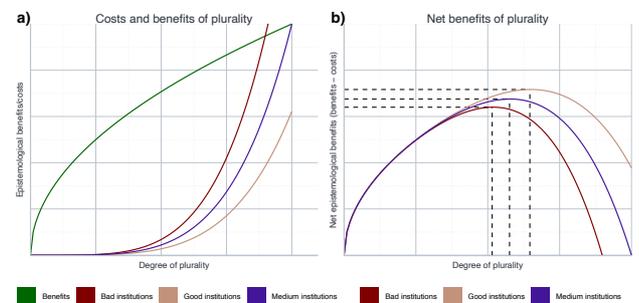


Figure 3: The functional interplay of epistemological costs and benefits of plurality for different institutional settings.

5. Strategies to deal with the trade-off

As discussed above, the costs of plurality are by no means fixed, but depend on how well a certain economic community is equipped to deal with the two challenges that underlie the drawbacks of plurality, i.e. the challenge of quality and the challenge of communication. In the following, we sketch some strategies that could reduce supposed costs of plurality and shift the cost curve in Figure 3 to the right.

5.1 Strategies to address the quality challenge

Regarding quality controls, three suggestions are made in the literature that are - on their own - unable to solve this challenge. However, we argue below that a triangulation of them combined with insights from the philosophy of interdisciplinarity might lead us towards a potential solution.

First, for Caldwell (1988, 1997), mutual criticism is the essential constraint that prevents a pluralist economics to fall into the anarchy of ‘anything goes’. In this conception, it is not a set of quality standards, but constant communication and criticism, i.e. a *process* that ensures quality. Yet, such a culture of criticism alone is insufficient to guarantee quality. To start with, the ‘paradox of outside criticism’ (Rolin, 2009) questions the feasibility of criticism across research programs: since criticism is always voiced from a specific perspective, it either counts as within criticism, or, if the critic operates on a different dimension than the one being criticized, is opaque to the latter. This problem would leave us yet again with a naïve relativist position across research programs. Criticism alone does not seem to do the trick.

A second potential solution is to accept the absence of any general criteria, but to use the practical implications of specific theories as a means to discriminate among them. This implies to judge their quality depending on the question at hand (e.g. Dobusch & Kapeller, 2012). Yet, such a stance is viable only if one is concerned with applied research questions on which different research programs issue concrete propositions or predictions. Moreover, the appraisal of such propositions is itself dependent on several meta-theoretical considerations, such as the preferred kind of explanation (e.g. functional vs. causal vs. predictive). So, despite being useful in some situations, such an approach does

not provide an exhaustive solution to the challenge of quality criteria.

A third approach would propose a new set of standards, which are broader than current criteria but still clearly delineate admissible ways of doing research. To start with, there is certainly a set of evaluative meta-criteria generally appreciated by many, such as *transparency*, *consistency* or *accuracy*. Yet, as we also argued above, these criteria are usually not universally applicable, nor are they unambiguous in their formulation. In fact, they are a set of *virtues* rather than strict standards that can be applied directly to evaluate a given research output – similar to the scientific ‘values’ Kuhn (1977) identified in the history of natural sciences. In that sense, while these meta-criteria do provide a starting point for the evaluation of research, they alone are insufficient since they remain ambiguous.

Since all three solutions remain insufficient on their own, we propose to combine them, and enrich them with some contributions from the philosophy of interdisciplinarity. Quality criteria should address both the process (or the ‘knowledge system’) through which an idea has been produced and the idea itself. Criteria for the process side may be similar to Longino’s (2002) *Critical Contextual Empiricism Norms*. According to these, any viable knowledge system (1) should provide for venues of criticism, such as accessible conferences or journals, (2) has shown to uptake criticism, i.e. beliefs must be shown to respond to criticism over time, (3) has some enforced standards of evaluation that are transparent to the public, and (4) follows the tempered equality of intellectual authority according to which critiques must not be assessed by the speaker’s social position within the epistemic community.

When judging the quality of the idea itself we suggest a two-step procedure: On the most general level one could refer to *scientific virtues* (Kellert et al., 2006; Longino, 2002; Koskinen & Mäki, 2016) such as consistency, transparency and accuracy. On the applied level one should assess quality using more strict *criteria*, whose selection depends on the purpose of the investigation at hand: an inquiry aimed at concrete predictions must adhere to other criteria than a hermeneutic inquiry geared towards a better understanding of the actors’ motivations. Yet, for both areas clear quality criteria must exist. Once the purpose of an inquiry is made explicit, the selection of concrete quality criteria gets easier. This implies that the explicit communication of the purpose and the starting point of one’s inquiry becomes essential (Gräbner, 2018).

5.2 Strategies to address the communication challenge

To address the communication challenge, we see the need for ‘symbolic spaces’, where adherents of different research programs can engage in a “civilized conversation among equals” (McCloskey, 2001, p. 107; see also Longino, 2002) and where a constructive channelling of their conflicts can take place (van Bouwel, 2009). Unfortunately, such spaces are not only difficult to construct in practice, they are also underresearched theoretically: Most frameworks that have been proposed so far, such as the ‘critical pluralism’ of Caldwell (1997), the ‘ontological reflexive pluralism’ of Bigo and Negru (2008) or the ‘interested pluralism’ of Dobusch and Kapeller (2012) either presume a certain level of mutual understanding, or neglect its necessity (exceptions include Dow, 2004; van Bouwel, 2009). The remainder of this section seeks to explore avenues of how this communication can be facilitated.

First, there must a change of communication practices among researchers. Scholars need to be more transparent with regard to their (meta-)theoretical assumptions and orientations. Similar calls for more extensive model commentary in economics recently came from Rodrik (2018) and Mäki (2018). By clarifying more explicitly what the terms used in an inquiry mean, how concepts are understood in the present framework, or what the success criteria for one’s investigation are (the ‘construal’ according to Weisberg, 2007), one facilitates discourse across research programs tremendously (e.g. Bigo & Negru, 2008; Gräbner, 2018). Such change in practice could be facilitated by exploiting corresponding analytical tools and frameworks from philosophers of science, as illustrated by Gräbner (2018), and by demanding such commentary frameworks for the appendices of published work.

Second, enabling young scholars with the ability to reflect upon programmatic differences and to effectively communicate with different research programs is of prime importance to enable them to conduct the “exercise in hermeneutics” that needs to be at the beginning of any successful cross-programmatic conversation (Dow, 2004, p. 279; see also Garnett, 2006). There are a few simple means to do so, and they partly reflect demands of pluralists regarding necessary changes in the education of economics. For example, the inclusion of a mandatory course in the history of economic thought would help students to appreciate

different viewpoints. The same holds true for a mandatory course in the philosophy of economics (see also Rodrik, 2018): here students would learn the basic terminology that helps to establish a dialogue across research programs.

Third, joint ‘symbolic spaces’ for exchange across research programs can also be explicitly constructed: joint symposia, conference special sessions and special issues of journals explicitly geared towards the fostering of a discourse across research programs have been proven powerful for fostering interdisciplinary research, and they can play the same role for communication across research programs as well. The recent symposium on Dani Rodrik’s *Economics Rules* (Aydinonat, 2018) is a nice example.

What becomes clear from this tentative and non-exhaustive list is that any move towards more plurality must always be accompanied with an adequate change in scientific institutions. Otherwise, communication and triangulation are most likely to fail, which is why the question of how communication can be established between various research programs is of prime importance and deserves more attention by advocates of pluralism.

6. Conclusion

This article discussed common arguments against pluralism in economics. It was shown that the arguments targeted to the *movement* are either unconvincing (“pluralism would emerge on its own”) or not precise enough to assess their validity (“the discipline is already pluralist”). The argument whose object of critique is the *concept of pluralism* itself, highlighting the necessity of common foundations for research, such as common quality criteria or a common language, does present a challenge for pluralists. This debate is not alien to the pluralist community, and corresponding critiques have also been voiced from ‘inside’, notably with respect to the literature around the trade-off between diversity and consensus (most recently by Hodgson, 2019a). It is, however, less a debate about the ‘pros’ and ‘cons’ of pluralism, but more about the relevance of its limitations and the adequate degree of plurality.

To advance this debate we discussed the deeper reasons for the epistemological trade-off between plurality and consensus. We surmise the trade-off to be the result of the interplay between epistemo-

logical benefits, which are increasing in the level of plurality, but with decreasing marginal benefits, and the epistemological costs, which are also increasing in the level of plurality, but with increasing marginal costs. We also argued that the costs are the result of two major challenges of plurality: the challenge of quality control, and the challenge of communication. This implies that the actual costs of plurality depend on the scientific institutions, and can be – *ceteris paribus* - reduced if the scientific community is better prepared to address the two challenges. That is, the costs of plurality can be lowered if the institutions are adapted. This can be epistemologically attractive since there is indeed an inherent epistemological value in plurality.

In all, the present paper indicates that for pluralists to be successful they must not only take the relevant critiques seriously, they should also focus more on the debate about good scientific institutions and on justifying the right degree of plurality, rather than getting lost in unconstructive pro-contra debates, which ultimately only tend to cement the status quo.

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