Is engaged pluralism the best way ahead for economic geography? Commentary on Barnes and Sheppard (2009)

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Abstract
Barnes and Sheppard (2009) assume that an anti-monist and anti-reductionist economic geography is desirable and that this desirability is so obvious that no argument needs to be advanced in its support. This commentary challenges this assumption and suggests that a monist and reductionist economic geography organized around the idea of truth-seeking is neither unthinkable nor unpalatable. In order to flesh out this idea, the commentary builds on recent work in the philosophy of scientific induction to show why one of its less publicized advances – error statistical theory – holds far more promise for the future development of economic geography than Barnes and Sheppard's vague and nebulous 'engaged pluralism'.

I have read with great interest Barnes and Sheppard's (2009) recent plea for engaged pluralism in economic geography. I wholeheartedly agree with their diagnosis of the subdiscipline, as being 'increasingly fragmented into a series of intellectual solitudes that has created isolation, producing monologues rather than conversations' (p. 193). When it comes to the solution advanced for this problem, however, I have serious reservations. Barnes and Sheppard propose engaged pluralism, an approach 'based on dialogue, translation, and the creation of trading zones . . . that recognizes and connects a diverse range of circulating local epistemologies: a politics of difference rather than consensus' (p. 193). Their commitment to engaged pluralism seems to arise from the fact that they perceive it as the perfect means toward their cherished goal of a '*determinedly* anti-monist and anti-reductionist [sub]discipline' (p. 193; emphasis added). Barnes and Sheppard seem to assume that this goal is desirable and that this desirability is so obvious that no argument needs to be advanced in its support. Yet I would like to hear why they believe that a monist and reductionist economic geography is unthinkable or, in any case, unpalatable. In my humble opinion, a 'monist and reductionist' economic geography that is organized around the idea of truth-seeking is neither unthinkable nor unpalatable. In order

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to flesh out this idea, I would like to offer a specific alternative to Barnes and Sheppard's proposal, namely error statistical theory. As I am about to show, if this approach were embraced by economic geographers, we would be able not only to reduce the internal fragmentation of economic geography but also to place the subdiscipline on a path that would increase its scientific and social relevance.

As Barnes and Sheppard (2009) convincingly show, economic geography has become a marketplace for an increasingly diverse collection of theoretical stances and methodological approaches. While we generally extol diversity for its power to detect multiple facets of an empirical phenomenon of interest, we should nonetheless remember the price paid for cultivating it. For a scholar concerned with rigor and clarity, the positively valenced phrase 'rich diversity of perspectives' and the negatively valenced phrase 'confusing hodgepodge of approaches' are the two sides of the same coin. To put this another way, the greater the diversity of theories and methods, the higher the risk of failing to find a common denominator of quality across them, and, therefore, the more arduous the task of making sense and profiting in a meaningful way from diversity (Bunge, 2006). Economic geography journals are confronted with the conflicting goals of (1) encouraging a variety of schools of thought and (2) ensuring that only high-quality scholarship gets published. The goals are conflicting because different schools of thought espouse radically different views of what constitutes good research (Povinelli, 2003). Some value objectivity, impartiality, neutrality, quantification, replicability of results, and predictive power, whereas others value acknowledgments of the positionality of the researcher and of the situatedness of her knowledge claims, as well as enthusiastic subscription to the avowedly political goal of making the world a better place (in addition to the more traditional epistemic one of simply describing and explaining economic geographical problems).

How, then, is an editor or a referee or a simple reader able to meaningfully assess quality across such deep and wide gulfs between perspectives? One strong candidate answer to this question is derived from a staggering, but less publicized, advance in the philosophy of scientific induction (cf. Kyburg, 2008), known as error statistics or error statistical theory (Mayo, 1996; Mayo and Spanos, 2006).

Understanding the significance of this novel approach hinges on noticing that economic geography attempts to produce new knowledge in a way that goes well beyond merely deducing conclusions from stated premises. That is, its typical inferences are ampliative (content-increasing), and not deductive (content-preserving). The universal problem that confronts ampliative inferences is that they run the risk of being either false or trivial (Psillos, 2002). The more researchers generalize from a given sample, the higher their inductive leap (or ampliation) and, therefore, the higher the chance that *that* particular inference is not warranted (i.e. it is likely false). Conversely, the more researchers become concerned with limiting themselves only to fully warranted inferences, the higher the chance that their inductive leap will be so small so as to be uninformative (i.e. trivial). In short, the problem that brings together all economic geographers, regardless of preferred theory or method, is how to navigate between the Scylla of triviality and the Charybdis of falsity. More pragmatically, to publish in leading economic geography journals, one's contribution must be at the very same time substantive (non-trivial) and correct (not false). The inevitable concomitant of the praiseworthy fact that researchers would not get published lest their results are highly significant, is the less benign fact that they are inadvertently tempted to make claims that are not fully licensed by their data. Error statistical theory proposes a principled manner of detecting those who fall prey to this temptation. Because of its specific aim of telling apart genuine claims from spurious ones, it can perform

the sorely needed role of a common denominator for quality control across diverse schools of thought and across diverse methodologies (Mayo, 1996). The same cannot be said for Barnes and Sheppard's vague and nebulous idea of engaged pluralism.

The key to quality control in a context of systematic heterogeneity of perspectives is to encourage editors, referees, authors, and readers to scrupulously scrutinize the data generation procedures employed in economic geography and to relentlessly ask one simple but penetrating question about the evidential bearing of the data on the particular hypothesis advocated by a given researcher. The question is: what is the likelihood that the hypothesis under consideration is false, despite its being fully consistent with the submitted data? (Or, in a corollary formulation, what is the likelihood that the proposed hypothesis is true, despite its being inconsistent with the data at hand?). To state that (1.1) hypothesis x has a very small probability of being false, while at the same time being consistent with the given data set, is to say that hypothesis x has passed a very severe test (or a highly stringent, or highly informative, or highly probative test) with the respective data set. Alternatively, to state that (1.2) hypothesis x has a very small probability of being true, while at the same time being inconsistent with the given data set is to say that hypothesis x has failed a very severe test with the respective data set. That is, for situations (1.1) and (1.2), the submitted data constitute a severe test or a highly reliable error probe for the truth status of hypothesis x. To state, on the other hand, that (2.1) hypothesis x still has a good probability of turning out false, despite its being consistent with the given data set, is to say that hypothesis x has passed a minimally severe test (or poorly probative, or uninformative test) with the respective data set. Alternatively, to state that (2.2) hypothesis x still has a good chance of actually being true, despite its being inconsistent with the respective data set, is to say that hypothesis x has

failed a minimally severe, or uninformative, test. In other words, for situations (2.1) and (2.2), the submitted data are a minimally severe test or an unreliable error probe for the truth status of hypothesis x.

For convenience of use, we can extract the common principle underlying these ideas and encapsulate it in an easier-to-remember general severity criterion (Mayo, 1996; Mayo and Spanos, 2006). According to the latter, a hypothesis is severely tested by the data afforded by a procedure of inquiry if, and only to the extent that, the procedure is able, with a very high probability, to detect errors in that hypothesis, if and only if such errors truly exist. The secret to quality control, then, is to systematically enforce this severity criterion whenever we assess the wildly diverse types of data submitted by economic geographers as evidence for their hypotheses. But to do this in daily practice, we need to understand one fundamental implication of error statistical theory: the one and only way in which we can yield a pronouncement on the degree of severity with which a data set tests a hypothesis consists in the thorough investigation of the reliability of the procedure of inquiry (e.g. computer simulations, observations, experiments, in-depth interviews, focus groups, surveys) by which the data were generated. Data are allowed to count as strong evidence (i.e. strong warrant) for a hypothesis only to the extent that the procedure by which they were obtained is highly reliable, i.e. has low error probabilities. This rationale applies equally well to qualitative methods (e.g. are the data from these in-depth interviews with entrepreneurs compromised by the fact that most of the questions asked were leading questions?) and to quantitative methods (e.g. is the sample collected large enough to allow reliable estimates of the population of interest?).

By encouraging referees, authors, and general readers to actively and systematically apply severity considerations in their assessment of

scholarship in economic geography we achieve three important goals that are certainly not met by Barnes and Sheppard's engaged pluralism. First, as we relentlessly nudge researchers to frame their questions of economic geographical interest only in terms of conjectures amenable to severe testing, we slowly overcome the unprincipled, unhealthy, and ad hoc practice of letting scholars define their own parochial standards of quality. Second, we thereby establish an epistemologically sound foundation for evaluating scholarly output across diverse theoretical and methodological perspectives, and thus facilitate commensurability (cf. Povinelli, 2003), interoperability, dialogue, and cross-fertilization. Third, and most importantly, we provide economic geographers with a clear guideline for how to go about improving both the quality of their procedures of inquiry and the credibility of their written arguments (Farrell and Hooker, 2009). To take this line of reasoning one step further, it is required to bring out the subtle point that the severity criterion can enable scholars to mount arguments from error (Mayo, 1996; see also Schickore, 2005). More specifically, if authors anticipate that referees will hold their work accountable by severity considerations, they are likely to pre-empt criticism (cf. Walton, 2008) either by designing research strategies based on established procedures of inquiry of demonstrated reliability, or by making a strong case for the reliability of their less established procedure of inquiry, if that case has not been convincingly made before. In addition to the augmented research quality fostered by these twin tactics, one must also consider less obvious quality-enhancing effects ensuing from the requirement that researchers show in their written papers that the economic geographical data supporting their hypothesis were generated in a reliable manner, and hence constitute a highly stringent test of the truth status of their hypothesis. Since this basic requirement presupposes explicit and detailed written description of the data generation procedures, and since this explicitness and wealth of methodological detail empowers us to *independently* scrutinize the severity with which the proposed hypothesis has been tested, the net outcome of this pressure would be an enhanced ability to learn, both at the individual level and, more importantly, at the level of the field of economic geography, as a whole.

To sum up, while I agree with the diagnosis of undesirable fragmentation that Barnes and Sheppard (2009) identify for economic geography, I have serious doubts that the vague and nebulous 'engaged pluralism' they advocate can cure this disciplinary disease. Instead, I propose that we should re-evaluate our fears of a 'monistic and reductionist' economic geography and give some thought to the potential effectiveness with which error statistics might reduce fragmentation and might remind us of the virtue and discipline of truth-seeking.

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