IMPERIALISM AND THEORICITY IN THE ECONOMIC SCIENCE

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Rezumat

Problema statutului epistemologic al ştiinței economice este una în desfăşurare. Ştiința economică este victima unui imperialism epistemologic şi, mai ales, metodologic, exercitat din partea ştiințelor naturii (îndeosebi fizica non-relativistă) şi, în acelaşi timp, este autorul unui imperialism la fel de nefast pe care îl exercită asupra unor ştiințe umane.

În acest context, materialul discută câteva probleme cruciale care trebuie să stea la baza reconstrucției conceptuale a ştiinței economice şi, în ultimă instanță, pentru construirea unei epistemologii economice genuine: teoreticitatea, analiticitatea, capacitatea explicativă şi capacitatea predictivă a acestei ştiințe.

Concluzia de bază este că nu se poate construi o teoreticitate „tare" a ştiinței economice (aşa cum au realizat matematica, fizica sau biologia teoretică) ci, cel mult, o teoreticitate „slabă" care să salveze analiticitatea formală a ştiinței economice.

Abstract

The issue of the epistemological state of the economic science is one in process. The economic science is the victim of an epistemological and especially methodological imperialism exerted by the natural sciences (mainly by the non-relativistic physics) and, at the same time, is the author of an identical imperialism exerted on other human sciences.

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In the context, the paper is discussing certain crucial issues that must stay at the basis of a conceptual reconstruction of the economic science and, finally, for building of an economic genuine epistemology, as: theoreticity, analyticity, explanation performance, and predictive performance of this science.

The basic conclusion is that is impossible to build a "strong" theoreticity of the economic science (like mathematics, physics, theoretical biology) but, at most, a "weak" theoreticity that could save the formal analyticity of the economic science.

Keywords: theoricity, analycity, prediction, explanation, comprehension

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The orthodox economic science still is the prisoner of the mechanicist paradigm.

The economic process is considered by most practitioners and even by many science philosophers, as a mechanicist process. The main characteristics of the economic process, according to this position, can be synthesized as follows:

a. the economic process is *fully causal;*

b. the causality of the economic process is *eutaxiological*[1] (meaning that the observable order of the economic phenomenology has an efficient cause[2]);

c. the time and space which "locate" the economic process are considered to be *absolute* (independent of the described economic process);

d. the economic subject is considered a sui-generis *machine* for decision optimisation;

e. the values, irrationality, the lack of direct interest, intuition are not considered as variables of the economic process;

[1] *In the teleological causality, the observable order has a final cause (a purpose).*
[2] *Here, the term of efficient cause has its Aristotelian significance.*

f. the non-linearities, bifurcations, the singular spots are not considered to be attributes of the orthodox economic process;

Therefore, the orthodox modelling[3] of the economic process has the following intrinsic attributes:

a. it relies on the hypothesis of optimality (extremisation of an objective-function within a system of given restrictions);

b. it relies on dynamic equations (even if the dynamic characteristic displays a relaxation by the introduction of the statistical[4] random variables);

c. it relies on differential equations (which presuppose the continuity of the economic process, meaning that it transfers the hypothesis of mathematical continuity into that of physical continuity, which is illegal[5]);

d. it relies on the exogenous nature of the human subject (as decision-maker and participant in the economic process), which ignores the Oedipus[6] effect. The hypothesis of the exogenous nature of the human subject in relation to the economic object is a transfer, illegal too, from the hypotheses governing the science of nature, physics particularly[7];

e. it relies on the invariability of the initial conditions of the process;

f. it relies on the invariability of the "law of movement" of the economic process[8].

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[3] We mean here the general concept of modelling, not just the quantitative modelling.

[4] Do not forget the failure of the probabilistic calculation, revealed by the current financial and economic crisis, regarding the problem of the financial derivatives.

[5] Obviously, the term of illegal used here has its significance from praxiology, not that from justice.

[6] The Oedipus effect is that one which modifies the initial conditions (it produces the amnesia of the economic process regarding the initial conditions).

[7] Of course, it is about the Newtonian physics, because the quantum physics joins the observing subject with the observed subject.

[8] Regarding this characteristic, we would not want to be too drastic: insofar it signifies a rejection of the probabilistic laws of movement, we would even be tempted to accept it; insofar it signifies the invariability of the dynamic law of

2. The economic science still is the prisoner of the eutaxiological causality

The Hayekian economic order (more precisely, the catalactic order) is an order generated eutaxiologically, which:

a. Relies on four essential methodological invariances:

-Invariance of the law in relation to the initial conditions (universality);

-Invariance of the law in relation to the time's arrow (reversibility);

-Invariance of the law in relation to the quantitative accumulations (proportionality);

-Invariance of the law in relation to the final cause (objectivity);

b. Rejects the idea according to which the efficient causes of the economic process are effects of the final causes. Logically, this means that the anthropic[9] principle is considered an *a posteriori* principle.

c. States that the future can not be built normatively, rather only forecast causally. In other words, the future is not built, rather noticed (anticipated);

d. Economic process modelling only offers the possibility of an exogenous choice, out of a list of morphologically-generated options, without the possibility of invention (the possible worlds are already given);

In the Hayekian economic order, the man (as individual and/or as society) is placed outside of the economic process (real process, desirable forecast or ex post evaluation). Thus implicit hypothesis of the eutaxiological causality is unrealistic conceptually, because:

movement of the economic process, the issue can become arguable, but it is not our intention to solve this issue in this paper.

[9] *As it is known, the anthropic principle states that what the observer observes in terms of existence can only be as it is, because, in this case, the observer would not exist to notice the specific existence.*

a. Man influences from the inside the economic process (the Oedipus effect – variation of the initial conditions), introducing Heisenberg imprecisions. It is known that prediction depends on three factors in the economic process:

1) Initial conditions;

2) Law of movement;

3) *Permanent evaluation of the contextual desirability* (the eutaxiological causality neglects this third factor);

b. Disregarding the Oedipus effect is equivalent to rejecting the teleology of the economic process (but the economic process is an artefact, therefore it is teleological by its nature). This implicit hypothesis of the eutaxiological causality is perturbing methodologically: in the mathematical functions describing the economic process, man is only considered among the independent variables under the species of the "production factor"[10].

3. On the imperialism of the economic science

The dominant economic science (of obvious positivist nature) is, in fact, itself the victim of an epistemological imperialism exerted by the Newtonian mechanics. The mechanicist paradigm has been assumed by several economists and even philosophers (such as Kant who, as known, was really enthusiastic about the logical construction of Newton). The neoclassical school of the economic science brought several "improvements" to this position of victim of the imperialism exerted by the natural sciences[11].

This state actually bestows on the dominant economic science a "tragic face" within the play of human knowledge and practice. Lacking originality, the economic science doesn't yet has its own epistemology, parasiting other epistemologies, particularly that of the

[10] *Even in this situation, man can only influence the economic process in a "substantial" manner (the amount of involved workforce).*

[11] *It is significant that, recently, attacks were targeted on the economic science (accused of a true epistemological and practice failure) from the very ranks of the natural sciences researchers.*

classical physics (also see the "synthesis" termed econophysics, an attempt to resuscitate an erroneous epistemology[12]).

In turn, the dominant (positivist) economic science is the author of an epistemological imperialism exerted on the other social sciences[13] (politology, sociology, psychology, law etc.). Based on the same reasoning, the tale quale methodological transfer from economy to the non-economic social sciences can be qualified as an "epistemological crime" (or, paraphrasing a famous phrase – Talleyrand –, it is more than a crime, it is an epistemological mistake). However, this imperialism is improper, because the economic science doesn't transfer its genuine epistemological or methodological precepts, rather only those received through the Newtonian mechanics (it only functions as a transmission channel).

4. On the theoricity of the economic science

The sciences dealing with domains in which there is evolution (qualitative change), such as the economic science, can not have a theoretical code for phenomenological ordering. That particular science can not provide a smaller cardinal for class of α statements in relation to the cardinal for class of β statements. The impossibility of a theoretical code to accomplish the phenomenological ordering leads to the impossibility of novelty through combination. The novelty through combination (not morphological, because this is not novelty related to class α, rather that derived from the prevalence of the whole on the parts[14]) increases the cardinal for class of α statements, defeating thus theoreticity.

The impossibility of the theoretical code of phenomenological ordering is generated by the existence of the Oedip effect, which

[12] *The main element of error here is, in our opinion, the preservation of the breaking distinction between the economic subject and the economic object. Maybe we even ought to define the economic subject only as a "logical synthesis" between the subject and the object, but this will be developed in a further intervention.*
[13] *See, especially, the "work" of Gary Becker (Nobel prise winner for economy?) and that of a countless and inexhaustible number of "quantifiers" in this field.*
[14] *As known, this position has been expressed as far back as Aristotle.*

forbids the invariance of the initial conditions. Therefore, the economic phenomenology can not by arithmomorph[15].

Every time we don't have a theory, there is phenomenological incertitude. The occurrence of incertitude or of risk concerning the forecast is produced by empirical (factual) tests regarding the level of theoreticity of a science[16]. Generally, only the theoretical sciences can make forecasts, because it is necessary (in the logical meaning of the term necessary) to ignore the novelty. Forecasts thus belong to class of β statements.

In consequence, an economic theory is possible only at the formal level, not inn terms of content, because the latter is conditioned culturally. It is noteworthy, within the context, that the present positivist economic science is only formally theoretical. At the same time, the impossibility of a theory of the genuine economic science refuses it the possibility of being tested (either by verificationism[17] or by falsifiableness).

We therefore propose the acceptance of a "weak" theoreticity of the economic science, theoreticity ensured in three steps, as follows:

1. accept the metaphysical (non-testable) synthetic[18] statements in class α, thus obtaining a modified α' class;
2. derivation of class β' from class α', with β' fully testable;
3. accept the falsifiability of class α' for any falsification of class β';

Thus, the logical bases of the economic science would be redefined; two problems are yet to be solved, nevertheless:

a. the development of the logical procedure to derive the statements of class β' from the axioms of class α';
b. since class α' also contains metaphysic synthetic statements, the logic of class β' derivation should be a para-consistent logic.

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[15] *As known, the concept of arithmomorph structure has been introduced by the great economist born in Romania, Nicholas Georgescu-Roegen.*
[16] *Also see the falsifiability test proposed by Karl Popper.*
[17] *Scientificity criterion proposed by the Vienna Circle.*
[18] *Synthetic statements in Kantian sense, here.*

In our opinion, the construction of a weak theoreticity of the economic science is necessary if we want the save the possibility of predicting the economic process.

5. On the analycity of the economic science

The problem of analycity in describing the economic process is closely related to the problem of its theoreticity. Analycity presumes reversibility, but in the evolutive sciences there is a time's arrow (described by entropy) which bans reversibility, thus compromising analycity. The impossibility of analycity involves, however, logically, the impossibility of the punctual prediction of the economic phenomenology. Furthermore, the punctual prediction would claim the use of point mathematical functions (functions which are impossible in the evolutive processes, the processes which presume qualitative changes).

The impossibility of prediction in the economic process is also necessary because the economic concepts are not cardinal but ordinal or, at least, poorly cardinal (meaning just quantifiable[19], not measurable). Indeed, the economic concepts are, by excellence, dialectic (they have semantic shadows[20]).

Within the context, we propose an "*algorithm*", in three steps, to produce cardinal variables for the economic concepts:

1. definition of the *essence* of an economic variable as the sum of its potentialities;

2. construct the „list" with the *potentialities* of the economic variable (or the „menu" of the particular variable);

[19] *As known, quantification is considered, in logics and mathematics, a pseudo-measuring.*

[20] *In semiotic sense, the scientific language should only have denotation (have the same significance for any receiver of the specific language). Since the economic language also has connotation, it is possible to debate the scientific nature of the language in which the economic processes are described. Unfortunately (but not without an explanation) the use of mathematical language to describe the economic process seems to be an epistemological failure, although the intention of this "borrow" was exactly to eliminate connotations.*

3. introduce an *inspector-demon* which to observe, at any time, if a specific variable is in an "hypostasis" from the list of potentialities;

Based on this algorithm, we expect the variables which keep their essence, to ensure the analytical description of the economic process. This means that hypertrajectories, rather than trajectories, will be described (trajectories within the "menu" of the variable). Since this is an analytical description (invariance is ensured by keeping within the "menu"), then the hypertrajectories are reversible dynamically (or, the physical reversibility is the grounds for the analycity of process description).

By constructing the economic invariables we ensure the invariance of the laws describing the economic processes, by "regrouping" the dynamic reversibility. At the level of the standard economic processes, causality can not be replaced by the conceptual reconstruction (meaning that comprehension[21] is required), but at the level of the economic hypertrajectories, knowledge is enough (we can limit to rationality).

The law of entropy, which "guarantees" the irreversibility[22] of processes has not relation, however, with causality (just like the probabilities). Entropy ensures only the limits between which the qualitative change still designates identity (we have here the problem of thresholds, of the causal relation between quantity and quality). At the level of the economic hypervariables (as introduced above), predictions are possible with the same exactness as in the analytical models. It is enough that the inspector-demon monitors only the variables which become initial conditions for the next explanative or prediction cycle, in other words, all it takes is to eliminate the Oedipus effect.

By the reconstruction of analycity, the logical grounds of the (weak) theoreticity of the economic sciences can be laid.

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[21] *Comprehension doesn't involve reason, but intuition. If we were to make a connection with the specialisation of the brain hemispheres, comprehension (which is non-sequential, holistic) is managed by the right brain hemisphere, while knowledge (which is sequential, algorithmic) is "managed" by the left brain hemisphere.*

[22] *Or, at least, their non-ergodicity.*