Economics in Blueprints: The Rivalry of Anticipations

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The emergence of economic science is typically assessed retrospectively, i.e. as a process tending to come up to some "classical situation", to use Schumpeter's term (1954). Otherwise very different works by Marx (1859), Schumpeter (1954), Blaug (1965), Hutchison (1988). are representative of this view. Such an approach is quite appropriate for tracing back the origins of the phenomenon taken for a benchmark in order to identify its roots and follow the logic of its maturing. It does not catch, however, the context within which a new phenomenon appears and takes its shape.

The paper departs from the assumption that the emergence of a new phenomenon occurs usually in bifurcation points, i.e. under conditions when the future is not predetermined, and the choice of development path depends on incident factors, while subsequent steps tend to become path-dependent. In such cases the genesis of a new phenomenon is a matter of selection from available options, of which the rejected ones are of no less importance than the option that happened to be accomplished.

It is argued in the paper that the genesis of the economic science belongs precisely to this kind of scenarios. To support this claim a set of blueprints of the emerging economic science are identified and considered. Among them James Steuart's rationalized version of earlier empirical and descriptive tradition rooted in mercantilist economic reasoning; the empirical and statistical project of William Petty; John Law's attempt of social engineering; David Hume's perspective of economic philosophy; and, finally, the project of abstract science proposed by Richard Cantillon.

Although not all of these projects were consciously intended to culminate in a new branch of science, and there was no explicit *Methodenstreit* among their authors, these blueprints served as eventual paradigms for those who succeeded in establishing economics as a new science. Cantillon's attitudes to Petty and Law, Smith's rejection of 'political arithmetic', as well as his notorious ignoring Steuart' *Principles* are clear symptoms of implicit rivalries accompanying the birth of economics.

I

There is a broad consensus that the genesis of economics as a science took place not earlier than the middle of the XVII century and not later than the second third of the XVIII century. However, the interpretation of this claim varies among the authors. Thus, for Karl Marx in his "Zur Kritik der Politischen Ökonomie" (1859) the emergence of scientific political economy was associated with the idea of the labour theory of value found in the work of William Petty, whereas other historians of economic thought could stress the articulation of the principles of

free trade (Hutchison, 1988) or utility, which roots can be traced back to this period as well. In all such cases the criteria of scientific are posed ex post, by virtue of their connection with the ideas which reputation grew up due to later theoretical constructs. The logic of this position is clear and well expressed in Marx's dictum "human anatomy contains a key to the anatomy of the ape". This is, however, the logic of an emerging particular form, in our case – of an emerging form of scientific discourse. All other forms of such discourse are excluded from consideration. Hence this approach does not fit to answer the question why this – and not some other – particular form had been preferred.

Plurality of projects of the anticipated economic science was partly due to the coexistence of alternative images of science in that period. Scholastic tradition – especially the natural law doctrine – remained one of its sources. According to this doctrine non-scientific was identified with not being natural, whether because of being artificial, subjective, non-universal, etc. It was less clear with the interpretation of 'natural', by which one could mean – following Aristotle's tradition – either something 'being in accordance with nature', or 'just', or even 'purposeful'. In economic writings of the period this tradition was represented by John Locke for whom 'natural law' did not differ from 'the law of nature'. By appealing to natural law he argued either against regulation of interest and in favour of protectionist measures in foreign trade (See, e.g.: Letwin, 1963).

By the end of the XVII century such ambiguity in argument could already be taken with suspicion. According to Letwin (1963) attraction to science in that time was not a matter of sentiment. Pamphlets defending private interests tended to lose their appeal forcing the demand for objective reliable knowledge capable of attracting supporters, persuading opponents and enhancing author's repute among the public. The example of leading sciences, such as mathematics and physics, suggested the ways to cope with this task. It was in the XVII century that the two basic epistemological strategies took their shapes: René Descartes generalized experiences of rigorous mathematical reasoning, while Francis Bacon put forward the idea that true knowledge ought to be confirmed by experiment and empirical data.

The direct link between these epistemological strategies and patterns of economic theorizing was claimed by Karl Pribram (1983) who argued that early English economic writers starting from Petty conceived science according to Bacon, while the French, especially Physiocrats, were Cartesian rationalists. Although Pribram's scheme was too straightforward and underestimated the integrity of the international scientific community (see, e.g., Gronewegen, 1987) allowing for such a phenomenon as was Dudley North, an English Cartesian, - nevertheless the very attention to the impact of competing epistemological settings on the contemporary economic theorizing was a step indicating possible inadequacy of linear schemes to grasp the genesis of economic science.

Schumpeter's observation that economic reasoning was shaped within two different groups of authors – consultant administrators and pamphleteers, indicated another source of diversity. In a similar (although not identical) way Amartia Sen differentiated ethical and engineering roots of economic theory (Sen, 1987).

II

Intellectual fermentation during the second half of the XVII century and the first half of the XVIII century gave birth to a series of projects to transform economic discourse into a kind of science.

Two such projects might be called inertial – they were intended to rationalize already existed discourses. The above mentioned **philosophical project** of John Locke was an attempt to develop a sort of economic philosophy based on natural law doctrine. In the XVIII century David Hume pursued similar strategy to integrate economic phenomena into a broader context of moral philosophy, but now without dependence on the natural law doctrine. Economic phenomena, such as money and trade, interested Hume because of their influence upon human manners and, consequently, upon the mechanisms of social progress. Contributions of both philosophers to analytical economics seem to be by-products of their larger endeavors.

The second – **empirical and descriptive – project** summarized experiences of Schumpeter's consultants-administrators in a narrower field of economic policy. This major job was completed by Sir James Steuart in his *"Enquiry into the Principles of Political Oeconomy"* (1767). The treatise was addressed to an enlightened ruler and claimed to present principles of economic policy derived from various experiences of different countries. Unlike Marx who named Steuart "the first Briton to expound a general system of bourgeois economy" (1859), Steuart himself consciously distanced his work from what "the French call *Systèm*" seeking to avoid abstractions. "The great art, - he wrote, - of political oeconomy is, first to adapt the different operations of it to the spirit, manners, habits, and customs of the people; and afterwards to model these circumstances so, as to be able to introduce a set of new and more useful institutions" (Steuart, 1767). In the Preface to his *Enquiry* he recognized that "It goes little farther than to collect and arrange some elements relating to the most interesting branches of modern policy, such as population, agriculture, trade, industry, money, coin, interest, circulation, banks, exchange, public credit, and taxes. The principles deduced from all these topics, appear tolerably consistent" (Ibid.).

However, Steuart's project came too late to be competitive among other blueprints. It was a manifesto of enlightened mercantilism in the epoch when this sort of policy was losing its credibility in the eyes of growing part of society.

The first innovative project of economic science belonged to William Petty, who in Schumpeter's words "was one of those theorists for whom science is indeed measurement" (Schumpeter, 1954). The often cited his phrase that "instead of using only comparative and superlative Words, and intellectual Arguments, I have taken the course … to express myself in Terms of Number, Weight, or Measure; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites, and Passions of particular Men, to the Consideration of others" (Petty, 1690) was an evident challenge. Schumpeter even suggested that being "acutely aware of the polemical aspects of his methodological creed", Petty "was quite ready to fight for it and to start what would have been the first controversy on 'method'."(Schumpeter, 1954). Yet this suggestion he formulated in the subjunctive mood, for: "…nobody attacked. A few followed. Many admired. And the vast majority very quickly forgot. … It was the inspiring message, the suggestive program, which wilted in the wooden hands of the Scottish professor and was practically lost to most economists for 250 years" (Ibid.). The latter words were addressed to Adam Smith who expressed his attitude to Petty's project in a disparaging remark of having "no great faith in political arithmetic, computations" (Smith.WN, Book IV, ch. 5).

Schumpeter's enthusiasm in relation to Petty's **statistical project** fitted quite well the empiricist intellectual mood of the 1940s, and much less the conditions of Petty's and Smith's lifetimes. Despite Petty's true ingenuity in manipulating with available data the fact is that these data were scarce and fragmentary, and calculations derived from them could hardly be persuasive. Conditions for such sort of science did not yet mature.

Another innovative project of doing economics was proposed by famous John Law in his book *"Money and Trade Considered"* (1705). It was an example of **engineering approach** to economics. The book consists of eight chapters. The first two chapters introduce basic concepts and pose the problem: importance of providing an economy with money. Next four chapters is an outline of different approaches – actual or proposed – intended to deal with the posed problem together with the critique of these approaches for their either insufficiency or inadequacy. The seventh chapter contains a detailed – step by step – description of reforms to be implemented. And the final chapter is reserved to show the benefits the implementation of the project will bring.

The fact that neither Petty's, nor Law's visions of future science caused any reaction of their contemporaries does not mean that their projects were neglected. Scientific communities were small, mechanisms of scientific communication were in the shaping, and the accumulation of scientific knowledge was still slow, involving generations of scholars. No wonder that the response came with delay. It was one more project elaborated in the early 1730s by a merchant and banker of Irish origin Richard Cantillon.

The only known Cantillon's work is his *"Essai sur la nature du commerce en général"* published posthumously in 1755. It contained critical references to Locke and Petty, but its main, although anonymous, target was John Law (See: Murphy, 1989 and 2008). Along with theoretical controversies the *"Essai"* differs strikingly from all previous economic writings by its methodology. Cantillon's economics was an accomplished **project of a particular theoretical science**. It was not a subsection of moral philosophy as in Locke, it was not a set of analytical hypotheses to select and analyze data as in Petty, even less it was an engineering project in the spirit of John Law.

Cantillon's economic theory was an attempt to grasp its object of inquiry in a generalized model rendering its salient properties. It is a system of consciously constructed abstract schemes, with the circular flow scheme as its hard core. The scheme is objectively determined by the volume of available resources, reducible to land, and by the proportions of its component parts since the 'natural state' of the system implies viability and reproducibility of each of these parts. This basic scheme is supplemented with two additional ones allowing for certain variability: the agents' hierarchy, and the money circulation scheme.

The whole structure is based on the assumption of an objectively given natural state which is reproduced through the functioning of the system. The latter is conceived as a circular flow process determined independently of market forces; market forces are assumed to be pushing the system towards the natural equilibrium state, while the mechanism involved is allowed to be imperfect with various sources of uncertainty ever present to cause deviations; finally, natural state is explained without not only any recourse to 'invisible hand', but without normative connotations as well: equilibrating trend is taken to be natural, yet 'blind'.

The second basic assumption is the differentiation between production and monetary spheres. For Cantillon it is a way to combine determinism and uncertainty in his theory. Production is determined by objective factors independent of human will, but these factors are put into motion by humans with their limited abilities and imperfect mechanisms of interaction. Therefore certain gap between natural state and reality is inevitable, and it is this gap that provides space for supplementary schemes, including monetary factors, to enter the game. The agents involved into this game are entrepreneurs taking risks of all deviations from the natural state.

III

Multiplicity of projects of economic science put into doubts the received view of the genesis of economics as a cumulative process. Although the authors of later projects were fully aware of the ideas of their predecessors and took them into consideration, the relation to these ideas was often quite critical. Later authors rather repelled from its predecessors than relied on their legacy. The example of Cantillon's references to Petty and Locke is instructive in this respect. In

both cases certain continuity of topics between the two pairs of authors does not prevent contrast of approaches in their treating. As Anthony Brewer put it, "the connection between the two (Petty and Cantillon) was a great deal less direct than many, following Schumpeter, have thought" (Brewer, 1992, p. 123).

In the end, economic science was shaped along the path paved by Cantillon's project, i.e. as an abstract theory, derived logically from a limited number of basic assumptions. The success came several decades after Cantillon's death, and was bound to the works of the followers – Quesnay and, in particular, Adam Smith. What factors secured success to *the* theoretical project? On the one hand, it was the vulnerability of some competitors. Law's engineering project was discredited with the collapse of his financial scheme, while for Petty's statistical project there was no adequate statistical basis. On the other hand, the theoretical project as it was presented by Adam Smith appeared to be highly attractive ideologically. The success of Smith an economist – and the birth of political economy as its concomitant event – was due to a large extent to the success of Smith a political thinker. Consultant project of James Steuart was in this respect an antipode: it looked to the past. Philosophical projects of Locke and Hume tried to embed new ideas into old philosophical frameworks with much less appeal to the mindset of their contemporaries. It is to be noted that all above mentioned factors were historically conditioned, or even casual. Under alternative circumstances the genesis of economic science could take a different path.

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