

# The Three Paths of Inquiry in Economics, some Questions

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**Abstract:** The unrelieved state of dissatisfaction about the right method of inquiry seems to have become a characteristic of the philosophy of social science. Economics has played a crucial role in the modern extensions of the debate. The echoes of *Methodenstreit* remind us about one unfinished goal ahead, namely the search for historical specificity in the study of social phenomena. The task of this study is to discuss the degree to which such a claim is valid. After reviewing the existing scholarship, the argument comes down to a simple thesis: a successful test of the scientific exercise in the study of social phenomena is not associated either with its degree of formalism, or its predictive power, or still with its capacity to unearth causal relations; it is specifically about understanding the sequential classes of events that affect human development and that undergo historical and cultural transformations under the influence of short-lived, recurrent events.

## Introduction<sup>1</sup>

For Ibn Khaldun (1332-1406), the monumental edifice of ancient Greek science, which his contemporaries revived and eminently improved upon, did not possess the relevant epistemic discourse to make sense of the rise and fall of civilizations. He consequently proposed a *new science* of “human social organization, growth, and development” (Al-Araki, 1983) based on the concept of *social cohesion* or *group feeling* in which a good many of present sociological inquires may find their intellectual roots. Giambattista Vico (1668-1744), “the inventor of the first anti-modern social science” (Lilla, 1993: 6), opened more widely the assailable front to include this time not only the antique wisdom, but also the then emerging influential Francis Bacon’s empiricism and René Descartes’ rationalism. He too devised a *scienza nuova* to answer, “*How is it possible to universalize the political experience of a nation whose supreme virtues were its indifference to universal categories in politics and its firm attachment to the particular and contingent?*” (quoted by Lilla, 1993: 127; emphasis added)

With Vico, the discontent entered its modern phase and has since continued with or without acknowledgement of filiations through a rich scholarship. In its broadest form, it resides in a restless aspiration to winnow *law-like, recurrent* from *contingent, accidental* events; to leave aside the naturalist claim for all-encompassing explanations and look instead after meaningful conceptual analyses that ought to reveal what makes and what does not make sense in the scientific treatment of human world phenomena.

Economics has played a crucial role in the modern extensions of the debate. This area of study prompted by the turn of the nineteenth century (ca. 1870) a sweeping controversy over methods—*Methodenstreit*—which began between the economists of the German historical school and those of the Austrian marginal utility school and soon engulfed disciplines from the whole social spectrum. After the passions faded out from limelight, powerful far-off echoes however reached over decades. Apart from theoretical queries, its epistemic language bequeathed essential terms of the modern discourse such as ‘historical economics’, ‘moral sciences’, ‘cultural sciences’ (cf. Huff, 1984: 28; Hodgson, 2001) and proved instrumental in the 1929 launch of *Annales d’histoire économique et sociale*, in the sense that the two founding historians (Marc Bloch and Lucien Febvre) deliberately borrowed the title of one of the German

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<sup>1</sup> This is an extended and adapted version of the argument partly developed in Valentin Cojanu, “The logic of inquiry in social science, the case of economics in particular”, *Social Science Information*, 48:4 (December 2009).

historical school's reviews—*Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*. The *Annales* school approach was significantly important to such fields of study as economics and historiography in the 1970s (Braudel, 1976), archaeology and anthropology in the late 1980s and early 1990s (Lucas, 2005: 15), and is resuscitated these days through a widespread *cultural* turn in the philosophy of social science (see Abbott, 2001: 104 ff; Sewell Jr., 2005). As will become evident later on, the *Annales* paradigm of *social* temporality stays at the core of the ongoing epistemic reconstruction in social sciences.

The echoes of *Methodenstreit* remind us about one unfinished goal ahead, namely the search for historical specificity in the study of social phenomena. The task of this study is to discuss the degree to which such a claim is valid. The review of the existing scholarship makes this endeavor only more challenging. To preview the substance of the discussion, it suffices to note that two representative accounts on the subject (i.e. Hands, 2001 and Wallerstein et al., 1996), each giving preference to a radically different epistemic reconstruction, have been received with *literally* the same acclaim: *if one wants to read only one book about philosophy and the social sciences then this is the book for her* (cf. Philip Mirowski, book endorsement to Hands, 2001, and Fay, 2006). How to make sense of *historical specificity* is indeed one provocative question.

The claim of appropriating *historical* as a particularly appropriate attribute in the epistemology of science sounds somewhat superfluous. Historical representation after all is revealed by recourse to a *linear* chronology of events, one following another one in an irreversible sequence, and it is in this sense that one understands natural or economic or social *history*. However, the choice shouldn't come much as a surprise at least for the reason that *Historia* was originally identified with "critical inquiry" (Windelband, 1912: 57-65; Teggart, 1916; Topolski, 1976: 47, 55). It was not until the advent of the Middle Ages that one began using the term to emphasize a narrative depiction of past events (Topolski, 1976: 47) which in fact is the customary equivalent to our definition of the study of *history*. But there is a second, more profound reason that should make us think of social evolutions in terms of *historicity*. To arrive at my argument I will start within the very realm of the classical view of the logic of scientific inquiry to show why and how it approaches its limits when deals with the subject of social phenomena. There remain two other paths to knowledge that will be discussed in turn: the middle-range theorizing and the approach to social science as a unitary domain. The paper concludes by reviewing the challenges ahead.

## Questioning the paths of inquiry in economics

In its basic form, the word *science* simply means 'systematic inquiry' following the German conception of science—*Wissenschaft*—as formulated in the eighteenth century to denote the informed study "directed toward the augmentation of knowledge in one specific area" (Stremlin, 2004). To this description, some will also add the prerequisite that the scientific product be useful in practice and convincing (Ritchie, 1958: 55; Gerring, 2001: 19), but all will unanimously agree on two other building epistemic blocks: a methodological component, i.e. a way of reasoning for stipulating the criteria of proof, as well as techniques for exposing the end-product to the rational scrutiny of his conclusions; and an ontological component, i.e. a description of the knowable objective world whose truth and meaning are to be revealed through the scientific process. It is these two epistemic blocks—the method and the subject matter—that give rise to controversies about the nature of science.

One century before K. R. Popper set forth his falsifiability test, the embracing of formal logic had so become the demarcationist standard *avant la lettre* in discerning between science and nonscience. Napoleon bestowed the privilege of the elite class in scientific knowledge to natural scientists alone (Stremlin, 2004), whereas in 1877, Francis Galton recommended the exclusion of 'statistics and economics' from the British Association for the Advancement of Science because their "papers were not up to acceptable scientific standards" (Moggridge, 1997: 345).

Reasoning from hypothesis to result also produces by consequence two other defining elements of scientific inquiry: the explanation of causality and the possibility of prediction. Science follows the same logical procedures as long as truth, be it analytic or synthetic, is revealed within the epistemic boundaries of causation and predictability or lack thereof. Questioning the all-encompassing validity of the formal logic has typically prompted three kinds of reactions: unconditional belief in its power of explanation, skepticism in the form of "middle-range theorizing", and noteworthy constructive criticism. I will consider them in turn.

### **Formalism**

For the first camp, the Cartesian dream of *mathesis universalis* is what gives science its unitary logic. Any claim to doubt its relevance for the whole spectrum of scientific inquiry has only stirred irritation or disdain. When reviewing J. Neville Keynes' *Scope and Method of Political Economy* (1890), an erudite account of what would be called later *methodological pluralism*, F. Y. Edgeworth remarked in 1891, "We cannot conceal a certain impatience at the continual reopening of a question on which authorities appear to be substantially, if not in phrase, agreed" (quoted by Moggridge, 1997). About the same time, Henri Poincaré in similar confident manner proclaimed, "The natural sciences talk about their results. The social sciences talk about their methods" (quoted by Gerring, 2001: xix), a credo which four decades later metamorphosed

into Paul Samuelson's emblematic verdict for the would-be economist: "Those who can, do science; those who can't prattle about its methodology" (quoted by Hands, 2001: 1).

Although what the defenders of the formal logic have in mind about being the right approach varies considerably, at some point however, set-theoretic formalism—a methodological expression which "has developed from an analysis of mathematical reasoning, and is rarely followed outside logic and mathematics" (Kesting and Vilks, 2004: 285-7)—had unambiguously become the predominant approach in economics, in spirit if not *ad pedem litterae*. An illustration of it one may get from the classic text of Gerard Debreu (1959), the 1983 Nobel Prize winner for *having incorporated new analytical methods into economic theory*:

"An economy  $E$  is defined by: for each  $i=1,\dots,m$  a non-empty subset  $X_i$  of  $R^l$  preordered by  $\leq_i$ ; for each  $j=1,\dots,n$  a non-empty subset  $Y_j$  of  $R^l$ ; a point  $w$  of  $R^l$ . A state of  $E$  is an  $(m+n)$ -tuple of points in  $R^l$ ." (75)

To paraphrase one Dickensian character in *Dombey and Son*, the value of this depiction of economic reality seems to have been estimated in proportion to the immensity of the difficulty one experiences in making anything out of it. If one asked what meaningful policy initiatives could emerge out of this theorizing, she could be in conventional terms replied with the words of Daniel McFadden, a 2000 Nobel Prize winner for *his development of theory and methods for analyzing discrete choice*: "the consumer may need to be coaxed and wheedled into responding to market choices with sufficient diligence" (quoted by *The Economist*, 2006: 76). If our theory fails to explain economic behavior is not the economists' fault, would thus be the obvious inference, a rephrasing of Milton Friedman's argument that the realism of assumptions is irrelevant in the scientific pursuit.

It is necessary to append here that *the formal method* refers to a bundle of analytical techniques, like controlled experiments, game theory or computer simulations, which may or may not consist of mathematical calculus, but have of necessity in common the logic based on a set of algorithmic presuppositions that are deemed to lead to the same results as long as they are presumed to hold true. We are constantly reminded from Edgeworth's time on that "mathematical modeling is essential and is here to stay" (Dasgupta, 2002). This paper is justified precisely on the ground that this false perception of having arrived at a settled issue is the very one which delays the necessary reconsideration and facilitates the continued immersion in the realm of formal logic.

### **Pluralism**

The mainstream view has been nevertheless under attack since the 1960s and 1970s and one emerging option has been to find a middle-way between the poles of scientific inquiry which, on the one hand, regard the facts of knowable world as naturally constant and universally true and those which, on the other hand, regard them as historically contingent and specifically social. As is well known, Adam Smith is as much cited by the orthodox camp in support of free market ideology, as is by the heterodox one to argue for an interpretive position. The ambivalence is presumably rooted in two modes of appropriating the classical logic. First comes a certain perception that there is nothing wrong with formalizing *per se*; a second issue regards our failure to escape the classical boundaries of a logic that adds only thin layers of knowledge about the social happening. Herein lay the origins of the pluralistic methodological universe.

Pluralism recognizes that mathematics "is a partial method and requires combination with other methods in order to construct a complete argument." (Dow, 2002: 160) How would this argumentation look like? The only seeming methodological alternative, in the line of such predecessors like J. Neville Keynes (1890), consists of the appeal to *no unique method*. The right blend of techniques is assembled from the available toolkit and applied according to the research objectives in need. In a typical case, explains Dow (2002), the economist may find herself in one of the following situations: to focus on case studies, questionnaire surveys to find out the (subjective) knowledge of the individuals concerned; to focus on aggregate data series and employ historical methods as a basis for theory construction; to employ mathematics based on classical logic; finally, "someone else who sees individuals more as social beings *may employ a different logic*, which may or may not allow for mathematical expression." (159; emphasis added)

What we end up with consists, on the one hand, in a revised theoretical framework, making room for a plurality of theories instead of one all-encompassing, grand theory; on the other hand, the gain in adaptability comes only at the expense of consistency and clarity. The same subject matter, say integration, may yield a confusing picture when mixing beneficial effects of integration, a regular causality in formal models of trade, with political quid-pro-quo in advancing the integrative processes, a regular causality in case-study based analyses. Inciting though it is, the admission of a possible *different logic* is advanced in equivocal terms, for if the topic of study did not allow 'mathematical expression', why would it be a different logic at all as long as, we are informed in the same context, "one of the purposes of theorizing is to provide policy makers...with predictions about the future, and about the likely effect of particular courses of action" (Dow, 2002: 13)? That is why pluralism resembles rather a paternalistic approach to epistemology, a sort of methodological indecisiveness that becomes by default the approach of choice for heterodoxy (cf. Fullbrook, 2004).

The effort to instill more methodological consistency has lately resulted in a distinct strand of conceptualization identified with the description of *mechanism* as the central analytical unit in the social study. A comparative view of the existing scholarship as discussed for example in Reiss (2007) and Weber (2007) depicts a widely shared belief that the pluralist universe should be understood within the epistemic boundaries of counterfactual analysis ('as if' reasoning) applied to multi-structured layers ('higher' and 'lower' levels) of reality. The complex web of social relations is not easily amenable to mathematical formalism because it is mainly revealed in idiosyncratic behavior of the components of the social whole, i.e. individuals, groups, and institutions (see also King, 2006).

There is one significant step forward that distinguishes this last variant markedly from mere criticism against formalism: it positions the researcher in front of a different structure of social reality, one that may consist of event regularities, but more often than not exhibits chains of conditionality and dependency embedded in inherently unpredictable evolutions. Lawson (2003) captures the essentials of this thinking when describes it "on the basis of analogy and metaphor amongst things, from a conception of some phenomenon of interest to a conception of some totally different type of thing, mechanism, structure or condition that is responsible for the given phenomenon" (145). In other words, the *mechanism* is not simply viewed as *method*; it carries over the design of a new ontology as well.

The prefigured epistemological implications are not however stretched much further for they continue to adopt the classical representations of subject matter and causal explanation (e.g. Lawson, 2003: 24, 143), and the goal of a *new logic* remains again unfulfilled. Quite distinctly, a separate route of argumentation suggests, it is possible to preserve methodological consistency within a different epistemological context.

#### **A unitary social science**

For the supporters of a unitary social science, the central argument holds that the rejection of formalism as the main methodological ingredient makes sense if and only if we are also able to redefine our subject matter in a way which is universally accepted by social scholars.

Of course, the main challenge is to give an account of a subject matter that could stand as a meaningful representation for the whole spectrum of social sciences on the same logical footing in which *the recurrent fact* and *the law-like event* epitomize the study of natural realm. Without doubt, if the current dissatisfaction is justified, the search for a new paradigm should be a process in deciphering the complex texture of social events, with the important caveat though, that not all human manifestations get a meaning as subject matter of social sciences.

The quest for historical specificity has been early on revealed as one defining feature of social science but, in spite of its incontestably long legacy, has failed to take off as a serious rival epistemology to formal logic. Its beginning is usually associated with the emblematic figure of Giambattista Vico, a resolute adversary of both modern scientific methods, "both futile and dangerous" (Lilla, 1993: 57), and pluralism, "interminable archaic digressions" (Lilla, 1993: 7). A similar scale of conceptualization was made possible anew only at the turn of the nineteenth century with the emergence of the works of Droysen (1858), Cournot (1871), Dilthey (1905), Xenopol (1908) or Windelbandt (1912). These were exemplars of logic of historical inquiry distinctly justified by the need to reveal the meaning of the sequence of historical facts, of their particular, long-lasting consequences rather than their causes. The dichotomy between explanation (*Erklärung*) and understanding (*Verständnis*) was emphasized as separate methods of scientific inquiry, and, by implication, the distinction between sciences of events, *Ereignisswissenschaften*, and sciences of laws, *Gesetzeswissenschaften* became the new guiding light in the heterodox tradition of the philosophy of social sciences.

The momentum had been gained and it was the Annales School which set in its own terms the rival paradigmatic approach to the logic of science for the decades to come. A fair good part of its initial rise to prominence was dominated by efforts to enrich the intellectual legacy with such new conceptual thinking as 'geographical time' from the works of Paul Vidal de la Blache (1845-1918), 'social time' from Henri Pirenne (1862-1935), 'structural history' from Gaston Roupnel (1871-1946), or 'world-economy' inspired by the works of Friz Rörig.

This long effort of conceptualization finds its ultimate expression in the works of Fernand Braudel in the 1960s and the 1970s, accompanied by those of Immanuel Wallerstein in the 1980s and the 1990s. Against the classical representation of time as a uniform, linear phenomenon, Braudel opposes a social temporality by recourse to multiple temporal scales of analysis dominated by *la longue durée*, a key epistemological tool for social science used to describe the eternal truths of social reality in contrast with particular and nonreplicable events. Inquiry in social sciences becomes in this tradition essentially connected to the cultural interpretation of time. Societies may evolve at different temporal rhythms, and assess their trajectory within the boundaries of their own representation of historical events. That is why the object of our study, say, an archeological finding, may be found simultaneously at the confluence of research interests from exact science, relative to age determination by carbon dating, social science, relative to its ethnographic significance, and humanities, relative to its artistic value.

At the end of this tumultuous lineage, one may configure the basics of what appears to be a different method of proof, a proof on the meaning of social reality. "A fundamentally different reality may require a different theory. This, in rough outline, is the problem of historical specificity." (Hodgson, 2001: xiii)

## Conclusions

This material focused on three major perspectives—i.e. formalism, pluralism, and a unitary social science—of the existing scholarship with regard to the methodological explorations in economics and social science in general. The argument comes down to a simple thesis: a successful test of the scientific exercise in the study of social phenomena is not associated either with its degree of formalism, or its predictive power, or still with its capacity to unearth causal relations.

One may hardly conclude about a positive solution to this methodological conundrum. The converging ideas in the heterodox tradition nevertheless indicate that a potential clarification may take the form of understanding the sequential classes of events that affect human development and that undergo historical and cultural transformations under the influence of short-lived, recurrent events. As with any other previous attempts, including the mainstream one, we may have to build up the missing epistemic reconstruction while ideas have to wait for *circumstances to conspire in their favour* as John Stuart Mill so wisely advised.

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