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The logic of inquiry in social sciences, the case of economics in particular

Abstract. *The present-day epistemology of social science resembles a picture puzzle whose pieces are scattered to and fro across the vast domain of philosophical inquiry. This study attempts to assemble them in what appears to be a common thread of thinking for a necessary epistemic reconstruction, the historical specificity of social sciences. This understanding reveals itself as a method of validating truth in acknowledgement of three logical principles: (1) causality indeterminately becomes embedded in spatial–temporal distortions; (2) linear time is replaced by multiple, overlapping timescales, ‘multiple’ being a cultural rather than numerical concept; and (3) prediction remains associated with the least historical events, the particulars; that is, event-regularities normally specific for short periods of time.*

Key words. *Economics – Epistemology – Historical systems – Logic – Social science – Social time*

Résumé. *L'épistémologie contemporaine des sciences sociales ressemble à un puzzle dont les pièces se seraient dispersées dans le vaste domaine de l'investigation philosophique. L'objectif de cet article est de les soumettre à une réflexion critique et de les replacer dans une reconstruction épistémologique nécessaire, à savoir la formulation d'une spécificité historique des sciences sociales. Nous soutenons qu'une démarche épistémologique nouvelle s'avère indispensable pour valider toute vérité relevant du contexte social, démarche qui distingue trois principes logiques: (1) la causalité reste associée aux singularités spatio-temporelles d'une manière indéterminée; (2) le temps linéaire est remplacé par des échelles temporelles multiples et superposées, où ‘multiple’ est un concept culturel, plutôt que numérique; et (3) la prédiction s'applique exclusivement aux événements les moins historiques, ceux qu'on nomme ‘particuliers’, c'est-à-dire les régularités événementielles à court terme.*

Mots-clés. *Épistémologie – Logique – Science économique – Sciences sociales – Systèmes historiques – Temps social*

Whatever the defects of the classical design, it still remains the only over-all design we have, and will remain until another conception of the meaning of economy has taken form. Before this can happen two conditions must be met: a new set of ideas must be found with which to make a fresh theoretical start, and the old way of thinking must be abandoned altogether, price analysis and all. (Ayres, 1962: 21)

I continue to believe that the historic categorizations of the disciplines of the social sciences make no intellectual sense any more. But if we continue to protest, it is because we remain a minority. And if we cannot solve the 'key' theoretical conundrum, perhaps we deserve to be. For without solving it, it is hard to convince others of the irrelevance of our consecrated disciplinary categories. (Wallerstein, 2004: 108)

The unrelieved state of dissatisfaction about the right method of inquiry seems to have become a characteristic of the philosophy of social science. A rich scholarship (e.g. Cournot, 1872 [1972: 3]; Winch, 1958: 17, 72; Rickman, 1961: 39; Oakes, 1997: 59–60; Fay, 2006) aspires to winnow *law-like, recurrent* from *contingent, accidental* events; to leave aside the naturalist claim for all-encompassing explanations and look instead for meaningful conceptual analyses that ought to reveal what makes and what does not make sense in the scientific treatment of social world phenomena.

As it happens, economics – the field of choice for this study's epistemic application – has played a crucial role in the modern extensions of the debate. It is this area of study that provoked, by the turn of the 19th century (c. 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. The lingering echoes of *Methodenstreit* remind us about one unfinished goal ahead, namely the search for *historical specificity* in the study of social phenomena. To this end, various specificity-based dichotomies of science have been proposed (e.g. value-neutral vs value-laden, nomothetic vs ideographic, quantitative vs interpretive, orthodox vs heterodox) and all elicit a continuous train of thought: that scientific inquiry should be molded in conformity with logical premises that account for the historical nature of social phenomena.

The first task of this article therefore is to discuss the degree to which the claim of *historical specificity* is valid for inquiry in social sciences. A suggestive illustration of Salvador Dalí's famous *The Persistence of Memory*, depicting gravity-distorting time, adorns Hodgson's book (2001) on *historical specificity*. However, neither his work nor other equally ambitious efforts which proclaim a different ontology for social sciences in contrast to natural sciences

(Mann, 1995; Lawson, 2003; Sahlins, 2004; Wallerstein, 2004; Sewell Jr, 2005; see also Fay, 2006; Yoshida, 2007), follow the logic of spatial-temporal distortions in social evolutions to its ultimate consequences. For all keep the presupposition of a linear dimension of time intact and thus confine the epistemology to the same logic of studying natural events.

The fact that the social event is of a historical nature places it instead in a different epistemological context, and, as a consequence, it requires a different logic of inquiry. The task of outlining the possible configurations of this new logic is dealt with in a separate section. The argument comes down to a simple thesis: a successful test of the scientific study of social phenomena is not associated either with its degree of formalism, or with its predictive power, or with its capacity to unearth causal relations; it is *specifically* about understanding the sequential classes of events that affect human development and which undergo historical and cultural transformations under the influence of short-lived, recurrent events. *Understanding* becomes a category of social thought about sequential developments organized around the building-blocks of social life, a logically different method of proof.

The ensuing argument is enriched throughout by means of casuistic illustrations from economics designed to explore these issues in more detail. Insofar as economics is admittedly 'the most fully mathematical and quantitative of the social sciences' (Sewell Jr, 2005: 13), the present exercise seems all the more instructive. The final section summarizes the themes of this article as well as looking ahead to new directions for the discussion of *historical specificity*.

The claim for a different epistemology

That science is a unitary domain of the cultural pantheon is one observation that above all imposes itself. With a bit of irony, Ritchie remarked, 'Singular science is the sacred cow of twentieth-century idolatry' (1958: 2), reflecting on the shortcomings of transferring and permutating the same methodological toolkit across disciplines. The concurrent rise of the age of Enlightenment, of the nascent contributions in the philosophy of science and of the breakthroughs of the Industrial Revolution almost naturally led to the adoption of measurement, and its mathematical expression in particular, as the method of proof in science. Reason, spirit and humanity all seemed to have converged in one single cultural process whereby people devise theoretical structures, attach to them a set of rules (or of initial conditions) and produce or fail to produce some expected and hopefully beneficial results. Testimonies to this effect are important actors in our following narrative. In Droysen's words:

'It is not alone the astonishing performance and results of work in natural science which spreads abroad the conviction that its method is in a preeminent measure scientific, the only scientific one. The deeper ground of popularity ... lies in the mode of culture prevalent in our age, and in that stage of development at which we have arrived socially and politically' (1967: 62).

Reasoning from hypothesis to conclusion results in two defining elements of scientific inquiry: the explanation of causality and the possibility of prediction. The verdict is advanced in unconditional terms: 'The methods always consist in offering deductive causal explanations and in testing them (by way of predictions)' (Popper, 1961: 131). Science follows the same logical procedures (Popper, 1961: 133; Gioia, 1997: 174) as long as truth is revealed within the epistemic boundaries of causation and predictability or lack thereof. This inference is in fact a conclusion I do not dispute. What is instead questionable is the assertion that the object of our knowledge is subject to a *unique logical structure*. It is for this reason that any argument that attempts to attach the *historicity* label to some equally valid scientific inquiry in social science has to show to what extent the classical view of science is still valid in this epistemological context.

Questioning the all-encompassing validity of formal logic has typically prompted three kinds of reactions: unconditional support, skepticism and noteworthy constructive criticism that sets out the challenge of a different epistemology. I will succinctly consider each in turn.

For the adherents of the first camp, the Cartesian dream of *mathesis universalis* is what gives science its unitary logic. Although what the defenders of formal logic consider to be the right approach varies considerably, at some point set-theoretic formalism – a methodological expression which 'has developed from an analysis of mathematical reasoning, and is rarely followed outside logic and mathematics' (Kesting & Vilks, 2004: 285–7) – had unambiguously become the predominant approach in economics, in spirit if not *ad pedem litterae*.

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 which of necessity have in common logic based on a set of algorithmic pre-suppositions deemed to lead to the same results as long as they are assumed to hold true. It is presumably due to this overwhelming stature of the mainstream view that formalism may *in fact* have been conducive to 'an ingrained belief that these methods are an essential component of all science' (Lawson, 2003: 22). The present article is justified precisely on the ground that this false perception of having settled the issue is the very approach which delays the necessary reconsideration and facilitates the continued immersion in the realm of formal logic.

The mainstream view has nevertheless been under attack since the 1960s and 1970s (cf. Huff, 1984; Abbott, 2001; Sewell Jr, 2005), a period which gave birth to an assortment of methodological reconsiderations. One option has been to find a middle way between the poles of scientific inquiry which, on the one hand, regard the facts of the knowable world as naturally constant and universally true, and those which, on the other hand, regard them as historically contingent and specifically social. At times these attempts have aspired to justify the study of social science in terms of a new logic between hitherto mutually exclusive domains of inquiry, such as science and art or truth and beauty, on the premise that no one school of thought 'can generate satisfactory theories without using methods of opposing schools' (Brown, 1977: 21).

A remarkably insightful lineage has been without doubt at the origin of this revitalized *cultural* turn in the philosophy of social science. This modern tradition relies on famous suggestions which probably date back to Adam Smith's conceptual interplay between *self-interest* and *empathy*, and continues with William Whewell's 'consilience of induction', C. S. Peirce's *abduction*, Max Weber's interpretation of 'meaning' or Thorstein Veblen's interaction between 'instincts' and 'institutions'. The new literature's reconstruction is no less insightful, and book-length arguments are put forth in guise of a unifying methodology reflected in terms such as 'cognitive aesthetics' (Brown, 1977), 'narrative positivism' (Abbott, 2001), 'classificatory inference' (Gerring, 2001), retroduction or 'as if' reasoning (Lawson, 2003) or 'combined models of self-interest, social, and culture' (Wilk & Cliggett, 2007).

The bilateral symmetry of this terminology prompts an elementary query: Why do we have this self-replicating dichotomy? Why have scientists been driven forcefully to supplement their initial inkling with an opposite one, to oscillate between two contradictory and associated innate imperatives, 'a preference for tranquility and one for novelty and change' (Setterfield, 2003)? As is well known, Adam Smith is as much cited by the orthodox camp in support of free market ideology as he is by the heterodox argument for an interpretive position. The ambivalence is presumably rooted in our failure to think outside the classical boundaries of a logic that adds only thin layers of knowledge about the social happening. Herein lie the origins of the pluralistic methodological universe.

The path of middle-range theorizing leads to a chicken-or-egg dilemma: our dissatisfaction with the method stems from its incapacity to add to our knowledge of the world; but what exactly is that world we seek to discover? Is it our methodology, our subject-matter or both, that need redefining? A proper introduction would be to reiterate that social inquiry focuses primarily on human-devised or -provoked actions and institutions. The domain of study so defined may be said to comprise the fields of economics, political science, sociology, anthropology, history, psychology; but also education,

communications, public policy, social work (Gerring, 2001: xv); comparative religion, jurisprudence, philology and literary criticism (Rickman, 1961: 23); and the study of 'philosophic world views and systems' (Dilthey, 1961: 68).

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 have meaning as subject-matter for social sciences. Consider *material prosperity*, probably one of the most intimate human aspirations. If an economy succeeds in keeping its population growth below the rate at which it is capable of reproducing wealth; or if it is capable of creating economic product at lower factor costs, the people there are then going to enjoy a more affluent life. However, up to this point, this is a technical matter only, not necessarily having any meaning at all to be sought as an object of *social study*. A Stone Age economist with a sufficiently developed algorithmic mind could have been in a position to *explain* the causes of wealth or, for that matter, of any other *automatic response behavior*, like commodity exchange or pricing in conditions of scarcity/plenty.

But, if he were to have been asked to account for *uneven development* among his contemporary economies, he would have been less successful. He would have had to wait to reach some point in the course of history in order to grasp the meaning of such a peculiar social phenomenon. When Leonard Cohen sings about how everybody knows that *the poor stay poor, the rich get rich*, it's a widely accepted conventionalism today, at least in popular culture; but it was not so obvious at some earlier moment in human evolution. The more he lived, the more he could have made of the meaning of a recurrent process of inequality, which is triggered by cumulative causation and can be understood only in historical contexts, through the social lenses of time. Disconcerting though it seems and so defiantly against the mainstream, the social scientist is advised by scholars like Dilthey (1905: 106) and Winch (1958: 70) to *wait for the end of history to have all the material necessary to determine its meaning*.

Finally, if our Stone-Age economist were asked this time to explain the vices and virtues of, say, *the leisure class*, he would assuredly have no consistent account. Indeed traces of conspicuous or decent consumption, voracious or philanthropic attitudes may be found in almost all times. To be sure, accumulations of wealth or desires of gain were as much *habits of life* at some moments in Antiquity as they are these days. For good reason, therefore, Thucydides thought that he could find universals of human nature in the particulars of history and asserted: 'Under similar conditions people will always act pretty much the same way. They will be driven by the same desires of power and again, the same hopes thereof, and the same fears of losing them' (quoted in Sahlins, 2004: 3). These accounts reveal neither

causal relations, nor predictive behavior. The Stone-Age economist and we alike can neither find the meaning nor explain the facts of *predominantly cultural expression*. A heuristic process of bringing to light their significance is the most we can do.

It is for these reasons that *understanding* events as a scientific pursuit appears only in connection with the vagaries of time and imprints the study of social science with *historical specificity*. It is a method of proof in the Habermasian sense of *Sprachethik*: economists become openly convinced that what they have got is a meaningful account, a proof of *what's going on* about *the question of social being*.

The quest for historical specificity was revealed early on as one defining feature of social science; but, in spite of its incontestably long legacy, it 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' (p. 7), Vico left his original imprint in the fourth edition of *La Scienza nuova* (1744), a magnum opus which, in spite of continued citation, has virtually failed to play out within present-day thinking.

Part of the problem lies in reasons intrinsic to the difficulty of formulating at the very onset of modernism a similar *grand* paradigm of equal recognition. In flagrant contrast to contemporary natural philosophers, Vico advances his argument along a path that would later be called, with no derision intended, 'pre-scientific thinking' (Ritchie, 1958: 13). Specifically he questions the problems of knowledge on the assumption that the human species has fallen from God's grace and consequently lost its ability to reveal the truth, the divine *verum*, in its possible incarnations of mind, spirits and speech. On this basis, he proclaims a method of *rational civil theology of divine providence*, as well as a new vision of science based on the dichotomy between natural disciplines, preoccupied to narrow the epistemic gulf between the human and the divine, and historical disciplines, which 'face an altogether different obstacle to *scienza* ... that between two human minds separated in time and space' (Lilla, 1993: 127).

A similar encompassing scale of conceptualization was made possible once again only at the turn of the 19th century with the emergence of a *fin-de-siècle* 'epistemology of uncertainty' (Remaud, 2006). It in fact resumed the basic Vichian theme of multiplicity of logical structures of inquiry. In parallel with the echoes of *Methodenstreit*, a kindred set of core presumptions about the nature of social science emerged. This time the results were by far more tangible in their distinctive rejection of the prevalent determinism, as well as in their appropriation of a corresponding distinct reasoning about historical evolutions.

The indeterministic stance is worthy of its antedating role of questioning the logic of modern science well before quantum mechanics would unravel the philosophical field in the interwar period. The works of Cournot (1872) or Xenopol (1908) were exemplars of the 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. Multiple causality was thought to define evolutions that possess a dual characteristic, a recurring behavior combined with uniquely temporal manifestations under the influence of human interference.

A complementary set of ideas was exposed by scholars who emphasized, like Droysen (1858) and Dilthey (1905), the dichotomy between explanation (*Erklärung*) and understanding (*Verständnis*) as separate methods of scientific inquiry, and, like Windelbandt (1912), the distinction between sciences of events, *Ereignisswissenschaften*, and sciences of laws, *Gesetzeswissenschaften*. 'We have to distinguish between those sciences which are governed by laws and those which deal with events, between nomothetic and ideographic inquiry. It is this which really makes the difference in intellectual interest between Natural Science and the Humanities' (Windelbandt, 1912 [1961: 57]).

The momentum had been gained, and it was the Annales School that set in its own terms the rival paradigmatic approach to the logic of science for the decades to come. This 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 sets a social temporality by having recourse to multiple temporal scales of analysis dominated by *la longue durée*, a construct that has been eventually accepted as a key epistemological tool for social science (Wallerstein, 2004: 77; Sewell Jr, 2005: 12) to describe the eternal truths of social reality in contrast to particular and non-replicable 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 the humanities (relative to its artistic value).

The Annales paradigm has not been spared the fate of its predecessors. Even sympathetic expositors of its theory profess themselves baffled. However essential Braudel's contributions have come to be recognized as being, they say, the Annales legacy is afflicted by 'ambivalent grammar', 'rhetoric ebullience' and 'ambiguous thread of thought' (Kinser, 1981);

disregards individuals, 'at least for certain histories of the *longue durée*' (Sahlins, 2004: 125); 'deliberately lacks any theoretically explicit models' (Harding, 2005); and expounds concepts that 'are not analytically or logically rigorous, but are adjustable according to circumstances' (Lai, 2000).

Learning from Braudel that, 'if one understands a paradigm as a strictly articulated and closed system of thought, a description that has never applied to the *Annales*' (1976), it is little wonder that among the mainstream opponents of the theory the failure to understand it is complete. However, 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).

Historical specificity in social science

While the legacy of epistemic reconstruction in social sciences spans centuries, its various theses connect uncontentious propositions that share a similar critical perspective, namely the claim for the historical nature of social science. *Understanding* as a method of inquiry has been proposed under the paired significance of *the study of meaningful facts* (Rickman, 1967: 11) and *the study of reconstructing the meaning to social actors* (Rickman, 1967: xv; Boudon, 1997: 9). At the same time, it is also admitted (Winch, 1958: 72; Hodgson, 2001: 26) that this claim makes the social study logically incompatible with inquiry in the natural sciences. This different epistemological context is exposed in the remainder of the text under the rubrics of three understanding concepts – cultural universals, contingency and sequential logic – which account for three basic assumptions of historicity.

Cultural universals

A common error in interpreting facts of historical nature is to adopt by default the natural variant, time as a linear sequence of events. The naturalistic interpretation is kept intact even when dealing with time multiplicity. If evolutions are considered to evolve on different temporal scales (Harding, 2005; Lucas, 2005: 115), societies will always have a kind of sequential continuum in which they may reflect their histories. Because chronology continues to play such an important role, one typical consequence of this variant of historicity consists in the preservation of the subject-matter unaltered in contrast to its conventional view. Lawson (2003: 141) summarizes three

broad and enduring preoccupations of economists as being: the causes of wealth, human daily activity and the optimizing decisions of human beings. A moment's reflection suffices to realize how eclectic this definition appears in the light of our temporality concept. It subjects to the same logic of inquiry processes which are temporally invariant (of optimization or technical nature) and those (causes of wealth) that are fundamentally explained by socio-historical contexts and those (human daily activity) that may play any versatile role for human knowledge in such instances as automatic responses to stimuli, technological innovation or idiosyncratic preference for a bundle of fashionable commodities.

Contrast that approach to Braudel's definition of history as 'a chronological sequence of forms and experiences' (Braudel, 1977: 79). It is the richness of this novel combination of history and culture that defines the subject-matter in social sciences. My choice for *cultural universals* reflects a shared epistemological predilection to search for evolutions of dual character that become amenable to understanding as enduring series and whose meaning can be revealed only in specific cultural contexts. Wallerstein refers to this issue as 'the unexcluded middle – time and duration, a particular and a universal ... if we are to arrive at a meaningful understanding of reality' (2004: 77).

Besides chronology, we do have very short, medium and long timescales, but these are not the only representations; there is also a cultural one. I differentiate between transversal and linear sequences to reflect social temporalities consisting of overlapping cultural and temporal sequences, respectively, and within the former, between broad (cultural universals) and narrow (contingency), to acknowledge the existence of enduring and recurring events or facts, respectively. When we observe a chemical process, we can only note a sequence of events; but a social evolution requires due consideration to its cultural mappings of meaningful, temporal location and probably geographical dimension.

A definition of cultural universals is best left to those who pioneered this way of thinking: 'A relatively limited set of enduring, entrenched, and causally powerful features of the social world ... an experience is a unit made up of parts linked by a common meaning' (Dilthey, 1905 [1961: 107]). However, the intellectual tradition enlists several variants with similar connotation for what I designate here as *cultural universals*. Such a list includes for example 'common senses' or 'ragioni' and 'orders' (Vico quoted by Caponigri, 1953: 112; Lilla, 1993: 137, 154), 'faits de succession' (Xenopol, 1908), 'ensembles' or 'sets' or 'structures' (Braudel, 1977: 64), 'patterns' (Kinser, 1981), 'networks' (Mann, 1986 [1995: 506]), 'vectors' (Hopkins & Wallerstein, 1996), or 'happenings' or 'sequences' (Sewell Jr, 2005: 100, 273). A graphical representation of this epistemological whole is provided in Figure 1.

In *that* passage of time from year_n to year_{n+1} usually several contingencies are at play: tipping moments of social unrest, emerging 'power jumps', a possibly irrecoverable loss of a scientific thesaurus, an extreme dissolution of mores and so forth. It is thus possible that humanity does not actually possess a sense of forward advancing inherent mechanism, but a culturally determined one resulting from a bundle of simultaneous interplay of sequences of events. Time consists of a multiplicity of 'levels' with different 'rhythms', but also of different *meanings*, distorted by cultural structures. The broad sequence is recurring in the sense that we bestow upon it the same meaning, even if in particular it undergoes variations that render differences of the same sequence's manifestations in time irreconcilable. Depending on the issue, it is not the temporal boundary of a particular event that is of interest but the way we frame it in a cultural context in time.

Such *threads* of universals have been recognized in various instances as possible fundamental premises of a revamped body of knowledge in social science. From discipline to subdiscipline and vice versa, and in no particular order, here is a concise list of representative examples:

- religion, marriage and property 'to guide the course of all nations' historical development' (Vico quoted by Lilla, 1993: 154);
- races, powerful economic rhythms, constant social tensions, reign of technology, demographic expansion, vegetable expansion (Braudel, 1980: 10);
- science, technology, political institutions, conceptual changes, civilizations (Braudel, 1980: 30);
- interaction between dry farming, irrigation, climate, crops; a pattern of food production regulated not only by meteorological, geological and biological factors but also by technological, marketing, political and cultural factors (Kinser, 1981);
- power networks such as Christendom (an ideological power network), judicial regulation and confirmation of customs and privileges, military power, economic power (Mann, 1986 [1995: 506–8]);
- six vectors: the interstate system, the structure of world production, the structure of the world labor force, the patterns of world human welfare, the social cohesion of the states and the structures of knowledge (Hopkins & Wallerstein, 1996);
- class relations, dominant ideologies, enduring occupational or demographic patterns, powerful economic interests, stubborn cultural beliefs or built-in characteristics of organizations (Sewell Jr, 2005: 14).

Lately economic study too seems inclined to reorient its focus in line with this approach. In this respect, I mention George (2007), who provides quite

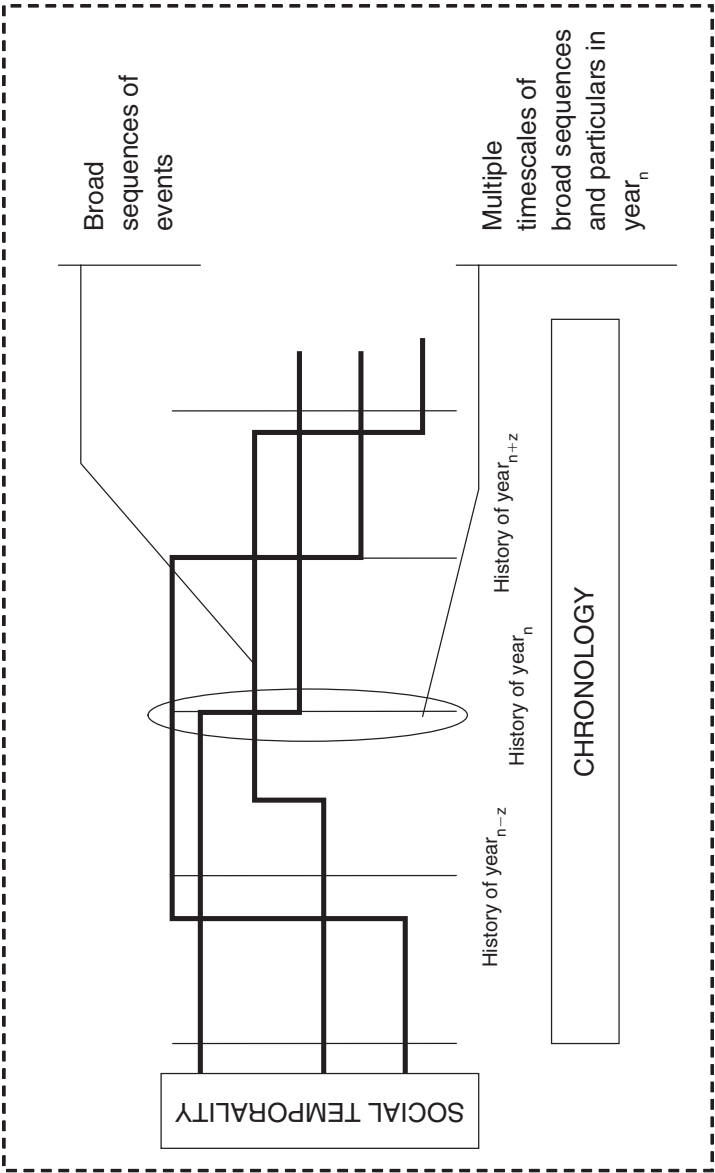


FIGURE 1
The dual nature of the social event: social temporality and chronology

a distinct interpretation of the economics subject-matter relative to the establishment in the form of several 'topics of huge importance', like economic growth, employment, production, world poverty, inequalities of wealth and power, crises and environmental degradation, 'to name a few'.

How are we to establish relevant connections to make these sequences intelligible according to each disciplinary approach? Part of the answer is again, and even more so, intimately associated with the cultural justification of the broad sequence; the other part is dealt with subsequently in the section on *contingency*.

For issues of an economic nature, this problem has been defined as 'the historical determination of economism' (Sahlins, 2004: 43), a conceptual resolve which adds understanding to the particular circumstances of the broad sequence. Any sequence rises to the level of being susceptible of relevant inquiry as a culturally specific formation. Sahlins' example brings into view the emergence of materialism, which is demoted or promoted in importance in historical time with no apparent rationale, except for the cultural structures of the respective period themselves. Ancient Athens is thus depicted as 'a decadent economic system in which the milking of the state by the general populace was complemented by arriviste politicians with dubious origins in trade', only to tell, in a different cultural-historical context, a different story, for 'in the very plight of everyday life, and even among the lower classes, the ideal was not so much to become rich as to lead a good life' (pp. 41–2).

More refined analytics advance techniques of inquiry based on a special mode of historical knowledge – the ability to put oneself into the skins of other people in other times and places. It is advanced by means of such concepts as Bronislaw Malinowski's 'relativism' or Mikhail Bakhtin's 'exotopy', referring to the practice of understanding – in time, space and culture – a society's schemes of value and relationships, and revealing the meaning of its histories. It is however a very specialized discussion, which goes into details of methodological techniques, which this discussion cannot afford in its assumed scope.

Contingency

The dichotomy between *cultural universals* and *contingency* or, equally, between *broad* and *narrow* sequences, respectively, has been found helpful in replacing an early, outdated, variant delineating enduring and historically significant from particular and self-replicating events. This emphasis is essential in justifying *historicity* as the rationale of the new logic. The regular

way in historical research has been to look for ‘criteria for distinguishing between the usual and unusual, between events “historically” negligible and historically important’ (Teggart, 1916). That view corresponds indeed to a linear perspective of historical evolutions and is no longer able to play the same role when social temporality enters the scene. The social event should be understood at the confluence between some patterned flow of evolution – the web of broad sequences – and historical contingency, a set of historical realities that have little or no pattern. The *importance*, the *meaning* or the *relevance* we attach to an event is to be inferred from the theoretical schema of understanding.

Because the necessary terminology and the conceptual thinking are in the process of being worked out, the typical attempt to draw on a coherent lineage is vulnerable to criticism at least on the ground of misappropriation. This qualification notwithstanding, a sketch of *contingency* is normally thought to be reflected by the characteristics of the historical event, as encapsulated in the following definition: ‘Events may be defined as that relatively rare subclass of happenings that significantly transforms structures. An eventful conception of temporality, therefore, is one that takes into account the transformation of structures by events’ (Sewell Jr, 2005: 100).

One explicit presupposition about the role of the event in inquiry concerns its critical if indeterminate impact on the subsequent course of evolutions. The contingent event *transforms*, *rearticulates* or *determines* in an arbitrary way the pattern of social temporality. In this *eventful notion of temporality*, the social action surfaces as contingency at the behest of both natural and human causes; the first, obviously, reveal themselves through formal logic, the second defy any attempt at generalization.

What example would be more fitting to illustrate this dual causation than the subject of *human behavior* itself? Rationality is one fundamental premise in economics according to which people possess the ability to *react* to incentives. In compliance with the prerequisites of formalism, the growth of economic thought has erected such an apparently solid foundation of concatenated reactions in the marketplace. From production to consumption and vice versa, people are thought to react, give or take a few caveats, in a predictable way to prices as market signals.

In the light of the contingency argument, I have to admit that the standard economic view is indeed part of the relevant answer, only it misses an equally important side of the story. As has been already implied, the rationale for acceptance is provided by the recourse to natural causes of evolutions. In this respect, it suffices to take several insights from ethology, a disciplinary branch of zoology that undertakes research with a view to making recognizable a certain pattern of behavior among animals, humans included.

In a nutshell, its body of knowledge supports the view that one may indeed find the same recurrent pattern of human behavior in 2000 BC as in 2000 AD owing to an embedded genetic imprint, in spite of an ever-changing and at times important historical context. Natural causes, as defined for example by a host of neurophysiological, physicochemical and physical processes in the central nervous system, are definitely at play in bringing about a certain expected outcome.

The missing part of the economics story is that, in addition to innate behavioral patterns, people exhibit a similarly strong characteristic of being framed in a cultural context. The central hypothesis is that social reality is essentially made up of social customs and values, which conveniently disrupt or inflate historically shaped behaviors and attitudes. Evolutions then occur not in linear time but in contingent developments of reproducible as well as singular events.

Another presupposition concerning the object of inquiry comes in an implicit form: various social sciences share a common pool of facts when trying to bring to light the understanding of the arbitrary interplay of events. My modified perspective of *rationality* renders itself just as necessarily instrumental in economics as in any other social discipline. And the list continues with such subjects of inquiry as practices, routines and emotions, acts of creativity, rituals, sanctions and so forth. The act of understanding relates these various temporal processes to each other within the meaning of a broad historical sequence.

Sequential logic

The emphasis so far has been on identifying understanding or the interpretive discourse as the logical structure of inquiry in social sciences as against the underlying epistemological context of *historical specificity*. The sections on *cultural universals* and on *contingency* describe causality as an indeterminate scientific inference. While explanation may still have a role to play over short spans, when parallels can be traced to quantitative investigation, causal statements are completely subdued within the configuration of the subject-matter along broad and narrow sequences of events.

This section caps off the logical mechanism of inquiry with the issue of prediction. The *unpredictable* character of social events has almost become an axiom in dedicated epistemological studies (e.g. Wallerstein, 1996; Lawson, 2003; Lee, 2004), and much of my previous discussion has just reinforced this belief. So what still remains to be said? The problem is that unpredictability has also been admitted on the ground that it is *logically*

impossible in historical science, which is quite a different stance from the distinct character of the social subject-matter as hitherto discussed.

This strong position has been forcefully advocated by K. R. Popper (1957), whose attitude was quite reasonably prompted by an overt aversion to *prophecy* in science. He does not hesitate to make clear the way ahead for social sciences: 'The success of mathematical economics shows that one social science at least has gone through its Newtonian revolution' (Popper, 1957 [1961: 60]).

His argument is all the more worth considering as it concedes in detail the canonical representation of understanding. To bring nevertheless the social study into the realm of scientific inquiry, he accordingly devises a method he calls *piecemeal social engineering*. In this way, prediction is just another term for trial-and-error-based inquiry. In Popper's words: '[the scientist] will make his way, step by step, carefully comparing the results expected with the results achieved, and always on the look-out for the unavoidable unwanted consequences of any reform; and he will avoid undertaking reforms of a complexity and scope which make it impossible for him to disentangle causes and effects' (1961: 67).

This admission is no more than just another piece of his rebuttal of the study of social science on other premises than formal logic. The mandatory appeal to provide a way to *disentangle causes and effects* takes the reasoning on a misleading path, even if prediction were possible. Consider one frequent happening in the economic domain, a run on the national currency. Given a sufficiently accurate estimate of *current* exchange market bids, one may forecast in precise terms the magnitude of the impact. Nevertheless, one does not necessarily also arrive at an understanding in terms of how to make sense of this behavior. Understanding would imply stepping back and looking at what seems to be a historical broad sequence of *international movements of capital*. Within this sequence we find reasons for political hegemony, greedy or merely speculative behaviors, or spectacularly profitable opportunities for investments and so on.

The argument goes even further and restates the unnecessary character of the predictive capability of our social theories. But, in contrast to Popperian epistemology, which refutes law-like historical trends, social scientists should admit that prediction cannot have any sense in a context dominated by indeterminate causality and hence does not enter the *main* frame for understanding historical evolutions. Once we are aware of the relevant facts in historical perspective, one cannot meaningfully advance a scientific dialogue which would join such incongruent elements of scientific discourse as knowledge about: *insider trading* and explanations of chaotic behavior in stock market fluctuations; *technological preeminence* and the benefits of

mutual trade relations; *illegal or hidden transactions* and the precision of our macroeconomic measurement; *power relations* and the admirable nature of entrepreneurial behavior.

Moreover, it does not even matter how pervasive these behavioral attitudes actually are. Their meaning is enriched by *historical specificity* and cannot be impoverished by explanation alone. There is in fact no possible mechanism for assessing their real measure and impact, and recourse to natural imagery, such as *market equilibrium or disequilibrium*, seems to be the only possible scientific method for orthodoxy. In brief: we could have good or bad approximations of actual behavior, but they are of no *meaningful* interest as far as *social evolutions* are concerned.

* * *

What does it mean to say that something is of a historical nature? And to what extent does it matter for the logic of inquiry in social science? In addressing these questions, I argue that 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 in the same logical way as *the recurrent fact* and *the law-like event* epitomize the study of the natural realm.

The final thesis of this article is that the historical specificity of social sciences is ingrained in the ontological fabric of a social reality composed of multiple social temporalities of overlapping sequences of events. This conclusion connects various strands of an intellectual lineage that attempts to establish a logical foundation of social study which is at the same time: (1) faithful to the unity of science, understood as a systematic study, possessing a logical structure of proof and of validation of our conception of truth; and (2) able to account for a different knowable subject-matter, immersed in social temporality.

On this premise, I configure a different epistemological context under the rubrics of three understanding concepts – cultural universals, contingency and sequential logic – that account for three basic assumptions of historicity. The act of understanding relates these various temporal processes to each other within the meaning of a broad historical sequence. Summing up, I would therefore say that historicity-based epistemology is based on a set of three presuppositions:

1. *An account of variations of social nature across time as well as space.* The main cognitive challenge is to make sense of the social framework of human temporality, to give a cultural, as opposed to a natural, expression of facts of human nature. Of course, acts of human intentionality go beyond the social context to include facts of *artistic* value like literary criticism, works of music or theatrical representations, which all embody a singular expression

of human intentionality. If this description is correct, it should appear clear that scientific investigation, on the whole, bears specifically on *the different character of temporality of its subject-matter*: natural, for events that recur independently of human interference; social, for events that occur in particular historical forms, depending on human interference and cultural imprint; and artistic, for events that are the unique product of their creator. The issue of *space* is associated insofar as it may be considered relevant to add a supplementary dimension (geographical) to the natural or cultural context of investigation.

2. *An account of double indeterminism, causal and predictive.* The recognition of understanding – regularly used interchangeably with interpretive argumentation – has the clear effect of discarding as unnecessary any search for predictive behavior in social evolutions, though it has not been unusual to let it further cohabit with the classical concept of causal explanation. Early versions of this epistemology, as exposed for example by Max Weber, Werner Sombart or Joseph Schumpeter (cf. Huff, 1984: 55; Shionoya, 1990; Gioia, 1997: 175ff), as well as newer variants (e.g. Hodgson, 2001; Lawson, 2003; Setterfield, 2003), preserve causation within the same logical structure as in formalism. As has been argued, the *historicity* claim conceals the search for *causation* as a prerequisite for meaningful investigation in the historical discourse.

3. *An account of the logical structure of truth validation.* A corollary of the two previous assumptions is that reasoning grounded on causality, linear time and predictability is relegated to secondary status in historical scientific investigation. The nuance is worth emphasizing: classical logic is not becoming invalid in understanding the social context, but its explanatory power is used only in contexts dominated by the natural specificity of human-independently recurrent events. This epistemic reconstruction means that a new logic now claims prominence in investigating events of a social nature. This logic is based on understanding or interpretive argumentation as a method amenable to validation when inquiry is based on historically specific events.

Once accepted, these assumptions would of necessity also require a new logic of inquiry in social sciences that keeps the unity of science intact but in a different epistemological context. In the same way in which natural sciences share a common methodological basis grounded in causal relations, social sciences share a common thinking based on the understanding of the sequence of arbitrary manifestations of the same event. The new logic this article proposes embodies a set of three principles specific to the study of social phenomena: (1) that there exist multiple, overlapping spatial-temporal

scales, where 'multiple' is a cultural rather than a numerical concept; (2) that causality indeterminately becomes embedded in spatial-temporal distortions; and (3) that prediction remains associated only with events of the least historical nature (quasi-ahistorical), the particulars, that is event-regularities normally specific for short periods of time.

Approaching the present topic, I was confounded by the common tendency of scholars to search for some *natural* interpretation of the scientific discourse. Why are we so inclined to search for natural imagery in representing human actions? Why do disturbing coincidences – such as the properties of a function of two-dimensional Cartesian coordinates that can be used to obtain complex biological shapes, those of leaves for example – make us equate processes of life in general with natural law-like events? Why are we so prone to look for and adopt natural metaphors?

The reason might be an ancestral drive to be in communion with God, an expression of a divine, innate, irrational bond that makes us think *foremost* of a natural imagery that resembles our thoughts. But we have to resist the temptation, and try to learn how to find out the truth, be it of reason in exact sciences, of spirit in social sciences, or of artistic expression in humanities, in as many different epistemological contexts. For the entire history of science is a history of the mind, of its quest for algorithmic or cultural patterns in the study of nature, of real and of human materialization, respectively.

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