‘Mercantilism’ and ‘physiocracy' as 'paradigms' in the same epistemic context

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This paper explores the context of emergence of ‘mercantilism’ and ‘physiocracy’ in terms of different configurations of thought according to the Kuhnian concept of 'paradigm' and the Foucauldian notion of 'episteme'. It intends to show the potentiality of such concepts, which are here considered complementary, for thinking about economic discourse. The similarity between them has been noticed since the publication of Foucault's *The Order of Things* in 1966. However, despite Kuhn's influence on the historiography of economics, Foucault’s archaeology has been practically ignored. The paper is divided into two sections. The first section briefly explores the interplay between these concepts in terms of some main notions existing in both Foucault's and Kuhn's systems. The second section applies them to economic thought, investigating the ‘epistemic’ context of ‘mercantilism’ and ‘physiocracy’. The paper follows the argument that these notions refer to a very distinct level in what concerns the underlying fundamental structure that determines knowledge. It is believed that they are complementary notions that can shed light on the historiography and methodology of economics.

Key words: mercantilism, physiocracy, paradigm, epistemic context.

1. Introduction

Similarities between Thomas Kuhn's *The Structure of Scientific Revolutions* (*Structure*) and Michel Foucault's *The Order of Things* (*OT*) were noticed as soon as *OT* was first published in 1966. This comparison was especially part of that which is called by Carrette (2000, x) the first wave of assessments of Foucault's *OT* (for example, Caws 1971, White 1973, Leary 1976, and Merquior 1991). Foucault was even accused for not mentioning Kuhn, whose *Structure* was first published in 1962. George Steiner stated in a review of *OT* for *The New York Times*:

> The notion of *episteme* strikingly recalls Thomas Kuhn's well-known definition of 'paradigms'. […] The trouble is that Foucault speaks as if he were a solitary explorer, opening up silent seas'. (Steiner, 1971a - emphasis in the original).

Foucault answered Steiner's critique, declaring that he only read Kuhn's *Structure* in the winter of 1963-64, that is, after having written *OT* (Foucault, 1971c). Also, Foucault admitted that their similarities might be due to the fact that they were influenced by the same thinker: Georges Canguilhem (1904-1995). Foucault stated: 'I did not cite Kuhn, but quoted instead from the historian of science who shaped and inspired his thoughts: G. Canguilhem' (Foucault, 1971c).

Indeed, taking their own systems' claims, the many similarities between Kuhn's and Foucault's works might result from the fact that they share the same 'paradigm' in the field of history and, at a deeper level, the same 'epistemic' context. This certainly enables suggestion of reflexivity in their works. Kuhn, for instance, was certainly aware of the discussions surrounding thought on history at that moment in France, and he even mentioned Alexander Koyré as being one of his influences (Kuhn 1970, 3). Foucault and Kuhn had the same fundamental question: is there any fundamental configuration that determines knowledge? They also mention the same issues related to knowledge: discontinuity, incommensurability, language, and consciousness and intentionality, for example. However, they found different systems of explanation. For example, Hacking (1979, 40) more emphatically says that Foucault found an organization completely 'different in kind from anything that Kuhn was looking for'.

Despite the striking similarities between their main notions, though Kuhn's ideas were promptly absorbed by historians of economics, Foucault's *OT* has been almost

ignored. There have been some allusions to Foucault's work, particularly applying some general ideas, notions and concepts introduced and/or made prominent by him; this has mostly been done without a detailed critical analysis of his writings, and definitely more related to his genealogy of relations power/knowledge. There has been very little that approaches his archaeology of political economy. In the Anglo-American literature in economics in particular, the one interesting piece in English that explicitly performs an analysis of it is Amariglio (1988). Yet, 17 years later, Amariglio's statement is still valid: 'With the exception of a few economists, such as Antonio Callari, Stephen Resnick, Richard Wolff, Keith Tribe, and Athar Hussain […], most economists are distinctly unaware of Foucault's writings' (Amariglio 1988, 584 - emphasis added).[ii]

There is still certainly a great potential for applying Foucault's archaeology to the rethinking of the economic historiography and methodology, and I propose here to do it through the application of the two concepts, episteme and paradigm, to the history of economic thought. As an illustration, we consider here the case of 'mercantilism' and 'physiocracy'.

The paper has two main sections. The next section briefly explores the interplay between these concepts in terms of some main notions existing in both Foucault's and Kuhn's systems. The last section applies them to economic thought, investigating the 'epistemic' context of 'mercantilism' and 'physiocracy'. The paper follows the argument that these notions refer to a very distinct level in what concerns the underlying fundamental configuration of thought that determines knowledge. It is believed that they are complementary notions that can shed light on the historiography and methodology of economics.

2. The complementarities of 'paradigm' and 'episteme'

The similitudes between the notions of 'paradigm' and 'episteme' result from the same conception of how to think about history, which followed the contemporaneous course of thinking about the subject. Historian philosophers contemporaneous to Kuhn and Foucault, such as Koyré, Bachelard and Canguilhem, were talking about discontinuity, non-progress, and incommensurability. However, Foucault and Kuhn turned to the history of knowledge from a very distinct perspective.

In terms of the categories of 'external' and 'internal' history, whilst Kuhn was practising both, Foucault's work certainly does not fit into any of them. Kuhn (1979,

123-124) refers to the importance of pursuing an interaction between ‘internalist’ and ‘externalist’ approaches and states that Foucault could be a thinker who could help to provide insights in such an endeavour. Thus, the most important difference between the concepts of 'episteme' and 'paradigm' derives from the distinct approaches of their formulators.

Kuhn followed the tradition of epistemological research and believed that techniques of psychology and sociology could provide the elements to unveil how the scientific community works in pursuing knowledge. Paradigms always refer to a given scientific community. They can be understood through an investigation of the intuitive and apparent beliefs, conventions and procedures of a certain scientific community. Paradigms and shifts between paradigms can be explained. Even if there are unconscious elements defining that behaviour, they can be uncovered by an attentive mind, provided with some correct techniques. This is even possible at the moment when a paradigm is dominant. As for the unconscious elements, they have to become apparent by the occasion of revolutions. It is worth stressing that Kuhn was very clear about what he meant by 'intuitive' components of a paradigm. He explained that the 'intuitive' elements were not 'subjective' or 'unanalyzable' (Kuhn 1970, 191).

Foucault's approach is both more ambitious and more cautious than Kuhn (Major-Poetzl 1983, 87). Foucault’s archaeology looks at a wider set of practices and discourses, pursuing them ambitiously to find out the underlying unconscious factors that govern the way man thinks at a certain moment in time and space. He is not really interested in analysing the past product of scientific investigation in order to understand *how* scientists proceeded in their search for the truth. He is not interested in characterising the internal procedures of a science. In his *OT*, he launched a gaze, which he called 'from outside', at the human sciences *en bloc*. ‘The thought from outside’ was a way of thinking that Foucault had already employed in his book on Blanchot (Foucault, 1987) and, in a nutshell, meant ‘a language without subjectivity, without humanistic constructions'. (Carrette 2000, 88-9). He analysed economics, biology, and philology *en bloc* because he was puzzled by the fact that they emerged at almost the same time and they were related to the emergence of the human sciences of psychology, sociology, and studies on literature. He wanted to find out why they emerged and concluded that there was an ‘interdiscursive practice’ that allowed that. For understanding that, he concluded that he had also to understand how man became an object of knowledge, so that an investigation about the emergence of economics,

biology and philology was necessary. He had to look at these branches of knowledge collectively. Foucault defined the 'episteme' as a 'set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences, and possibly formalized systems' (*AK*, 211). In OT, he focused his investigation on a set of relations: representation and language, same and other, the role of time (history) and space as a foreground and/or background for knowing the subject matter, and man as object and/or subject of knowledge. He also stresses that the 'episteme' is unconscious and that never becomes conscious for the practitioners of knowledge. For instance, changes in the conception of representation through language are only perceived after they happen and can take a long period of time to be fully understood. It seems that Foucault believes that the episteme can only be unveiled by philosophers, looking 'from outside' of the science, and, finally, he states, this is only possible *ex post*. Furthermore, Foucault was cautious in so far as he did not try to explain the shifts between the epistemes. He did declare that such an explanation was very complex and that even if it could be formulated, it would never be definitive.

Therefore, while it may be said that Kuhn was dealing with *connaissance*, Foucault wanted to understand *savoir*, as Foucault himself differentiates these French words. And, because of that, Foucault also turned to *connaissance*. In Foucault's terminology, *connaissance* meant 'the items of surface knowledge', while *savoir* was 'a frame …within which surface hypothesis got their sense, […], is more like a postulated set of rules that determine what kinds of sentences are going to count as true or false in some domain' (Hacking 1981, 33).

Language is a very important element for both Foucault and Kuhn. However, once more, they consider language from a very distinctive perspective. For example, Foucault takes the theory of language during the 17th and 18th centuries as a structure to understand economic thought. What is important for Foucault is how the conception of language at a certain moment determines if and how man can represent the world. Indeed, the case is the power of the language to represent things, the relation between words and things. Kuhn sees language as an important factor to comprehend the difference between paradigms, though it seems that he eventually concluded that language was much more important than that. He stated, for example, that the problem of incommensurability transcended a problem of translation and concluded that the relation between the ontological assumptions and language determined different paradigms. At this point Kuhn touched the same approach to language as Foucault, who

was relating epistemology to ontology in order to identify different systems of ordering language (words) and perceptions of reality (things) - epistemes.

The concepts of 'paradigm' and 'episteme' have indeed something in common. They result from the searching for understanding of the underlying structure that determines the way knowledge emerges and proceeds. However, 'paradigm' refers to surface effects compared to the 'episteme'. If the history of knowledge is thought of in archaeological terms, the 'episteme' is at a deeper layer. The 'episteme' is anterior to the 'paradigm' or 'paradigms'. It is 'the fundamental code', 'the generative grammar of cognitive language' (Merquior 1991, 37). The paradigm is much more related to practice than to the scientific collective unconscious, and, though it 'may be more than theories', it is clearly on the level of them (*idem*). Epistemes 'are more than world views - they are built in a still deeper layer of un(consciousness)' (*idem*). While Kuhn's paradigm is shared by a group of researchers, Foucault's episteme is much more widespread and evolves much more slowly. Epistemic shifts are not Gestalt-switches in the same way as changes of paradigms in Kuhn's theory. If thinking in terms of Gestalt-switches, the episteme is the conditions that lead to different perceptions of the Gestalt.

3. 'Mercantilism' and 'Physiocracy' as different ‘paradigms’ in the same ‘epistemic’ context

As the literature on history of economic thought usually recognises, 'mercantilism' is difficult to classify as a 'school of thought', essentially because of the lack of a 'system', that is, an articulated group of theories. The term first acquired significance with Adam Smith, who identified two systems before him, 'the system of commerce' or 'mercantile system' and 'the system of agriculture', which have been known by 'mercantilism' and 'physiocracy', respectively. What is denominated 'mercantilism' was indeed a group of reflections by some practical men who have a common claim. The mercantilists were either 'merchants' or administrators linked to the State. Their central aim was to find out how to increase the wealth and power of the State and/or of the merchants. This led to 'a certain doctrinal thread' (Blaug 1985, 10), a 'common theoretical core' and support 'a certain homogeneity to the various national economic policies' (Screpanti *et al* 1993, 23).

Mercantilists emphasised the acquisition of money through a favourable trade balance. One central and most dominantly mentioned characteristic of 'mercantilism' is

that 'money was wealth'. Almost all mercantilists saw money as a *nervus rerum*, 'the life of commerce', 'the vital spirit of trade', 'like muck', and as Bacon had affirmed, 'not good except it be spread', taking to the view that 'money stimulates trade' (Blaug 1985, 11). This has led to the critique that they confused 'money' with 'wealth'[iii]. This also started with Smith, who stated that that was the only form of wealth for these men (Screpanti *et al* 1993, 24). However, this hypothesis has been rejected because too absurd to be held by anyone. Rotwein (1955, xiii-xiv) argues, for example, that mercantilists wrote as if they were making this identification, but 'among a substantial number of mercantilists money was not desired in itself but mainly because of its beneficial effects on trade', as for 'driving trade'. Money was still regarded as the determinant of interest rates, says Rotwein, and so it was necessary to increase its supply in order to have lower production costs, enabling the producer and merchant to compete on more favourable terms with foreigners (ibid, xiv). In relation to this issue, it has been noticed that it is necessary to separate the 'mercantilists' of the 16th century from those of the 17th and 18th centuries (see, for example, Screpanti *et al* 1993). During the 16th century, they write as if they made the association between money and wealth. They are called 'bullionists'. This seems to have changed at the end of the 16th century. For example, even Smith had already conceded that authors like Thomas Mun (1571-1641) and John Locke (1632-1704) referred to wealth as being not only gold and silver, but also lands, houses, consumable goods (Blaug 1985, 11). In its more sophisticated formulations, says Blaug, 'mercantilism' did not confuse money with capital' (in the meaning of specie with wealth).

This issue is especially important here due to Foucault's periodization of economic thought in terms of 'epistemes'. For him, the 16th century was marked by the 'age of resemblance', whilst the 17th century and the first three-quarters of the 18th century were dominated by another epistemic configuration, which he called the 'classical episteme'. He argues that up to the end of the 16th century, knowledge was possible by resemblance and analogy. In that age, the conditions of possibility of knowledge were given by the belief that God had created everything on earth and left signs, His signature, on things. To know consisted of finding the relations things had with each other through analogies. It was not to analyse, but to interpret. Language was part of the world as all the other things. Words and things were together, so to speak, because language was not a problem. Foucault called the chapter about that episteme 'the prose of the world'. Analogously, in economic thought, money measured price and

was the unity of exchanges because of its intrinsic value. This was the case until Davanzatti (1529-1606), according to Foucault (*OT*, 174).

'Mercantilism' from Scipion de Grammont, who published his *Le Denier Royal, traité curieux de l'or et de l'argent* in 1620, onwards was in the context of another episteme, the 'classical episteme'.

To say that 'physiocracy' constituted a 'paradigm' seems to be not controversial, being perhaps one of the easiest examples of a 'paradigm' in the history of our discipline. 'Physiocrats' formed a community (*'les économistes'*, as they denominated themselves) that shared a common set of theoretical beliefs, and the same accepted standards and procedures to conduct the scientific investigation. They formed a group of adherents: basically François Quesnay, Mirabeau, Mercier de La Rivière, Le Trosne, Baudeau, Dupont de Nemours and Turgot. As Smith stated, they promoted a 'system of agriculture'. In relation to the 'mercantilists', the physiocrats followed a very distinctive 'paradigm'. Indeed, the 'physiocrats' emerged opposing themselves to the mercantilist purposes. They promoted a 'shift in scientific perception that accompany paradigm change' (Kuhn 1970, 117). They emerged in France, they were all committed to the class of landlords, and they aimed to stop the rising of the classes of merchants and manufacturers (Galbraith 1989, 46). They argued that only land could generate the *produit net*, a basic concept shared by them that meant basically the difference between the wealth produced and the wealth consumed. Their theoretical structure followed the conception of the existence of a natural order, *le ordre naturel*, such as stated by Dupont de Nemours (Ingrao & Israel 1990, 41). They understood wealth as material goods, 'as the consumable goods annually reproduced by the labour of society' (Blaug 1985, 24). In this sense, they did have a very distinctive notion, in relation to the 'mercantilists', of the relationship between money and wealth. Quesnay's *Tableau Economique* is the classical work of the school and may be seen as the 'textbook' of this 'paradigm'. Also differently from the 'mercantilists', who advocated protectionist policies, the 'physiocrats' saw economic progress as a result of *laissez-faire, laissez-passer*.

Concentrating the analysis on the 'mercantilism' of the 17th century onwards and 'physiocracy', whilst they can be seen as different 'paradigms', they were in the same epistemic context for Foucault: the 'classical episteme'. Therefore, let us to explore his characterisation of that moment in terms of the historical conditions of possibility of knowledge. Table 1 summarizes the main characteristics of the three main epistemes identified by Foucault.

Table 1: Three epistemic contexts – main characteristics

Main notions/ relations	***Episteme - Savoir***		
	Pre-classical: until the end of the 16th century	**Classical:** the 17th and 18th century	**Modern:** from the end of the 18th century to today
General character	Age of resemblance	Age of representation	Age of history
Object of knowledge	God	Nature	Man
Mode of savoir	Interpretation: signs given by God	Representation: signs constitute themselves during the process of *connaissance*	Interpretation: signs created by Man
Things' mode of being	Resemblance	Order	History
Words and things	They are together	They separated, but representation through language occupied the gap	Representation cannot occupy the gap anymore. 'Man' is responsible for representation (and so he became subject and object of knowledge). Self-representation.
Same/other	Same	Same/other. Other is the different. *Cogito*: there was no 'unthought'	Same/other. 'The Other' is the 'unthought', which includes the 'unconscious' (object of human sciences) and the hidden meanings.
Main procedure	Analogy	Analysis and order	Analogy/succession
Visibility/deepness	Visible	Visible	Invisible/unconscious; 'Organic structures': 'vertical' investigation
Orientation	Time and space had no significance.	Space – Timeless table. Spatialization of the object.	Temporal
Philosophy	Theology	Rationalism; unity of knowledge: *mathesis universalis*.	Philosophy is fragmented: science and metaphysics; epistemology and science.
Language	'Transparent'	'Discourse' as a sequence of verbal signs was that which was studied. It is still 'transparent', though it has to be constructed. There was a best language for knowledge: Latin. Grammar became necessary.	Lost its transparency. Language has a historical nature and it is the means to express a subject. Language' became object of knowledge (*connaissance*): philology and linguistics.
Nature/human nature	Man is part of nature	Nature and human nature were in the same plan.	Nature and human nature are not in the same level. There is something 'external' to man; there is something unconscious that has to be thought. Unthought: something that has not or cannot be thought.
Perception of things	-	Continuity	Discontinuity; if there is continuity, it should be inside things.

Finitude	-	-	It is only in the modern episteme that 'Man' found out his limitations.

The epistemic context of the 'mercantilist' thought of the 17th century and of the 'physiocracy' was, according to Foucault, 'the age of representation' marked by comparison and an analysis of the object of study through the identification of similarities and contrasts - the relations between the same and the other - with the aim of establishing its 'order'.

Foucault not only did epistemology, but also a history of epistemology and ontology. He was relating epistemology to ontology in order to identify different systems of relations between language (words) and perceptions of reality (things). That is, he wanted to unveil the unconscious conceptions of being that were underlying epistemological systems. As explained by Major-Poetzl (1983, 161), the period of history of knowledge analysed by Foucault was characterized by three distinct ontological conceptions of being. In sequence, I will be stressing the connection Foucault sees between the ontological assumptions and the epistemological procedures in *OT*.

First, until the end of the 16th century (the pre-classical episteme), being was assumed, since everything was created by a superior entity that had left signs in the form of resemblances, which were God's signature. Signs were conceived as being in things and man could find them out through the interpretation of resemblances and analogies between/among things. Language was not a problem, because it was one more thing that was part of the world. Words mirrored things, so Foucault called the chapter about that episteme 'the prose of the world'. And as God is unique, he and his things cannot be compared. So knowing was not to compare or to analyse, but to 'interpret' signs already existent.

Second, from the beginnings of the 17th century to the end of the 18th century, the *cogito* declared being as a fact, relating it to a subject (I) and to consciousness (I think). So signs were not 'anterior' to knowledge anymore. Man as a subject (*cogito*: I) and conscious knower (*cogito*: I am) built the signs for knowing, that is, a 'well-constructed' language, insofar as representation was possible through language. In the classical episteme, *mathesis universalis*, as a general science of order, played a founding role for knowledge, not only for mathematics, but also for the empirical domains of

analysis of wealth, natural history, and grammar. It was not the method (mathematicization or mechanization of nature) that these empiricities borrowed from *mathesis*, but the general possibility of establishing an ordered table of identities and differences between representations (*OT*, 243).

Because 'order' was the 'mode of being' of things (*OT*, 219), knowledge followed a 'general science of order', which resulted from a project of a *mathesis universalis*[iv]. It is possible to say that the conception of space was privileged in the construction of knowledge. To know was to organise things in a kind of table of identities and differences as they were in a plan. For example, in natural history, knowing consisted of describing living beings according to their structure and character, classifying them in kingdoms, species, families, and so on, in accordance with their visible characteristics. At that moment, there was no concern with the internal constitution of living beings, their organs and functions. Knowledge was to analyse, to order, and to 'name' things.

Despite the unity of knowledge projected in a *mathesis universalis*, there were two basic ways to pursue knowledge: *mathesis* or *taxonomia*. *Mathesis* was the science of calculable order; in other words, *mathesis* was applied when dealing with 'simple natures', aspects of reality susceptible to a quantitative, mathematical treatment. In the case of 'complex natures', that is, the empirical domains of knowledge, a *taxonomia* was pursued. And, unlike *mathesis*, *taxonomia* did not have a pre-established method, and so it had to create a system of signs (*OT*, 72) in order to apply it. 'What algebra is to mathesis, signs, and words in particular, are to *taxonomia*: a constitution and evident manifestation of the order of things' (*OT*, 203). The empirical domains of knowledge of 'general grammar', 'natural history' and 'analysis of wealth' (how Foucault denominated the economic analysis of the period) pursued a *taxonomia* of their objects[v]. Thus, the economic analysis was a taxonomia and Foucault argues that 'mercantilism', chronologically delimited by Scipion de Grammont and Nicolas Barbon (1637- ?1698), provided the necessary system of signs. In it, wealth could be analysed into elements that permitted relations of equality or inequality and signify itself by means of precious metals. At the same time, the idea was that all kinds of wealth in the world were related one to another in so far as they were part of a system of exchange. In this system of signs 'there is no autonomous act of signification, but a simple and endless possibility of exchange' (*OT*, 179-80). Money, the sign of wealth, just had value in exchange. Therefore, economic thought happened inside a space of 'circular and surface causality' in which everything is composed of reciprocal relations between what was representing

(money) and what was represented (commodities). That is, there were explanations of how money could flow into a country or out of it, how prices rose or fell, how production grew, stagnated, or diminished. But all these 'movements' obeyed a kind of tabulated process, in which all values were able to represent one another. More precisely, prices increased when the representing elements (money) increased faster than the elements represented (commodities), production diminished when the instruments of representation (money) diminished in relation to the things to be represented (commodities), and so on.

'Wealth' was something that should be analysed and ordered in discourse. It was 'the domain of needs' and Foucault declared that William Petty (1623-1687) and David Ricardo (1772-1823) marked its chronological frontiers (*OT*, 57). That is, Petty began the classical episteme and David Ricardo started the modern age in economic thought.

Economic thought was focused on theories of value, money and prices. It started with the same problem of economic thinking during the previous episteme: how to understand money and its relation to prices in exchange. In the previous age, 'the age of resemblance' (until the end of the 16th century), money was made of precious metals and they were wealth and a mark of it. The metals were useful to coinage because they themselves had a price. Money had value in its own right and, because of this, it was able to function as a sign in exchanges. Money was a sign because it has value by itself and by its resemblance with what it put value. Money was a sign signifying because of its resemblance to that which it signified. According to Foucault, this was the case until Davanzatti (1529-1606), who was the last figure of the 'age of resemblance'. However, in the classical age, the value of money will not be intrinsic to it anymore. Its value will be just in its function as a sign, because it 'represents' the value of other things. For example, to the usual criticism to 'mercantilism' for equating money with wealth is unfair, because it has been attributing to 'mercantilism' something that it really could not understand. For the 'mercantilism' of the 17th century onwards, there was not the dilemma between 'money as a commodity or as sign'. Money started being seen as a pledge and was that which permitted wealth to be represented. If such a sign did not exist, wealth 'would remain immobile, useless, and as it were silent' (*OT*, 177). Gold and silver, as universal signs, become scarce and unequally distributed commodities. 'Money cannot signify wealth without itself being wealth. But it becomes wealth because it is a sign' (*idem*).

In the classical age, wealth was not anymore the preciousness of metals, but it was constituted of everything that was object of need, utility, pleasure or rarity. Money became just a sign, a representation without own value. Money has value just as the representation of the wealth in exchange and circulation. Wealth increases because goods can circulate through money and then multiply.

Foucault characterises the theory of money and trade as being a horizontal investigation of the process of exchange, i.e., it investigates the relations between/among things or kinds of wealth. Money is conceived as a pledge. 'Money is a material memory, a self-duplicating representation, a deferred exchange' (*OT*, 181). Because money is a deferred exchange, it has to be a pledge. Because money was seen as a pledge, the ideas of money-as-sign and money-as-commodity both emerged. The difference between them was in that which they considered to be a pledge: money-as-sign (Law and partisans) - money should be guaranteed by some merchandise exterior to monetary pledge (for example, land) or by the prince; money-as-commodity - money would be guaranteed as if it was coined with precious metals.

Although the quantity theory of money had already emerged in the 16th century, it had different meanings. For Davanzatti and Bodin (16th century), there was an intrinsic devaluation of money because of the inflow of metals from America, causing an abundance of them in the Europe. However, at the end of the 17th century, the quantity of money was thought of (by Locke, for example) as a proportion of the whole trade. Money began to be thought of as a sign, which was representative of wealth (*OT*, 183).

Moreover, according to Foucault, what articulated wealth was a system of exchange, that is, kinds of wealth were related one to another insofar as they all were part of a system of exchange. In this sense, value just existed within the process of exchange. There were basically two strands of thinking about value. Both were in the same 'theoretical segment' according to Foucault. The difference between them was in the way they looked at exchange. These strands were: the 'utilitarians' with their 'psychological theory' (Condillac, Galiani, and Graslin); and the Physiocrats. The former analysed value as anterior to the exchange and as a primary condition without which exchange could not take place. The latter analysed value in the act of exchange itself. For Physiocrats, exchange must exist in order for value and wealth to become possible. Quesnay and his disciples analysed wealth on the basis of what is given in exchange. They began their analyses with the thing itself which was designated in

value, but which existed prior to the system of wealth (*OT*, 195). Value and wealth only exist if exchange is possible. And exchange creates value. The psychological school and the Physiocrats employed the same mode of analysis. The difference was the point of origin and the direction each one chose 'to traverse a network of necessity that remains identical in both' (*OT*, 191).

Circulation became one of the fundamental categories of analysis. For Hobbes, for example, the circulation of money happened with duties and taxes; the state could redistribute it among private persons in the form of pensions, salaries, or remuneration for provisions bought by the state. It would stimulate the exchange of wealth, manufactures and agriculture. Just because of the space opened up by the relations between money and signs, wealth and representation, that it was possible to employ the metaphor of the circulation of the blood that had been recently developed.

For Foucault, there was a kind of circularity in economic thought, insofar as 'everything happens in terms of the reciprocal relations between what was representing and what was represented' (*OT*, 255), as I have already mentioned here. 'Value' was understood in terms of a system of exchange. The understanding of this statement becomes easier if we refer here to the modern episteme. In Foucault's view, the main difference in the modern age is that 'value' will be seen as a result of the productive power of labour. Ricardo was the first economist to present this conception. With him, labour started being the only source of ‘value’. Therefore, there was no need for relating one value to another one in exchange. In this sense, 'value' was not to be a sign in a network of representations, as it was the case during the classical age.

4. Final remarks

This paper argues that the case of paradigms *versus* episteme can be very enlightening for a reconsideration of the historiography of economic thought. Although the level of investigation is so diametrically different between Kuhn and Foucault’s system, their main notions are indeed complementary. While ‘paradigm’ refers to a configuration on the surface of thought, the investigation of the episteme provides elements to understand the interface between ontological and epistemological conceptions that define the way of thinking. This is possible because of the group of relations that was the focus of Foucault’s archaeology in *OT*: language-representation, time-space, same-other, interpretation-analogy-analysis, and perceptions of mode of beings and order-modes of

savoir, though not exclusively. Beyond an internal or external history, Foucault believed in the possibility of discerning the thought of ages through this set of relations, which provides elements to work on the interplay between these two kinds of approach.

Foucault explored in his archaeology the relations between ontological assumptions and epistemological beliefs (something he did very well, as observed by Rorty 1986, 43) that determined the ways of thinking in the history of economic thought since the Renaissance, which provides us with the elements to understand how and maybe why some methodological, rhetorical and linguistic devices have been preferred over others. Our discussion here, so far, leads us to establish that he showed a great erudition also regarding the history of economics and that his account, though presenting a distinctive perspective, can also be found in traditional writings, such as Schumpeter (1954) and Blaug (1997). Whilst 'mercantilists' from the end of the 17th century onwards and 'physiocrats' were producing different theories following different paradigms, they were thinking according to the same structure given by the same perception of basic signs (about what were wealth, exchange, money, and trade), and following the same conception of language derived from their 'age of representation'.

Until the end of the 16th century, a supernatural order established the thought about money and prices. According to this order, knowledge was to make analogies according to resemblances, the ability of money to measure price and to be the unit of exchange rested upon its resemblance to wealth. In those days money was made of precious metals because these were wealth and, therefore, a mark of it. For this reason, money became a sign that signified wealth due to its resemblance to that which it signified.

From the beginnings of the 17th century to the end of the 18th century, the *cogito* questioned the supernatural character of things and the act of knowing became to search for a natural order. Man, as a subject (*cogito* – I) and conscious knower (*cogito* – I am), built the signs (symbols) for knowing. The mercantilism of this period and physiocracy took over space, rather than over time, as the privileged agent for knowledge in a project of a science of order that allowed analysis of the elements of wealth according to equalities and differences. But, the most fundamental element in that configuration of thoughts was 'representation'. All the explanations concerning economic activity obeyed a kind of table (of order) in which all the 'movements' happened in relation to the role of money as a sign (or symbol). That is, everything happened in terms of the reciprocal

relations between what was representing (money) and what was being represented. Money became a pledge.

At the end of the 18th century, representation became an issue. Language did not allow the representation of thoughts anymore. Man became an object for knowledge, including in economics with the advent of 'labour' as the agent of production and wealth. When man became an object and subject of knowledge, the unthought emerged. Man was from now on to become always related to an unconscious and collective phenomenon, which has a historical character in the sense of 'an organic structure' and a temporal constitution. Thoughts and languages are now merged together. The human sciences emerged to think this unthought, but they are defective because there will be always this unthought, they will never find the ultimate origin and they will always oscillate around the transcendental-empirical. Smith was on the border of such a change from the age of representation to the age of history. His writings showed the shifts in the conditions of thought that led to the emergence of political economy. The object of knowledge in the economic thought transformed from exchange to the production of wealth. Man is now apparent in Smith's economic thought through the notion of labour. But labour is taken by Smith as a measure of value. Only with Ricardo labour started being conceived as creating value. That is why, for Foucault, Ricardo was the first figure of the modern way of thinking in economics. With Ricardo, production became more important than circulation, so it was in his work that the network of representations of the previous epistemic context was definitely broken. In this sense, the discontinuity in economic thoughts pointed out by Foucault seems to work very well in economics. As demonstrated here, even the common criticism, that his claim undermines the idea of influence and predecessors, does not apply to economics insofar as the economic thinkers are considered within determined epistemic contexts.

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[ii] Keith Tribe (1978), included in Amariglio's list, is usually taken as the most evident influence of Foucault's archaeology of knowledge on the writing of the history of economic thought. However, a more careful analysis of his book shows us that, as Tribe himself declared, his major influence was Gaston Bachelard (*idem*, 2). Tribe only mentioned Foucault three times in his book: to declare that he is using the term 'discourse' in a different sense from Foucault's archaeology, and briefly in two footnotes.

[iii] However, we will see that Foucault argued that what was established was not really an identity, but an "articulation' that took money as the instrument of representation and analysis of wealth, and made wealth into the 'content represented by money' (*OT*, 175).

[iv]Here Foucault refers to Descartes's dream of founding a universal science with the help of mathematics. *Mathesis universalis* was Descartes's designation to the science that would result from the application of a unified mathematical method. He enunciated this idea already in rule four of the *Regulae*: '…there must be a general science which explains all the points that can be raised concerning order and measure irrespective of the subject-matter, and that this science should be termed *mathesis universalis*…' (Descartes 1628, 19). The basic proposal was that knowledge should follow an itinerary/schedule from the ideas to the reality of things, being the first step to find just a unique certainty, a 'clear' and 'distinct' idea ('innate'), from which it would be possible to derive, by deduction, all knowledge. In his own philosophical project, this idea - axiom - was the *Cogito*. Therefore, the procedure should mirror itself on the sciences of mathematics. Descartes declared in the *Discourse on Method*: 'Those long chains composed of very simple and easy reasonings, which geometers customarily use to arrive at their most difficult demonstrations, had given me occasion to suppose that all the things which can fall under human knowledge are interconnected in the same way' (Descartes 1637, 120).

[v]Therefore, although following a taxonomia, these 'empirical analyses are not in opposition to the project of a universal mathesis, in the sense that scepticism is to rationalism' (*OT*, 73).

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