

AFC

ASSOCIATION FRANÇAISE
DE CLIMÉTRIE

WORKING PAPERS

Nr. 7, 2023

Hidden order, concrete disorders and
political arithmetic in Boisguilbert
The non-harmonious equilibrium of private
interests against the good order

Jean-Daniel Boyer

Hidden order, concrete disorders and political arithmetic in Boisguilbert
The non-harmonious equilibrium of private interests against the good order

Jean Daniel Boyer

LinCS, BETA, Université de Strasbourg
boyer@unistra.fr

Abstract:

Seeking to clarify Boisguilbert's conception of economics and of private interests, we examine his possible links with British political arithmetic and set out the influence this may have had on his thought. Then we explain how Boisguilbert estimates the wealth of the kingdom of France and the income of the king, and reconstruct the data he employs. We also show that Boisguilbert's analysis of prices and public revenues is grounded on the distinction he makes between current and constant prices. Boisguilbert echoes Gramont's analysis (1620): he seeks to dissipate the 'monetary illusion' to which he saw his contemporaries as having fallen victim, and which disrupted the good order. On these grounds, we show that two approaches coexist in Boisguilbert's writings: 1. a conjectural and abstract conception of the history of society, inspired by the Scriptures; and 2. a more concrete study of the recent history of the French kingdom, although based on questionable sources. We reconstruct Boisguilbert's conception of the good economic order following the principles of his conjectural historical analysis. We then demonstrate that Boisguilbert is an author who defends the importance of the good order of nature, which he considers as having been destroyed in France in the second half of the seventeenth century by the tax system, hoarding, the failure of circulation, and the low and disproportionate price of grain. We conclude that Boisguilbert is a very moderate supporter of the pursuit of private interests, seeing them as tending to disrupt the good order. He believes essentially in a natural pre-existing good order to which men have to bend, or else risk economic crisis.

Keywords:

Boisguilbert, circulation, crisis, interest, political arithmetic, order, proportion

JEL Codes:

B11, E02, E21, E31.

1. Introduction: Boisguilbert and the non-harmonious equilibrium of private interests in France under the reign of Louis XIV

Pierre le Pesant de Boisguilbert (1646–1714) is often considered to be one of the founders of economics (see, for example, Aspromourgos 1996: 2, Cadet 1870, Defalvard 1992, Faccarello 1986, 1999, Marx 1859: 52, Rosanvallon 1982: 37, Schumpeter 1954: 208–213, Waterman 2003: 121). His influence on economic thought is indeed undeniable (see, for example, Groenewegen 1994, 2001, Hecht 1967, Mac Donald 1954, 1955), particularly with regard to eighteenth-century economic thought. Although during this period it was not the custom to make named mention of other authors in one’s writings, Boisguilbert is explicitly quoted by Vauban (1707: 3) and Dutot (1738: I 388 note) and implicitly by Cantillon (1755a: 248, see also Cantillon 1755b: 305). He is mentioned by authors of the French science of commerce of the Gournay circle (for example in Herbert 1755: xii note, 135 note, Forbonnais 1767: I 286), and also had a significant influence on physiocratic thought. Mirabeau (1757: II 30) quotes him and considers him to be the forerunner of physiocracy, while Quesnay seems to have been directly inspired by him (1757b: 216–217, cf. Boisguilbert 1707b: 829–830 and Quesnay 1758).

Boisguilbert is also considered one of the first promoters of self-interest (Christensen 2003, Faccarello 1986, 1999, Perrot 1984: 351, Waterman 2003). Gilbert Faccarello and Philippe Steiner (2008) even regard him as the initiator of what they call a “*philosophie économique*”, as having proposed a new and more abstract way of thinking about economic phenomena, based on three elements: “1. a conception of human action as self-interested, whether this is considered at the pragmatic level of daily activity oriented toward gain or at a purely intellectual level as a form of utilitarianism. [...]. 2. a sensationist theory of knowledge that takes account of the way in which individuals apprehend the world. [...]. 3. a relation set up with those who govern, or in the language of the time, with the legislator” (Faccarello and Steiner 2012: 326). To ground these considerations, scholars have emphasized the diversity of Boisguilbert’s sources of inspiration, including Jansenism (Faccarello 1986, 1999, Jungels 2021, Waterman 2003), Jansenism and Cartesian occasionalism (Perrot 1984), Epicurean and Stoic sources (Christensen 2003), or Christian theology, Augustinianism and Newtonianism (Waterman 2003).

It might nevertheless seem problematic to regard Boisguilbert as a promoter of self-interest, given his constant condemnation of greed and avarice, of private or indirect interests, of avidity (1707a: 975), of “the corruption of the heart blinded by greed” (1707a: 1006; see also 1695: 685, 686, 718, 1705b: 891, 1707a: 974, 985, 1005, 1707b: 831, 841), and of the search for pecuniary gain and money (1707a: 982), perceived as the essential motive of thieves and robbers, but also of the *traitants* and *financiers* (1707a: 980–983) who are on this occasion described as “entrepreneurs” (1707a: 985). According to Boisguilbert, “self-interest blinds people” (1707b: 831). Moreover, the exclusive consideration of personal pecuniary gain and private interest is, for him, responsible for the disorderly and ruinous state of France. This is particularly the case with regard to the financial system, but also with regard to the trade in grain: in the latter, as Boisguilbert remarks, “the first authors of all the disorder, [are] namely, those who pretend to have bought [grain] cheaply and to sell [it] dearly” (1707b: 833). The populace, convinced of these same principles, and wishing to buy grain cheaply, “differ in nothing from the beasts in their general reasoning, and do not extend their views beyond their personal and singular interest of the moment” (1707b: 840). According to Boisguilbert, the harmony of the kingdom has been disrupted both by indirect interests (1696: 582, 615, 625) and by direct interests: “such great disorders would have ceased a long time ago, if no one had

an interest in maintaining them” (1695: 599; see also 1695: 611). Moreover, private interest also stands in opposition to the reforms necessary for the kingdom (1705a: 793), which is why some parties—described as “demanders of delays” (*demandeurs en delay* 1705a: 741)—want to postpone them. Boisguilbert would therefore appear as a convinced critic of self-interest, although he does recognize that it can, under certain conditions, contribute to harmony (1705a: 748–749).

Consequently, if we refer to Halévy’s typology (1901: 18), Boisguilbert would not be an author who subscribes to the natural harmony of interests. He doesn’t assume that by pursuing their private interests, and especially their vices, individuals would unknowingly promote the public good. Indeed, self-interest threatens the good order and concord: thus, “by a frightful blindness, there is no trader, who does not work with all his power to disconcert this harmony” (1705a: 986), and for this reason “a police is needed to enforce concord and the laws of justice among so many men, who seek only to destroy it and to deceive and surprise each other from morning till night, and who continually aspire to procure opulence for themselves on the destruction of their neighbour”. It seems hazardous to consider Boisguilbert as “a true pioneer in his vision of a self-regulating economy” (Waterman 2003: 126), although it is true that, according to him, “it is up to nature alone to put this order in place and to maintain peace; any other authority spoils everything by wanting to interfere, however well-intentioned as it may be” (1707a: 992). A paradox in Boisguilbert’s thought is therefore perceptible: a certain *laissez-faire* is promoted, yet a state with special features is needed (Rosanvallon 1982). The conditions must therefore be met for a convergence of private interests towards the general interest. Men have to respect natural laws; they have to bend to the will of nature, i.e. the will of God; they must consider the interest of the whole, that is to say, the interests of the other members of society (on this theme, see Ege & Rivot 2018: 16–17)—but to do these things, they must first possess the requisite knowledge. They must know the overall functioning of the order. And this explains Boisguilbert’s own role, that of a prophet revealing the truth and the functioning of the natural order conceived as the will of God: “Nature is nothing but Providence” (1707b: 869).

Adopting the perspective that Boisguilbert seeks to reveal the order of Nature conceived as the good socio-political order, we propose to examine his writings through a new prism: that of political arithmetic. This choice is grounded on Boisguilbert’s use (or, even, abuse) of numbers and his ambition to provide objective evidence for his analysis. It will emerge that the aim of his political arithmetic is precisely to reveal the good order, and indirectly also the bad order of the reign of Louis XIV. We choose therefore a different perspective from the sensationist theory of knowledge proposed by Faccarello and Steiner (2008) and consider Boisguilbert as wanting to propose an analysis grounded on objective data. From this point of view we suppose that numbers possess a symbolic, empirical and theoretical meaning in Boisguilbert’s analysis. To underpin our analysis, we show in section 2 that Boisguilbert could have known some of the essays of the British tradition of political arithmetic, and was also inspired by an embryonic reflection on political arithmetic that already existed in France. On these grounds, we propose that two approaches coexist in Boisguilbert’s writings, these being the same as those developed by the “arithmetic” politicians: 1. a conjectural and abstract conception of the history of the societies inspired by the Scriptures; and 2. a more concrete study of the recent history of the kingdom (in the case of Boisguilbert, the French kingdom), even though in this case the sources referred to are questionable and not very diversified. Against the common reading of Boisguilbert’s work, we show in section 3 that he is indeed a thinker of order, specifically of a pre-established natural order established by God. The architecture of this order is based on mathematical proportions which we try to bring to light. In section 4, we set out Boisguilbert’s factual history of the tax system, the grain price and the wealth of France. Boisguilbert shows

that whereas the tax burden was now higher, the king's revenues had also declined during the second half of the seventeenth century. Grain prices were disproportionate, and too low. Because of the disproportionate taxes and prices, the wealth of France had been diminished by half. In section 5, we conclude that Boisguilbert desires a return to the pre-existing order of nature following God's will. To achieve this, the king and all his subjects must be made aware that only a self-interest enlightened by an awareness of the characteristics of the natural order of societies will contribute to the general interest. Louis XIV, and France as a whole, must submit to the will of God. Boisguilbert may therefore be understood as in favour of the pursuit of *enlightened* self-interest: he is essentially a thinker of a pre-existing order that is to frame and shape individual interests, and that otherwise a society is condemned to fall.

2. The influence of political arithmetic on Boisguilbert's writings

2.1. The diffusion of British political arithmetic at the end of the 17th century in France

According to scholars (for example, Damien 2003), political arithmetic would not really have taken root in France at least until Melon's second edition of the *Essai politique sur le commerce*, which dedicates an entire chapter to the topic (1736, ch. 24). Charles and Théré even consider that political arithmeticians "were hardly discussed and even less translated before the middle of the 18th century", and indeed that "it was only in the decade 1750 that there was a brief but intense interest in English political arithmeticians" (Charles and Théré 2021: 314). For them, Diderot's 1751 article in the *Encyclopédie*, Forbonnais's chapter in the *Négociant anglois* "De l'usage de l'arithmétique politique" (1753: cxii–cxl), but mainly Quesnay's articles in the *Encyclopédie* (1756, 1757) initiated the spread of political arithmetic in France. And this is confirmed by the partial translation of Petty's *Political Arithmetick* in the *Journal Oeconomique* of June 1757 (1757: 157–179). But while it may be true that the 1750s was a moment of real interest in political arithmetic in France, it does not follow that this moment had no precedent.

In the book devoted to political arithmetic in 18th-century France, at least two earlier cases are mentioned: Vauban (see, for example, Damien 2003: 20–22) and the abbé Castel de Saint-Pierre. Vauban's aim in his *Méthode générale et facile pour faire le dénombrement des Peuples* (1686) was to know the French kingdom better, to count its inhabitants and to evaluate its wealth in order to establish his Dixme royal (1707). Vauban also wrote his *Supputation curieuse sur l'accroissement des hommes avant et après le deluge* dated 1 March 1698, echoing Petty (see Virol 2001: 867–868), and Virol suggests a number of different connections between Petty and Vauban (2001: 857–858, 867–870). Writing a little later, the abbé Castel de Saint-Pierre is another case in point. Petty's influence on Castel de Saint-Pierre is evident (Hébert 2011: 225–226, Poulouin 2016, Reungoat 2018). Castel de Saint-Pierre explicitly quotes Petty (for example, 1723 §68, 1725a §9, 1725b §171, 1735 §1, §6), and briefly sets out his method (1723 §70–72).

Thus, British political arithmetic seems to have been known in France in the early 18th century and even at the end of the previous one. We can find a confirmation of this in Dubos's 1703 work *Les interets de l'Angleterre mal-entendus dans la guerre présente*, which makes several references to Petty (1703: 78, 170, 198), Davenant (1703: 5, 9, 36, 64 footnote, 79 footnote, 98 footnote, 121, 124, 256, 261, 264), or King (1703: 26). Inspired by the approach of political arithmetic, he criticizes taxation in a manner similar to Boisguilbert, as well as war, which harms trade. The book seems to have been quite successful: as early as 1704 a revised sixth edition was published (Dubos 1704). But even five years previously, a bilingual French

and English edition of Petty's *Five Essays in Political Arithmetick/Cinq essays sur l'Arithmétique Politique* had been published in London (Petty 1699). The polemic between William Petty and the French mathematician Adrien Auzout concerning the estimation of the populations of London and Paris also proves that Petty's ideas were known and debated in France before Petty's death in 1687 (for a presentation, see Reungoat 2004: 89, 130–132). In passing, we may note that Petty's *Two Essays in Political Arithmetick, concerning the People, Housing, Hospital, etc. of London and Paris* (1687) were first published in French in 1686 under the title *Deux essays d'arithmetique politique, touchant les villes et hospitaux de Londres et Paris*.

According to Reungoat (2017: 26), “the *Essays on Political Arithmetic*, published in England between 1683 and 1687, were reviewed in several French-language periodicals, and some of them were even published in French”. Moreover, according to Petty's *Dedication to the King* of his *Political Arithmetick* (1690), if “the Doctrins of this Essay [had not] offended France they [would have] long since seen the light, and [would have] found Followers, as well as improvements before this time, to the advantage perhaps of Mankind”. We can conclude that some awareness of political arithmetic was already spread in France before the end of the 17th century.

2.2. The possible influence of British political arithmetic on Boisguilbert

We have no explicit textual evidence that Boisguilbert's thinking was shaped by British political arithmetic. He does not quote any British political arithmeticians. Yet commentators have nevertheless underlined certain proximities between Boisguilbert's thought and the representatives of British political arithmetic (see, for example, Magnot-Oglivy 2020: 42–46, Perrot 1984: 400, Simonin 1996, Reungoat 2018) suggesting that Boisguilbert knew Petty, Davenant and King. Hecht also reminds us that “after the memoir entitled *Factum de la France*, comes the *Réflexions sur l'état de la France* where, following Petty's example for England, Boisguilbert extols the riches and potential strengths of the kingdom” (Hecht 1966a II: 741. The manuscript is kept in the archives of the French Ministry of Foreign Affairs under the reference FRMAE 53MD/1138. – (AFFAIRES INTÉRIEURES, 398.) – 1705). Hecht (1966b: 160–161), reviewing possible points of contact between Boisguilbert and British political arithmetic, notes that Soulligné (1697) had partially translated Boisguilbert's *Détail de la France*, and that this may have inspired Davenant; but she neglects to mention that Soulligné in his translation also refers to Petty (1697: 13, 68, 184), which would suggest that he saw some affiliation between the two authors. According to Hecht, it is probable that in his project to calculate the national wealth of France, Boisguilbert was inspired by Petty and Davenant (1966b: 161).

Even supposing this to be true, with the exception of Petty's writings that were available in France, it remains unknown whether Boisguilbert had read the British authors or how he could have had access to the texts or ideas of political arithmetic. As Taylor recalls (2005: ch. 6), however, scientific ideas could be disseminated through circles of conversation: i.e. not through published texts, but through learned or literary groups and face-to-face discussions. This was the case in England, especially concerning relations between Gregory King and Charles Davenant, and explains the transmission of ideas from the former to the latter.

Some commentators suppose that Boisguilbert was influenced by Gregory King or Charles Davenant, especially on the question of grain (Hecht 1966b: 160–161, Simonin 1996). We know that Boisguilbert was not closely concerned with the issue of grain volatility until the beginning of the 17th century. In the *Détail de la France* (1695) he does not really address the issue of the grain trade and the gain price; consideration of this issue comes only after 1704, which might suggest an influence of King or Davenant (1699).

Nevertheless, King's *Natural and Political Observations* was only published by Chalmers in 1802, while his working journal remained in manuscript form and was only partially transcribed in Evans's article (1967): hence neither writing was in circulation in the early eighteenth century and it is therefore highly unlikely that Boisguilbert was aware of the manuscripts. It seems to us that the only way he could have been aware of the content of King's writings is if he had direct or indirect connections with members of English learned societies, such as the Royal Society, to which King belonged (Taylor 2004: 50).

The influence of Davenant is more plausible. Davenant published his *Essay on the Probable Methods of Making a People Gainers in the Balance of Trade* in 1699, where he quotes King explicitly (for example 1699: 15, 20, 23, 24, 34, 41, 49, 52, 91, 96; and particularly on the question of grain, 1699: 70, 88). Yet, again, a direct influence cannot be considered entirely established: Boisguilbert does not use Davenant's figures, is not concerned with the question of the consequences of grain price volatility on the deterioration of the trade balance, and does not comment on the appropriateness of public granaries to deal with possible shortages. His only recommendation is that grain should be freely exported. So Boisguilbert's awareness of the high volatility of grain prices could just as well be the consequence of the food shortages that France experienced in 1693–1694 or 1699, which marked public opinion (Simonin 1996: 214). In fine, then, we have no direct proof, nor, in the case of King and Davenant, any textual proof, of the influence of British political arithmetic on Boisguilbert.

2.3. The influence of an embryonic economic analysis using arithmetic in France

It is more likely that Boisguilbert was influenced by another kind of use of arithmetic in politics that in fact was to be found in France; for some of Boisguilbert's discussions can be located in the ongoing controversy, initially between Jean de Malestroit (1566) and Jean Bodin (1568), which inspired Scipion de Gramont's *Denier royal*, published in 1620 (for a presentation of Gramont and the *Denier royal*, see Chantrel 2014). Gramont may be inscribed in a tradition which can be termed "scholarly libertinism" (*libertinisme érudit*) (for a general presentation, see Pintard 1943, Moreau 2005). The aim of this tradition is to clarify phenomena by appealing to empiricism, observation of facts and logical reasoning, so as to challenge common beliefs and popular errors. In his *Denier royal*, Gramont engages in a historical investigation that seeks to evaluate the evolution of the French kings' income by considering the effects of inflation. His political aim is to praise Louis XIII and Richelieu and to show that the tax burden, estimated in constant currency, had not increased: indeed, contrary to public perception, the real income of the king had stagnated. According to Michel Foucault, by considering the effect of inflation Gramont opened up a new scientific era in the history of economics: that of the age of representation, which distinguished real prices (and thus the value of things or wealth) from current prices expressed in monetary value (Foucault 1966: 180–192). This new awareness allows Gramont to call into question beliefs born of monetary illusions, whether they relate to the evolution of economic quantities or to the distribution of wealth, which inflation affects. Even if a tax reform should prove necessary, according to Gramont, the king could not be held responsible for the increase of the tax burden. Claims that the tax burden was increasing would be an error of appreciation based on monetary illusion (see Chantrel 2014: 48–53). The king, on the contrary, remained clement and benevolent with his people.

Gramont's positions find an echo in Boisguilbert's thought. Boisguilbert's aim in the *Detail de la France* is to show that

the loss [of wealth in France] is not the effect of an increase in the King's revenues over forty years, but rather because, having never seen so little increase in such a period of time, for about two hundred years, the revenues of the people, far from decreasing, as they have done, doubled in the same period, which was the cause of the increase of those of the King. (1695: 586)

There are also other proximities. Certain estimations are the same between the two authors. For example, like Gramont, Boisguilbert estimated the French population to be 15 million (1620b: 198, Boisguilbert 1695: 625, 1705a: 788, 1707b: 855, 1705b: 926). Like Gramont, wealth for Boisguilbert is distinct from money or from the monetary valuation of goods: "wealth is nothing other than the power to procure the convenient maintenance of life" (1705c: 698). The two authors also had similar views on money: for Gramont, "the necessity of gold and silver is not based on nature, but on the will of men" (Gramont 1620b: 105). It had, therefore, been introduced by men to facilitate exchange, and metallic money is essentially conceived as a pledge (1620b: 105). The forms of money can be varied, recalling some of the examples, such as shells, that Boisguilbert cites (Gramont 1620b: 109; Boisguilbert: 890, 976–977). Money is also conceived as a flow crossing the flow of goods of which it is the counterpart. And Gramont also criticizes Malestroit and Bodin for confusing nominal price increases with dearness, for they thus confuse the measurement of wealth with wealth as such (Chantrel 2014: 22)

Although he does not take up the Malestroit and Bodin controversy, the consideration of the effects of inflation would also be one of Boisguilbert's themes, as we shall see. Similarly, although his analysis remains more summary, Boisguilbert tries to estimate the evolution of prices in the same way as Gramont, based on the evolution of the wage of the labourer and the prices of goods (for a synoptic presentation of Gramont's approach, see Chantrel 2014: 32–36). The prices based on which Gramont seeks to estimate inflation are also similar: grain, wine, labourers' wages, but also capon – although Boisguilbert prefers partridge. Gramont is in favour of grain exports and does not blame them for the general dearth of food, nor for the shortages (1620b: 141–144). As with Boisguilbert, the general increase in prices is explained by the increase in the amount of money in circulation or by the influx of silver. And neither author considers money to be neutral, for it generates illusions and engenders transformations in the distribution of wealth. Unlike Gramont and Mallestroit, Boisguilbert does not embark on a study of the evolution of the value of metallic coins according to their content; nevertheless, he adopts the same perspective as Gramont by trying to evaluate inflation via the purchasing power of money and of wages expressed in commodities.

They also treat fiscal matters in a similar way. Like Gramont, Boisguilbert was interested in the French tax system, and both criticised *la taille* (a direct tax on personal wealth initially set to finance the royal army) (Gramont 1620b: 172, 198), the inequality that characterised it, and the impoverishment that it caused. However, Boisguilbert did not assume that peace had first to be established in order to abolish the *taille* (1620b: 201), and spoke out against "the claimants of delay" (*les demandeurs en delay*), the subtitle of the *Factum de France* (1705a). Gramont was also in favour of a proportional tax, and "assigned the king the responsibility of enumerating men and wealth [...]. The king must be able to proportion the tax burden between provinces and between people, the strong bearing the weak, in accordance with the principles of geometric or harmonic justice" (Chantrel 2014: 45; Gramont 1620b: 197). Gramont was critical not so much of the burden of the *tailles* as its unequal distribution (1620b: 197); he also called into question the behaviour of the officers charged with collecting the *tailles*, as well as the fact that they did so in the service of the richest. Both Boisguilbert and Gramont were in favour of universal and proportional taxation; but unlike Gramont, who sought to defend Louis XIII, Boisguilbert was much more critical of the monarchy of Louis XIV.

There is another French author who could have influenced Boisguilbert, and who is considered one of the founders of French political arithmetic: Vauban. While Boisguilbert does not quote from British political arithmetic or from Gramont, he does quote Vauban, and cites his project of a *Dixme royale* (1707), criticizing it on the grounds that the tithe is to be paid in money and not in kind (1705b: 945). Boisguilbert knew Vauban's work and knew his approach was inspired by political arithmetic. According to Meyssonier (1989: 36), Vauban and Boisguilbert even met in December 1694, thus just before the publication of the *Détail de la France* (1695).

To conclude, it seems more likely that, with the exception of Petty, Boisguilbert was influenced more by Gramont and Vauban than by British political arithmetic. According to Faccarello (1996: 13), "perhaps Boisguilbert did read Petty, Child, Temple or Locke, but in this instance the connections with exclusively French concerns and intellectual traditions are too great not to merit exclusive attention". Nevertheless, as we now seek to show, there is indirect evidence that Boisguilbert seemed to know some of the British authors of political arithmetic, and their influences are also illuminating.

2.4. Indirect evidence of the influence of Petty's political arithmetic: numbers, ratios, censuses and tax reform

A first indication of the possible influence of Petty's political arithmetic is the use (or abuse) of numbers in Boisguilbert's writings. As Magnot-Oglivy (2020: 42–45) remarks, the employment of numbers is significant, even if the numbers themselves might seem incredible and highly over-estimated. Although they are certainly used as a rhetorical device to sway the reader and convince that the analysis presented is objective, we assume they are partially grounded in fact; moreover, they also have a symbolic dimension that echoes Petty's view of the functioning of the world.

Inspired by Scripture, and more precisely by the Book of Wisdom (11:20), Petty (1690: 21) thought that the universe had been conceived and built by a God who was a mathematician and architect. God, powerful and just, would have "set all things in right order by proportion: by measure, by number, and by weight". The aim of political arithmetic was thus to reveal the numbers that preside over the functioning and architecture of the Universe, and over human societies as well. To achieve this aim would be to discover and bear witness to the spirit and the will of God (Taylor 2005: 41. See also Reungoat 2004: 45–49). Political arithmetic could therefore enable humanity to possess knowledge of the good social order and of the political regulations necessary to achieve it, and to forecast the dynamics of human societies. In this respect, political arithmetic uses numbers rather in the manner of merchants; it uses a kind of shop arithmetic (Taylor 2005: ch. 4, 6).

From Petty's perspective, as well as from Davenant's or King's (Taylor 2005: 55–60), two kinds of numbers are to be used: (1) numbers and raw data, and (2) ratios, i.e. fractions and proportions, where such ratios are used to assess the importance as well as to determine the dynamics of a phenomenon. Boisguilbert shares this perspective: in his work we find both estimations of aggregates as well as proportions between them. But these numbers also have a normative dimension, and this is indeed the meaning of the "prices of proportion": they represent a ratio, but they also are the good prices, the prices of the good proportions of the good social order, or of nature itself. They are, at root, the good proportions established by God. In addition to the ratios of proportion, which represent the good social order from a static point of view, there are also rates of change of various quantities, that is to say ratios of evolution, which describe the dynamics of the society. Boisguilbert's interest in such ratios explains his tendency to present himself as a prophet who is revealing both the good proportions and the

iniquities of the French monarchic system and declaring the necessary reforms inspired by God's will.

A second indication is that, like Petty (Reungoat 2004: 65–82, 2nd Part), Boisguilbert bases his approach on censuses, but his primary objective is not to determine population size or the rate of deaths and births. Rather, he is concerned by another theme that is also tackled by Petty (especially 1665): the study of the national wealth in order to establish the best tax system. It is for this reason that Boisguilbert advocates the establishment of an income census for tax purposes (1695: 629–632), and his project to reform the French tax system is not far from Petty's own propositions. Boisguilbert echoes some of Petty's criticism of a bad tax system as set out in his *Treatise of Taxes* (1662): disproportion and inequality (1662: 14–19), vexation, a too-high tax burden, or high taxation on commodities (1662: 16–17). Petty also underlines that a good system of taxation must be grounded on a knowledge of wealth and the population (1662: 16), and must guarantee a willingness to pay tax. In the *Treatise of Taxes* (1662) and in the *Verbum Sapienti* (1665: ch. 5), Petty lays emphasis on the velocity of the circulation of money and its role in the production of wealth, and by extension on the fiscal revenue; this is a theme we will also find in Boisguilbert's writings.

The necessity of possessing knowledge of the wealth of a nation in order to set up a good taxation system also leads Boisguilbert to propose a method of analysis that takes up the propositions of political arithmetic, and Petty's method in particular.

2.5. Indirect evidence of the influence of Petty's political arithmetic: Boisguilbert's method

The choice of the title of Boisguilbert's first book does not seem innocent. While it certainly appears to be a play on words (in French, *détail* sounds the same as *des tailles* – on the taxes on personal wealth – one of the main topics of the book and, for Boisguilbert, the main cause of France's ruin), *détail* may suggest more particularly the approach of political arithmetic. According to the *Dictionary of the French Academy*, "*détail*" refers to commercial practices and to sales in small quantities, while it has a secondary meaning referring to peculiarities and precisions (Académie française 1694 II: 526 2nd col), the same meanings being found in Furtière's *Dictionary. Détail*, in this second sense, is also used in ethical matters, to figuratively denote the particulars and small circumstances of a case. But we can also find a third signification: for *détail* suggests the use of mathematics, "the exact enumeration of the parts" in reference to the details of an estimate, and also means a complete enumeration of the smallest elements of a set. Furtière's *Dictionary* quotes Pascal, who linked the word *détail* with geometric principles (Furtière 1690 I: 673 2nd col.–674 1st col.), and all three of these meanings are retained in the *Dictionnaire de Trévoux* (1704 II: np 3rd col.). To conclude, Boisguilbert's use of the word *détail* suggests that he wants to propose a study grounded on particular cases, which goes from the particular to the general, and which makes extensive use of mathematics – or more precisely of shop arithmetic, to use the terminology employed by Taylor (2005: ch. 4, 6). This echoes the methodology of political arithmetic, particularly that of Petty.

Boisguilbert's methodology also suggests the same centrality of empiricism within political arithmetic. He starts from a local empirical observation (the detail), which is supposed to be representative of the kingdom, and then generalizes it to infer the state of the kingdom overall. The details are thus conceived as a proportion of the whole. To know the *Détail* of France, it is necessary to generalize the detail to the whole nation. "By a simple sample one can judge the rest" (*par un simple échantillon on peut juger du reste* – 1707d : 823). As Boisguilbert explains,

As we count the income of a house, a farm and a village, as much in its decreases as its increases, it is easy, for those who are experienced in these matters, to calculate the income of an entire kingdom. We have done this for England, which is not worth the quarter of France, all things considered, working with or rather being governed by the same maxims, and we claim that it goes to nearly seven hundred million per annum. (1705b: 885).

This quotation is suggestive in various different ways. (1) The mention of the calculation of the income and wealth of England may be an implicit reference to the British political arithmeticians. The target could be Petty (although in Petty England's annual production is estimated at 15 million (1664: Ch. 1. 13), the difference may be explained by the exchange rate). Hecht (1966b: 160), meanwhile, suggests that Boisguilbert could be referring to Davenant (1695), who estimated the British income at 43 million.¹ But according to Hecht (1966b: 160–161), who relies on Boisguilbert's correspondence (22 July 1704 in Hecht 1966a I: 324), it is more likely that he is here taking up Dubos's estimation, even if the latter puts the national revenue at 600 million (Dubos 1703).² (2) We note that according to Boisguilbert, England is better governed and proportionally richer than France. (3) England's higher annual income is estimated to be 700 million. (4) All other things being equal, France, if well-governed, should be four times richer and more powerful than England, with an income of 2,800 million per year (nearly 3,000 million, the number used by Boisguilbert). (5) Boisguilbert echoes the rivalry between England and France that Petty emphasized (1690). (6) In any case, the initial estimate of France's annual production is based on that of England, using a ratio of 4 if France were well-governed, and a ratio of only 2 for the badly governed France of 1705.

But the main way to estimate France's wealth is different. In Boisguilbert's analysis, the crucial *détail* is to be found in a location between Paris and Rouen, in the *Election* (county) of Mantes (specifically, from Mantes to the Pont-de-l'Arche). In this Election, the decrease in the income from the vineyards had caused a loss of 2.4 million livres in the owners' product since 1660. This estimate is based on an "account made, by a just and certain calculation, verified on the spot; and as the incomes in funds, although certainly in advance of those of industry, are not even the fourth part of it, the latter far exceeding them, this makes over ten million in pure destruction on one election alone; and far from the King having gained anything from his fine household, he has lost more than five hundred thousand livres on the *tailles*" (1705b: 885). From this observation, Boisguilbert generalises to the case of France overall, to the national income, and by extension to the King's revenues, because "as this fate has befallen the election of Mantes by a cause general to the whole kingdom, the same consequences can be drawn from it, and we can certainly suppose the same loss for the whole of France" (1705b: 886). Then Boisguilbert concludes to "a decrease of fifteen hundred million in revenue which has occurred in the kingdom since 1660" (1705b: 886, confirmed in 1705b: 998). This loss being equivalent to half of the French potential annual production, an estimate of 3,000 million for the latter seems apt, and this confirms Boisguilbert previous estimate.

The approach is even more explicit in the *Treatise on the merit and Enlightenments of the so-called clever and great financiers (Traité du mérite et des Lumières de ceux que l'on appelle gens habiles dans la finance ou grands financiers)*:

¹ We have not found this estimation in Davenant's book. According to Hecht, Boisguilbert would therefore use an exchange rate of 1 to 16 between the pound sterling and the pound tournois. But Davenant (1695: 22) seems to use an exchange ratio of 1 to 12.5.

² We have not found this estimation in Dubos's book.

By a simple sample we can judge of the rest: in the Election of Mantes, in 1660, there were sixteen thousand acres of vines, each worth at least two hundred livres of rent; at least half of them have been torn out, thus sixteen hundred thousand livres of loss of income in this region alone, and the remaining eight thousand, which are abandoned even every day, are reduced by half, which forms another eight hundred thousand livres of loss, the whole amounting to two million four hundred thousand livres on a single commodity in a simple election. Now, as property in funds is not the sixth part of the faculties in general, the income from industry surpassing them by far, and as the vines do not even form nearly all the product of the lands, and that the whole has suffered the same fate, it is more than two [there may be a typographical error here: normally according the calculus it would be 10: *dix* and not *deux*] million per annum of diminution on a single county, which does not compose the hundredth part of the kingdom.

And as the evil has come about through a general and not a singular cause, one can with certainty draw the same reasoning with regard to the rest of France. (1707d: 823)

Boisguilbert also uses this kind of approach to estimate the evolution of the revenues of the kingdom from an “infinite number of large estates belonging to people of the highest consideration” (1705b: 894).

To conclude, Boisguilbert’s method is similar to Petty’s, yet his empiricism is clearly rather awkward. Boisguilbert doesn’t specify how he arrived at his estimation of the levels of the rents in the Election of Mantes; nor is he precise about how he deduced the ratios between his local data and the kingdom’s situation overall; and, finally, his method pretends to be empiricist whereas it is essentially grounded on deductions and imprecise estimations. Boisguilbert does not seem to have made any real empirical study: he only takes one dimension, and presupposes that there are fixed ratios between wealth, revenues and taxes. But as early as 1695 he allows the reader to suppose that he has made precise surveys.

The loss of half of France’s commodities in general being constant, for the reasons we have just discussed, although the reduction of this loss or estimate to a certain price is an indifferent thing in itself, nevertheless, we have been kind enough to make a supputation of it, by very long and very exact research. (1695: 585).

The supputations themselves certainly exist, but the “very long and very exact research” on which they may have been founded is not set out – if it took place at all.

Nevertheless, we can estimate the approximate ratios between wealth, revenues and taxes as they are set out in Boisguilbert’s writings, and these are illustrative of his method.

From particular to general: ratios and deductions

| Ratio between: | Détail | General | Amount of the ratio between the détail and the general | Deduction |
|---|---|--|--|---|
| The diminution of the revenue of: (1705b: 885) | Mantes's vineyard 2,400,000 | Mantes's Election Over 10,000,000 | x more than 4 | loss of Mantes's revenue 12,500,000 (10,000,000 + 2,400,000) |
| Amount of the: (1705b: 885) | Revenue of the lands 1 | Revenue of industry More than 4 | x more than 4 | so, the loss of Mantes's industry revenue should represent 10,000,000 |
| Amount of the: (1707d: 823) | Revenue of the landowners (<i>Biens en fonds</i>) | General revenue (<i>Facultés en general</i>) | x 5 "less than six" | 5, 2 |
| Amount of the: (1705b: 885) | Loss of the <i>tailles</i> in Mantes 500,000 | Loss in the revenue of Mantes's Election 10,000,000 Or 12,500,000 | x 20 or 25 | So, the <i>tailles</i> should represent 4 or 5% of the general revenue in Mantes (and in general) |
| Amount of the: (1705b: 885) | Loss of the <i>tailles</i> 500,000 in Mantes | Revenue of the lands 2.4 million | around x 5 | So, the <i>tailles</i> should represent 20% of the revenue of the lands |
| Amount of the loss of the revenue of: (1705b: 886) | Mantes 10,000,000 | Kingdom 1,500,000,000 | x 150 "More than 100" | So the loss of the <i>tailles</i> in the kingdom should represent 75,000,000 |
| Amount of: (1695: I ch. 7, 588, 1705c: 723, 1705b: 885, 888, 891, 892, 895, 897, 920, 923, 928, 951, 1707f: 1019) | The revenues of the Crown 115,000,000 <i>By comparing 1695 and 1705 estimates, is this an indirect criticism of Louis XIV, of his war policy and of the increase of the tax burden?</i> | The revenues of the kingdom 1,500,000,000 (decrease of this amount equivalent to the half of the revenue, so it remains 1,500,000,000) | x 13 | So, the <i>tailles</i> should represent 65% (2/3) of the revenues of the Crown |
| Amount of: (1705b : 885) | The revenues of the Crown 150,000,000 | The revenues of the Church 300,000,000 | x 2 | |

By referring to the influence of Boisguilbert's political arithmetic, then, we can come to understand why he would have believed that the wealth of France had decreased by 1,500

million. The figure is obtained from the sample that is Mantes, representing less than 1% (2/3%) of the area of the kingdom. But while the numbers appear overestimated, they are nevertheless logically constructed and obtained from a method that claims to be scientific. We also see that the tax rate is relatively low: it affects less than 10% of wealth (1/13) and is therefore lower than the *Royal Tithe* proposed by Vauban. If the tax burden seems too high it is because the tax system itself is unjust, inefficient, parasitic and paralysing: it is borne only by the poorest classes of the population. It is also because the wealth of the Kingdom of France had diminished by half since 1660. Were the wealth restored, the tax burden would represent less than 5% (1/26). Finally, we can also perceive a criticism of the Catholic church. The Catholic church has twice the income of the king (1705b: 885), and would therefore be in receipt of two tenths of the wealth of the kingdom. The Church had thus taken over a substantial part of the king's properties, explaining the necessity for a reformed tax system (1695: 591).

Overall, Boisguilbert's approach is broadly similar to that of Petty or Vauban. He deduces general numbers and aggregates from the local data, the same method Petty uses to estimate England and Ireland's population and wealth (see, for example, Petty 1664, 1690, Reungoat 2004: ch. 5). Vauban's method is based on the square mile (*la lieue carrée*), whose local production, generalized to the kingdom, is intended to provide information on national production (Vauban 1707; on Vauban's approach, see also Le Roy Ladurie 1968: 1086–1087 note 2). The main difference is that Boisguilbert does not collect any local empirical data. He thus proposes a specious political arithmetic, based on imprecise and vague estimates, on crude deductions, and on the idea that pre-existing ratios govern the relationships between sectors, incomes, taxes and growth rates.

To conclude, we have no direct proof of the influence of political arithmetic on Boisguilbert's thought, but, by reviewing his method and noting certain textual proximities, we may surmise that it was partially inspired by both a British stream of political arithmetic and by a French stream of analysis – in the line of Gramont, as we will see. From this perspective, Boisguilbert could be considered as a representative of an early-18th-century stream of French political arithmetic. This thesis is reinforced by the content of Boisguilbert's writings, for he proposes a conjectural analysis of the architecture of societies in which numbers, proportions and symmetries are given pride of place. In a second moment, Boisguilbert also proposes data to confirm the conjectures he has made, and the method used in this case is grounded on a more factual history of the French monarchy of the Old Regime, and in particular on the reign of Louis XIV.

3. The conjectural analysis: Boisguilbert and the hidden good order of nature

In his writings, Boisguilbert describes the history of human society, from its origins to the – lugubrious – days of Louis XIV's France, by proposing a succession of vignettes representing the hidden good social order, which is also the order of nature and of Providence. Boisguilbert essentially describes three moments in the history of societies: the Fall followed by the sectorial division of the economy (3.1); the birth of social classes (comparable to a feudal moment) (3.2); and the advent of money, referring to the emergence of the commercial society (3.3). He also describes the natural course of economic development of societies, which would be characterised by a doubling of wealth production every thirty to forty years if certain conditions are met (3.4).

3. 1. The Fall and the origin of the sectorial division

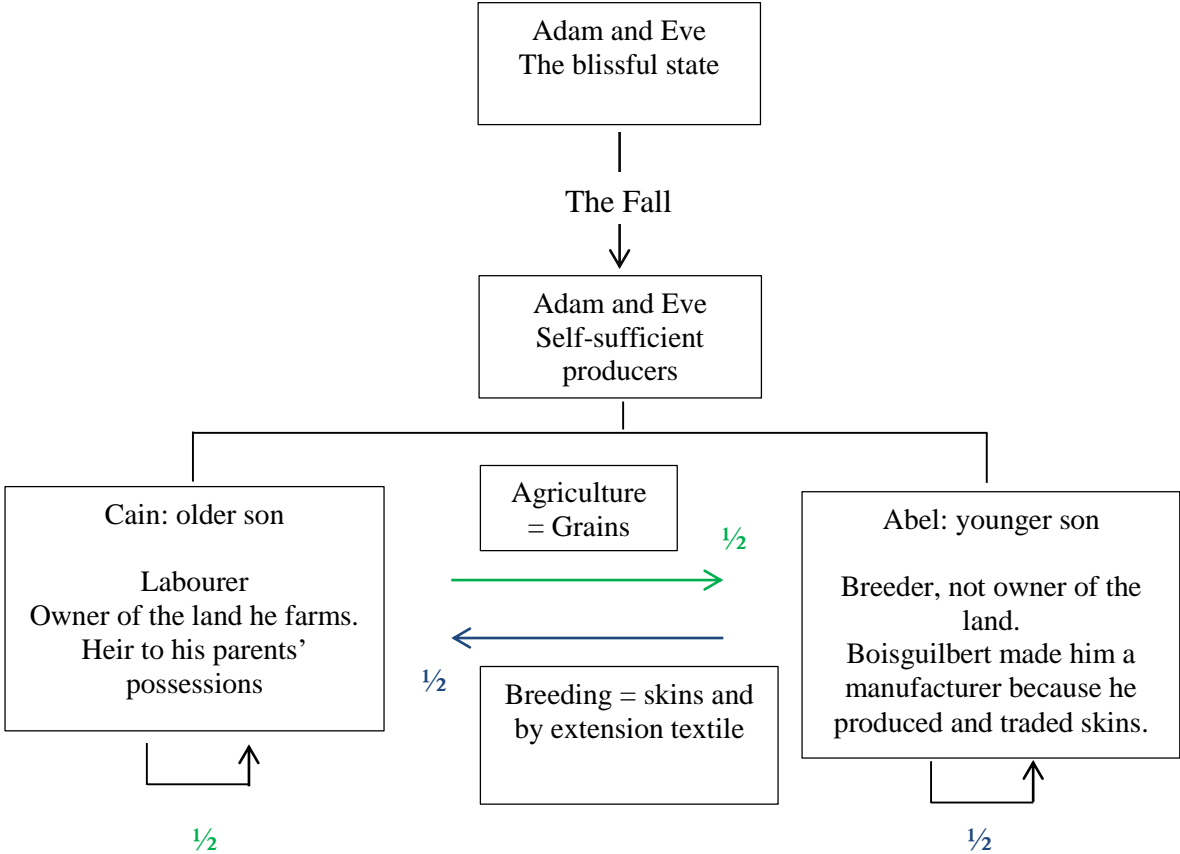
Faithful to the Scriptures and to Genesis, as well as to the Jansenist tradition of Port Royal (Faccarello 1986, 1989; Christensen 2003; Jungels 2021: 45–52), Boisguilbert proceeds through Biblical exegesis. He assumes that the first men, specifically Adam and Eve, lived in a state of perfect bliss, for their desires were, if not non-existent, then at least limited, and so were their needs. In this first, ideal, moment, all their needs were thus satisfied. Neither Adam nor Eve was forced to work. They lived in a society of abundance.

Breaking with this long moment of bliss, the Fall presents itself as the irruption of new desires and needs, and brings about a reversal. Two ruptures occur, resulting from original sin (Boisguilbert 1707a: 979) and the irruption of desires. To satisfy them, man was first of all condemned to work, and from then on was forced to earn his bread by “the sweat of his body” (Boisguilbert 1707a: 979; Genesis, 3, 19). Original sin and the associated curse determined the future path for humanity (1707a: 979). Men chose to follow self-love (*amour-propre*) and remain partially determined by this motivation even now, although, from a Jansenist perspective, they ought to follow God’s law and be moved by the love of God (Guion 2004: 60–72, Jungels 2021: 107–128) – which is itself a love and a respect of the order He has established. The Fall is thus presented as the point of origin of the economy, the moment of the birth of needs (Perrot, 1989: 152–155), and the beginning of productive activity.

A second moment then occurred with the extension of those needs. The economy was soon subjected to a process of specialization resulting from the division of labour, which obliged every man to exchange a part of his product for the productions of his fellow men in order to meet his needs. This specialization of producers took place in the second generation, between Cain and Abel (Boisguilbert 1707a: 979, 1705b: 888; Genesis 4, 2). Cain, no doubt because of the birthright that made him the owner of the land, became a husbandman. Abel became a breeder. In the natural order, agricultural professions come first and are therefore particularly honourable (1707b: 827). As Cain and Abel had to specialize in specific productions, and had to exchange their products in order to satisfy all their needs, the new order was based on reciprocity. But Boisguilbert proposes a very personal interpretation of this first specialization and of the nature of this first exchange. While he could have conceived it as an exchange between grains – or legumes – and meats, he instead sees in it the prefiguration of an exchange between agricultural products and manufactured goods. According to him, “one ploughed the land for grain, and the other fed herds for cover, and the mutual exchange they could make made them enjoy each other’s work” (1705b: 888, see also 1707a: 979). This account would represent a good sectorial division: in it, the products were to be divided logically in a proportionally equal manner between Cain and Abel and, by extension, between the sectors of production. The primary mode of exchange is therefore by barter (1705b: 888–889). We assume that Boisguilbert, inspired by Aristotle, establishes the value of the goods in the exchange, basing it on the equality of needs as described by Ragip Ege (2004). The needs of Cain and Abel being of a similar nature, the production of each had to be equivalent to the product of the other. Moreover, each had to have the same need for existing production. Thus, Abel had to give half of his product for half of Cain’s product. Such was to be the good proportion, the good price, or to use Boisguilbert’s term, the good price of proportion, which allowed economic and social equilibrium and ensured reciprocity. Boisguilbert proposes a singular reading of Genesis: he does not mention Cain’s murder of Abel (Genesis, 4, 8), and instead emphasises their economic interdependence and by extension the interdependence of the agricultural and manufacturing sectors (see Jungels 2021: 295–300). This reinterpretation of Genesis seems to us to inform the whole of Boisguilbert’s thought. It appears as the elementary structure of his

mode of reasoning, as well as the elementary structure of the order of nature: commodities, wealth and population double in each period, and this pattern then replicates itself and determines the future of human societies (see sections 3.4 and 4). In a first instance, we apply this pattern to what we believe to be Boisguilbert’s thought concerning the future of human societies. We shall see in section 3.3 that what is, for the moment, only a hypothesis, is in fact confirmed in the light of Boisguilbert’s texts.

Table 1. Elementary structure of exchange, first sectoral fragmentation and first circular flow³



The hypothesis of this first socio-economic fragmentation allows us to identify what would count as good relations between men but also, and more generally, between economic sectors. The good order appears to be realized if half of the product of the land, and by extension, half of the product of the countryside, is directed towards the manufactures and, conversely, if half of the product of the factories and the city is directed towards the countryside. Cain and Abel ultimately represent the allegory of a balance between land and manufacturing interests. This allegory also represents the proper and equal balance of wealth between town and country within any kingdom. This is why the balance will be both a territorial balance (on the importance of this, we refer to Dockès 1989) and a balance between landowners and other social classes (Dupâquier 1989: 196–197). This idea of the good order also testifies to the theological dimension that interlaces and gilds Boisguilbert’s writings (Perrot 1989: 149–151). Nature is conceived as a good order that determines the general structure of the universe, and is

³ In the figures presented in our text, we choose green to represent grain and, by extension, subsistence goods; blue, manufactured goods; and red, monetary flows. We hope that this approach makes it possible to get a clearer picture of the flows of circulation and economic exchanges, and so to perceive the nature and dimensions of orders.

fundamentally benevolent: it takes responsibility for providing people with all the natural resources they need.

Table 1 emphasizes the particular nature of economic circulation, which consists primarily in a real exchange of goods, and not in an exchange mediated by money (on the break which Boisguilbert effects, see Billoret, 1989: 59–69; see also Sect. 3.3 below). As we shall see, the circulation of money will simply follow the paths previously opened up by the circulation of goods, which is itself determined by consumption and needs. The circulation of money must respect them. Money is therefore only an instrument of exchange: it is logically the “servant of consumption” (1705c: 679), its slave, and not the primary cause of exchange, which lies in individual needs and reciprocity.

The representation of this order testifies to the fact that the right and balanced proportions are not given or defined by exchange, or, to use a more contemporary term, they are not generated by the market. Proportionate prices are determined before the exchange, which ultimately has the fundamental role of making them effective. Proportionate prices between sectors thus appear as ratios of quantities produced. They relate the agricultural product to the manufactured product and divide it by half, and are also, by symmetry, ratios of quantities consumed.

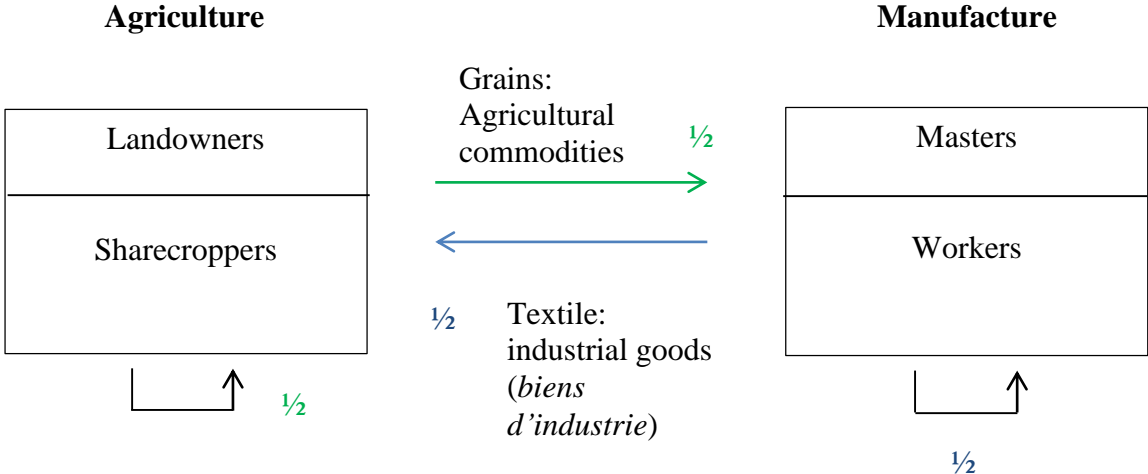
This was the hidden architecture of the good economy and good society. From this primary allegory inspired by the Scriptures, the economic laws of good order were to emerge. Any deviation from these proportions would signal a challenge to the original divine will, and generate disorder and internal wars. Harmony and good proportion had been established by Divinity, and were now hidden laws of nature. They would be the structure of order itself, and would explain why the growth of order depended on conserving and replicating this primal arrangement (see 3.4). The orders would stand in homothetic relations, such that any further fragmentation of the number of classes called for the same fragmentation of the product, which had to maintain the same proportion regardless of the demographics of the classes. Such was the good equality and the structure of the good order.

3.2. The birth of social classes as a second moment of the history of societies

In Boisguilbert’s reconstruction of human history, a second reversal occurred, which was against God’s will. This second moment is that of “crime and violence” (1707a: 979), and corresponds to the end of the “state of innocence” (1707a: 979). It gives birth to two classes: “one which does nothing but enjoys every pleasure; the other which works from morning till night, acquiring only the barest necessities for its troubles and often even totally deprived of them” (1707a: 979). The first class therefore transgresses the divine commandments and succeeds in extricating itself from the obligation to earn its bread by the sweat of its brow. This partition also overlaps with the partition between the rich and the poor (1705b: 942). This stage corresponds to the end of the state of equality, and the beginning of the physical, economic and political subordination of one class by another; it is the moment of the advent of an order of a feudal nature arising from violent and agonistic relations between men (1707a: 979). This moment is also “dated”: it comes after the Flood (1705b: 888). Following Boisguilbert, it would also seem that after the Flood, the Divinity’s *modus operandi* against sinful men changed. A new pact had been sealed: God’s anger was no longer expressed directly through his devastating intervention but indirectly through that of nature, which was responsible for calling men to order and punishing them in a new way (1705–1706: 814) – through economic decline, as we will see. On the contrary, if men followed the divine commandments, society would prosper.

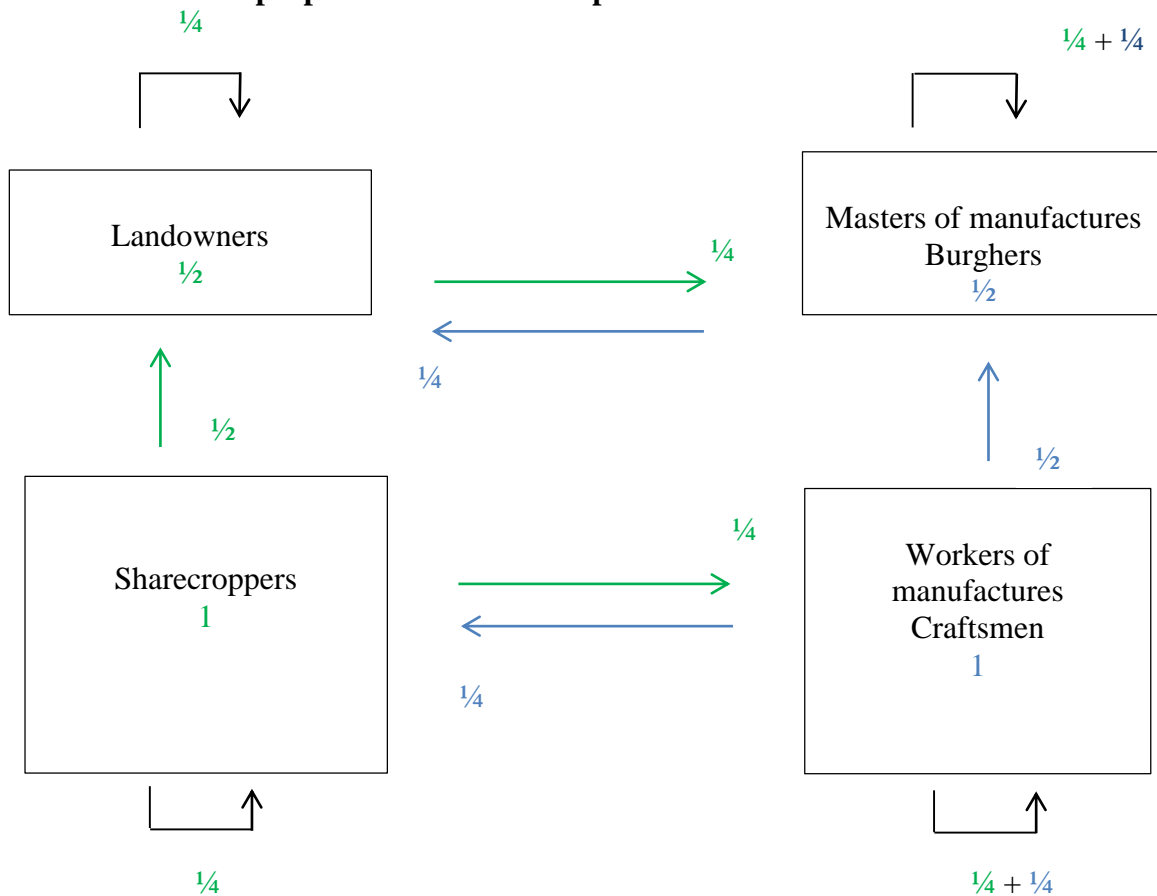
Being superimposed upon the first fragmentation, the appearance of social classes corresponds to a new fragmentation. It was to assert itself within both the agricultural and manufacturing classes. Henceforth, two classes could live without working: one in the agricultural sector (the landowners), the other in the manufacturing sector (the owners of productive goods).

Table 2. The second fragmentation: economic sectors and social classes



This new fragmentation raises the issue of the distribution and circulation of wealth between classes in the economic sectors. If we take up and transpose the elementary structure we see Boisguilbert as proposing, two classes would emerge from this new fragmentation in the two initial economic sectors – that is four classes in total, taking into account the difference between sectors. We can see this new partition when Boisguilbert considers there to be four categories of persons: “the ploughmen, the craftsmen or those who live by their industry, the burghers of the free cities, and finally the nobles and privileged of the countryside” (1695: 635). Logically, the right proportions between these categories should retain the principle of the division of the product by half that defined the right distribution of wealth.

Table 3. Second fragmentation – Conjectures about classes, circulation, good proportions and the complexification of circular flow



In these conditions, a new kind of equality – a degraded equality – would be preserved. While equality no longer exists between men because of the criminal appropriation, it remains between economic sectors and social classes.

The nature of the equilibrium described by Boisguilbert therefore has a particular quality. Equality exists between classes because wealth is equally distributed between them; but equality does not exist between their members. The owners are indeed few in number; the workers many. From this point of view, society is unequal. The equilibrium remains in terms of the proportion and quantity of the product distributed between the classes, which are always assimilated to two sectorial classes equally sharing the product of the land and the product of the manufactures, whatever the number of their members (and whatever the level of the production).

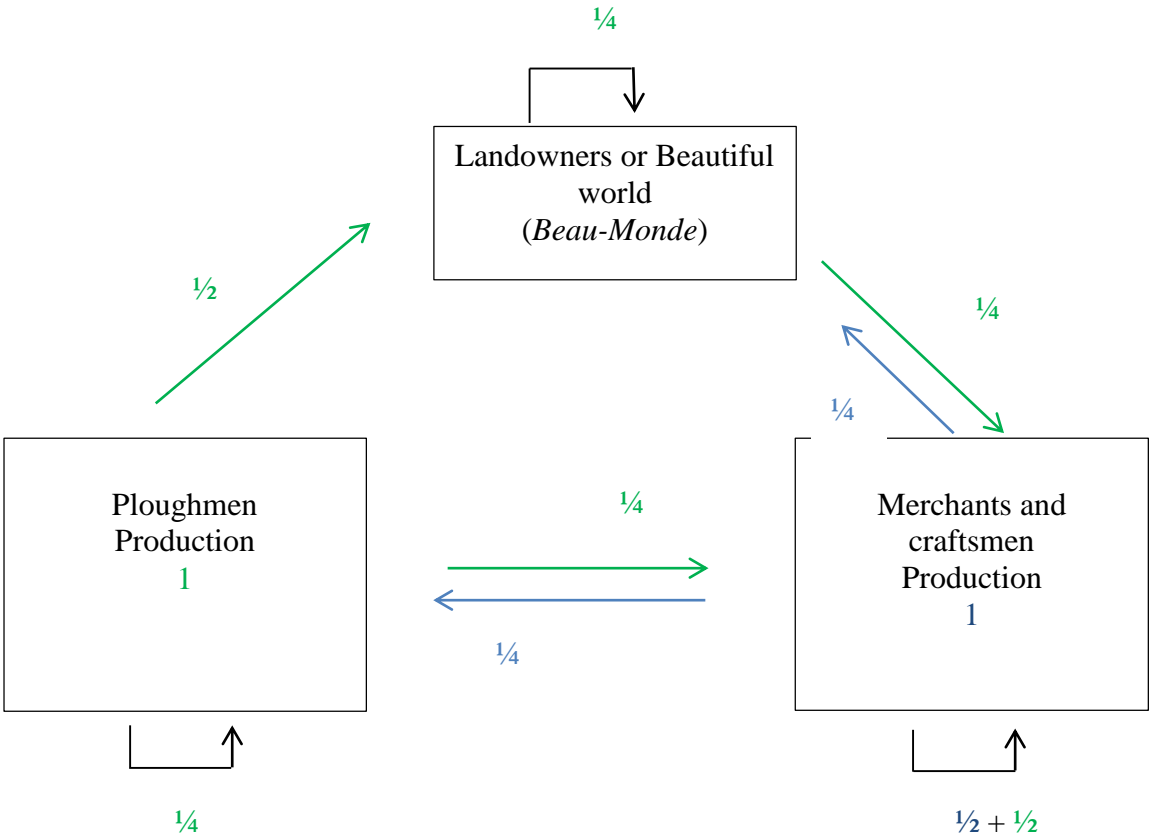
The two owning classes hold scarce resources which they make available to others. Property is therefore considered as a fiefdom, the usage of which its owners grant to others in return for rewards in-kind which they consume. Boisguilbert thus offers an abstract and succinct description of the feudal economy (in the countryside but also, with the corporations, in the towns), which also contributes, indirectly, to legitimizing it. Feudalism is now seen as the degraded natural order of humanity.

In view of this fragmentation, the conditions for the existence of harmony are clearly established: circulation, consumption, interdependency (1707b: 834) and balances between the classes must be maintained. The proper circulation will combine two moments: (1) payment of rewards (rents) in-kind and equivalent to half of the product, and (2) liberal expenditure of the

owning classes equivalent to half of the rewards collected. This will initiate exchange relations based on reciprocity, and will also maintain the balance of the product between the social classes.

But, according to Boisguilbert’s writings, the process of fragmentation seems to take place primarily in the agricultural sector, and prior to the advent of money. The distinction between the owners of movable and immovable property other than land, and the class of manual workers and merchants, is not clear-cut, especially since money has not yet emerged in society. The masters of manufactures or guilds were still thought of as members of the same whole, of the same body, working with their apprentices. Tradesmen and craftsmen were then reduced to the same class, which also included owners of real estate other than land and those of movable property. By bringing together masters and workers, the corporation made internal exchange relations invisible. They are assimilated to the commercial professions. Thus, the pattern of fragmentation and structuring can then be reduced to three classes, since “Everything that is not a ploughman or merchant, [constitutes] the beautiful world (*beau monde*)” (1705b: 882).

Table 4. Boisguilbert’s model of good order: economic sectors, classes, circular flow and good proportions



In this degraded state, which is now characteristic of human societies doubly marked by sin, all men could nevertheless live harmoniously, despite their unequal economic conditions. Only two conditions would have to be fulfilled: first, the good proportions between classes and

sectors, based on the original principle of the division of the product by half; and, second, the establishment of the proper circulation of wealth between classes and sectors.

Before the advent of money, the natural good order is nearly guaranteed. Since the circulation is only done by a barter of commodities, goods are not hoarded. They circulate in the good proportions following the order of needs, which helps to preserve them. As the rich landowners don't want to keep their grains and the merchant world needs subsistence, the former can extend their needs and so have access to more refined consumption, which also contributes to the extension of the division of labour and the diversity of the wealth produced.

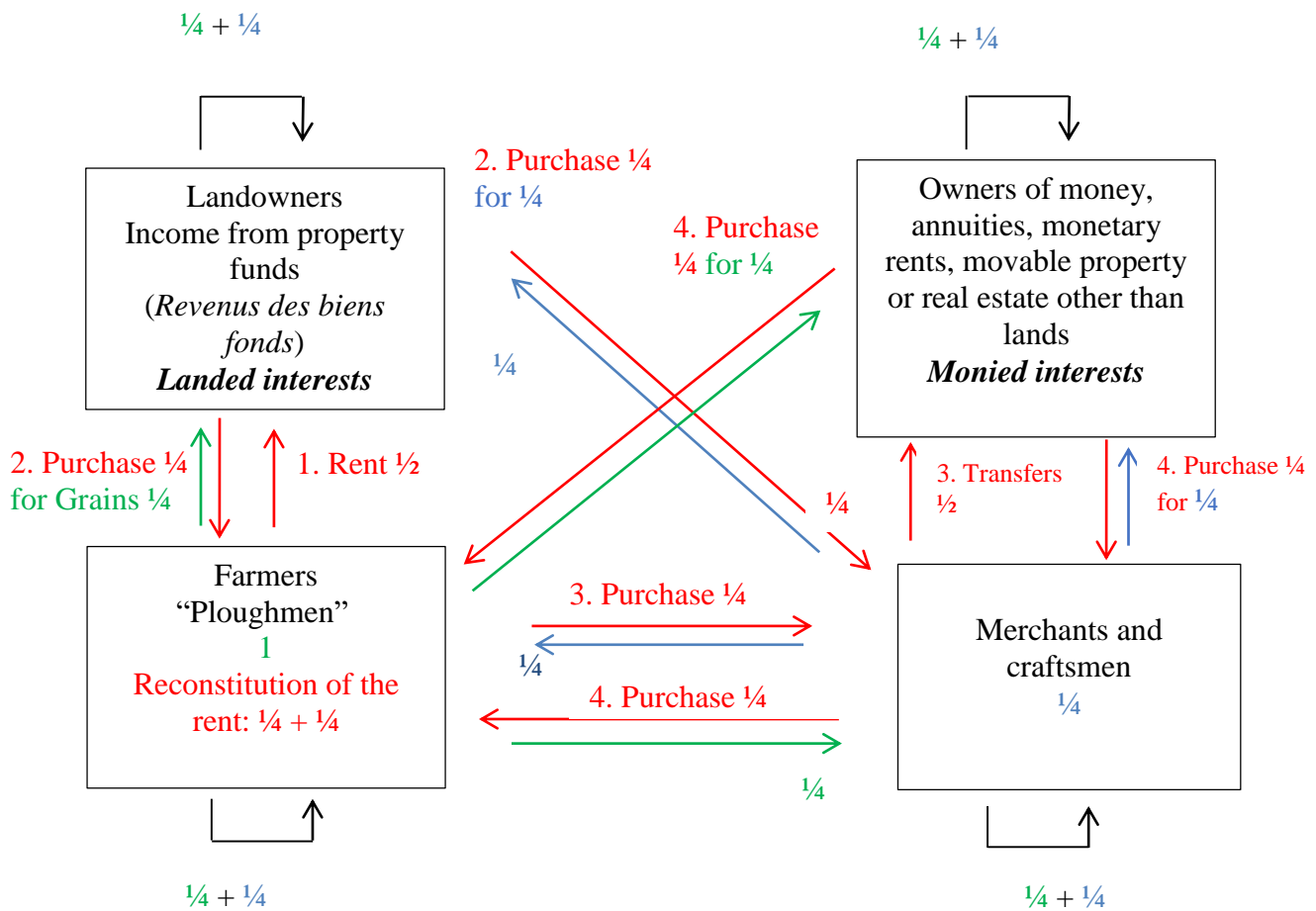
But if, before the advent of money, the pattern of fragmentation and social structuring can then be reduced to three classes, the situation changes thereafter. Thus, in the *Traité de la Nature*, Boisguilbert describes the existence of four classes: ploughmen (whose remuneration is that of the produce of the land), landlords (having the income of the landed property), owners of movable property or immovable property other than land (whose income comes from the renting of town houses, annuities, charges, money and bills of exchange), and finally, the non-agricultural working class (living on the fruits of their manual labour, or from trade, both wholesale and retail) (1707b: 829–830. See Table 6). But the advent and generalization of money also has two other consequences: it complexifies and also destabilizes the economic order.

3.3. The advent of money and the complexification of order as a third moment in the history of societies

As a result of the multiplication of needs that generates the progress of the division of labour, money became necessary to facilitate the extension of exchange (1704; 1705b: 888–889). Historically, a metallic money was chosen: silver (see, for example, 1705b: 889; in French *argent* means both money and silver). The advent of this metallic money thus accompanies and contributes to making the economic order more complex, just as it also bears the potential to destabilize it.

Indeed, whereas rent paid in-kind was determined in proportion to the harvest (that is to say a half in Boisguilbert's conception), and avoided the need for landlords to buy raw materials from sharecroppers, rent paid in metallic money transforms the sharecropper into a farmer who now pays rent in a monetary form to the landlords. As the rent is fixed and is set in money, its amount is no longer, as previously, in constant proportion to the harvest. A first destabilization of the order therefore emerges. Moreover, the rent partially loses its feudal character. It became the result of a transaction that was closer to a commercial contract, but this commercial contract contributes to veiling the feudal dimension that still structures the society. The farmers are also now the collectors of the monetary land rent, and have to keep part of the metallic money they receive (to be exact, half of the metallic money they receive must be kept, the other half must be consumed). These farmers must also be in possession of the entire stock of cash at the end of the period in order to pay out the annuity. Hence the farmer must also be a good steward and anticipate his future payments to the owners (which will be particularly important when deciding on grain prices; see section 5).

**Table 6. Money and the complexification of circular flow in a four-class state:
The good order of circulation**



For different reasons, money also has another, negative, face. While money can be “benevolent” when it facilitates the circular flow and so gives birth to wealth, it can also be “criminal” (1707a: 1001). Money can be retained and thus hinder circulation; and it is also a new instrument of power, of wealth capture and oppression, that has the potential to destabilize the commercial society.

On an individual level, money gives birth to new vices such as cupidity, greed, avarice and hoarding. As Boisguilbert explains, “the ease with which money can be used for all crimes means that it redoubles its remuneration in proportion to the corruption that seizes hold of men’s hearts; and it is certain that nearly every crime would be banished from a State if the same could be done with this baneful metal” (1707a: 979–980). Money can thus pervert people, and by extension society.

On a macroeconomic or social level, money has various different consequences. First, it encourages new behaviours such as cupidity, avarice and hoarding that can disrupt the order, impede the circulation of wealth and generate economic crises. Whereas the storage of commodities in a barter economy was limited, and not advantageous in the long term due to their degradation over time, the durability of money changes this (1704: 966). Hoarding tends to interrupt the circular flow and generate crisis (this idea is easily understood by referring, for example, to Tables 5 or 6 and considering that a class hoards money: circulation is then reduced by the same quantity as the degree of hoarding, with cumulative effects that follow the path of circulation, especially the consequent dearth of the monetary advances necessary to

production). Hoarding has three main motives: (1) A precautionary motive – for example when the landowner fears that his rent will not be paid by the farmer (1707b: 838). (2) A motive of greed (see below). (3) A motive of insurance – money is indeed sought because of the trust in its value as a counterpart to the sale of a commodity (1704: 966). This value increases in times of crisis, and declines in times of abundance and intense circulation of wealth. In times of abundance, when there is an intense circulation of wealth corresponding to a high speed of circulation of money, money may even not be wanted at all. In these situations, the general confidence – expressed as credit – is important. So, in this situation, metallic money is not needed, and is replaced by bills, paper, pieces of parchment (1707a: 927, 967, 970–971, 1004 1707b: 889–890) or pure credit (1707a: 971) such as one’s word (*parole*: 1707b: 889–890). The interest rate would then be low-to-zero. Boisguilbert is thus not a bullionist (see Blanc 2014: 379–384). Boisguilbert’s approach also calls into question what would be meant by the lack of money. It is only a lack of confidence, circulation and growth that explains the preference for money and hoarding, which now has a function not, as it should have, as a sign, but as an immovable estate (1705a: 974, 1707a: 987, 998).

Conversely, when the circulation of goods and by extension that of money is low, the interest rate becomes usurious. In this situation the wealth drain effected by the monied interests is significant and destabilizes the economic order. They therefore have a vested interest in economic decline. After the advent of metallic money, the holding of money became not simply possible but also advantageous, and hence the second motive for holding money emerges, the most criminal and antisocial. This is the motive of enrichment, of diversion and of misappropriation of wealth. It occurs particularly when the real interest rates of money and financial rents are higher than the rate of growth of wealth, or when a fisco-financial system contributing to the capture of wealth exists. In this case, the good proportions between classes are broken and the process of generation of wealth is weakened. The *monied interests* thus tend to destabilize the good order of society.

All the motives for holding money are detrimental to circulation. They lead to the cessation of some consumption, and hence diminish employment and the production of wealth. To prevent the criminal aspect of money from asserting itself, the holders of money are required to rid themselves of it; that is, there is a moral and systemic obligation for them to consume. Unlike the poorest, who are forced to spend to survive, the richest can hoard; but, according to Boisguilbert, they must comply with the feudal obligation of the nobility to consume (on this obligation, see Guéry 1984). The destiny of society and its economy is at stake. For the richest, consumption is therefore conceived as a means of expiation for their original and criminal appropriation of property. It contributes to re-establishing the circulation, rebuilding incomes, and so restarting the process of wealth production. Consumption also re-establishes the good proportions between the sectors, and leads to the advent of the good prices of proportion.

But there is another reason why money can disrupt order in its proper proportions: for it generates relative inflation between goods, and more precisely between the prices of agricultural goods and those of manufactured goods (see, for example, 1704: 966, 1705b: 890–891, 1707b: 832). For this reason, it transforms the flow of real wealth between classes. Indeed, in the monetary system, according Boisguilbert, wealth is defined as the product of the sale price and the quantity of goods. So, the monetary price has to balance the real price in order to maintain the good proportions and preserve the good structure of the society (see section 5). But Boisguilbert doesn’t propose a regulatory process that operates thorough market mechanisms: he only assumes that consumption and circulation will lead to a re-establishment of the state of order.

Another original aspect of Boisguilbert’s analyses is his underlining of the disjunction between the value of goods and the value of money. This rupture can be affected by the

extension (1695: 586 – following the discovery of the New World) or the diminution (especially via hoarding) of the metallic money supply. But Boisguilbert proposes a counter-quantitative theory of money in some places in his writings: the value of money – as the interest rate – would have increased at the same time as large quantities arrived from the New World. Money would have now become scarce, whereas previously it had been more abundant: indeed, after the influx of silver, more money would have been hidden because of the instinct to hoard it. The influx of silver led to a transformation of social morality: greed and avarice became more common, explaining both the increase in the supply of silver and the increase in the demand for silver (1707a: 980). Finally, the influx of silver would have indirectly increased the general level of prices but to a lesser extent than its rise, explaining that, contrary to what the nominal evolution of income shows, “we were more richer in the past with less income than at present” (1695: 587). This increase in inflation is also due to the decrease of the level of production. In other places Boisguilbert insists on a difference between goods. To be precise, the prices of manufactured goods would have increased, but not those of grain or, by extension, of agricultural commodities (1707b: 833, 875). The order would thus be disproportionate, disfavoured to the farmers and the landowners and favourable to the commercial world of craftsmen and merchants and the monied interests. Agriculture, the spring of all wealth, would dry up, and France would be progressively become ruined, as would its king – contrary to what an examination of the nominal evolution of his income would suggest.

To conclude, the advent of money could generate an increase in circulation and contributes to the emergence of a new society: the commercial society. Yet it also generates risks of economic crisis and ruin. In order that it should not collapse, the monetary order must always remain in correspondence to the real order that previously existed. The commercial society must therefore replicate the order of nature. The power of the monied interests should be limited and, more generally, the rich must consume and divest themselves of their money, or else disrupt the social harmony. If consumption is a vital necessity for the poor, it is a moral, social or systemic obligation for the richest. The fate of societies is determined by the propensity of the rich to consume and to despise the holding of money. A new conception of wealth is therefore emerging: it is not fixed, and it is not constituted by savings, but lies rather in production, circulation and consumption (1707b: 889), which is also synonymous with income (1707b: 893).

3.4. The natural history of societies

Boisguilbert proposes a history of societies based on sacred history and the scriptures in the tradition of Port-Royal (Jungels 2021: 169–170). He also refers to a secular history of France studied through the question of public finance and wealth that begins essentially with the reign of François I and which is focused primarily on the reign of Louis XIV (see Sect. 4).

For Boisguilbert, the history of societies seems to be conceived as a succession of social fragmentations generating orders of a similar nature. Any subsequent order would retain the structure of the initial one, which explains its fractal form. It would and should reproduce the right sectoral proportions. That may explain the emphasis on the number 2 and, as with Petty (on the importance of this number in Petty’s writings see, for example, Rohrbasser 1999), the importance of the doubling of economic, demographic or social aggregates over a given period of time. There is a deeply teleological dimension to this account of history. But the progress of societies would not be linear; it would depend on the specific conditions, and on respect for good order, that is to say the order of nature. What are for the moment hypotheses will be confirmed by a review of Boisguilbert’s picture of the reign of Louis XIV (see 4.3. below).

If we were to take the hypotheses of fragmentation to their logical conclusion, while adding some of the elements proposed by Boisguilbert, a historical order for the future of societies would emerge. The chain of opulence would be both a historic and static one.

The process of fragmentation would therefore not end with the sectoral division and the first intersectoral division. On the one hand, it would be perpetuated over time and would generate the extension of the division of labour until more than 200 professions had been formed in the manufacturing sector. This stage would correspond, according to Boisguilbert, to the contemporary period of the reign of Louis XIV, which, if we read him correctly, would nevertheless not be the highest stage of felicity ever reached in France. According to him, the kingdom of France was indeed much richer in 1660 (actually twice as rich) than it was at the beginning of the eighteenth century. So, logically the number of professions would have been 400 in 1660. On the other hand, the process of fragmentation would extend from country–city relations to relations between provinces and then to international relations (Dockès, 1989: 98).

In this process of growth, Boisguilbert points out, the “arts and crafts that make up a state” are a function of the degree of necessity of their productions (1707b: 837). The extension of the division of labour is therefore dependent on the amplification of needs and on consumption (1695: I ch. 2, 590–591). The order of professions is thus dependent on the order of needs. The development of societies is characterized by the stretching of human needs. Consumption, and consequently circulation, are the active principles of the economic development of societies. The fate of the 200 professions is also linked to that of the ploughmen and landowners, since this was the original harmony, or the original balance of the product. The primary sector, and more particularly the agricultural producers, had to generate an agricultural surplus that ensured the enrichment and then the expenditure of the landowners who, by extending the range of their satisfied needs, encouraged the multiplication of the professions and sustained the dynamics of fragmentation. Therefore, the agricultural sector is primary. It determines the possible course of growth of the manufacturing sector and the 200 professions (1695: 583). It is for this reason that the income of farmers, and the grain price, must be sufficiently high to give incentives to production (see Sect. 5, below). The interdependence of professions comes into existence first by construction (theoretical and divine), but henceforth has to be maintained unless the order should degenerate and the country be demoted to the lower rank of societies. In this case, the production of wealth, as well as national income and tax revenues, would fall by half, as in the France of Louis XIV (1695: 584–585). On the contrary, if the natural order were not disturbed, they would double every 30–40 years (1695: 586). But, as we will see, the normal evolution of prices is also to double during the same period. So the tax and the income of the crown would be stable. Finally, the wealth estimated at constant prices would double during every period; and it would quadruple if estimated at current prices (see Sect. 4.2, below).

The ideal history of human societies in general and of France in particular

| Historical state | State 0 | State 1 | State 2 | State 3 | State 4 | State 5 | State 6 | State 7 | State 8 | State 9 | State 10 Lewis XIVth's France in 1700. Ceteris paribus the same stage as in 1620 | State 11 Lewis the XIVth's France in 1660 |
|---|--------------------|---------------|--------------------------|---|--|----------|---------|-------------|-------------|---------------------------------|--|--|
| | The Garden of Eden | The Fall | Cain and Abel | Appropriation of the means of production. Separation owners-workers | Process of specialization of professions | ... | ... | ... | ... | ... | 200 professions | 400 professions |
| Type of needs met by the richest or most affluent class | Felicity, no needs | Taste of need | Necessary Strictly vital | Necessary | Convenient | Délicate | Sensual | Superfluous | Magnificent | Fanciful (<i>Fantastique</i>) | Excess that vanity has invented | Absolutely useless |
| Number of social classes | 0 | 1 | 2 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 |
| Number of professions That we could conjectured | 0 | 1 | 2 | 2 | 2 or 6 | 4 to 12 | 8 to 24 | 16 to 48 | 32 to 96 | 64 to 192 | 128 to 384 | 256 to 768 |
| Wealth Level 100 in State 0 | 100 | 200 | 400 | 800 | 1 600 | 3 200 | 6 400 | 12 800 | 25 600 | 51 200 | 102 400 | 204 800 |

What Boisguilbert presents, then, is a philosophical history of humanity. In effect, he announces the emergence of a literary (and scientific) genre that would achieve prominence in the eighteenth century: conjectural history (Perrot 1989: 145). His work also seems to express a particular *episteme*, that is to say the classical *episteme*, which seeks to discover the order of the world by drawing up pictures or tables that reveal the associations between events, while also exploring the genealogical links between the present day and a supposed primal state. His thought, moreover, appears sensitive not simply to quantities, but also to the settings in which those quantities are found, and the relations obtaining between them (to the proportions); adopting both a static and dynamic perspective. Boisguilbert also proposes a specific conception of history that falls between a modern linear conception of progress and a more cyclic medieval conception of eternal return. After the Fall, God's design is characterized by the linear and equilibrated progress of wealth and social order. This design can be broken by men and their self-love, by a bad fiscal system, or by insufficient circular flows, all of which introduce crisis and decline. Thus, cycles are integral to the dynamic of growth. This was particularly the case during the reign of Louis XIV, as can be revealed by Boisguilbert's more "factual" analysis, to which we now turn.

4. Factual history: Boisguilbert's condemnation of the reign of Louis XIV

As well as a conjectural history, Boisguilbert also proposes a more factual analysis of the history of the French monarchy, intended to reveal the sickness and disorder of the reign of Louis XIV. This historical analysis has two dimensions: a history of the political decisions taken in the domain of public finances and economic regulations, and a more quantitative history based on the study and evaluation of prices, wealth and, by extension, of the real fiscal resources of the monarchy.

4.1. The history of public finances and the “quantitative” history of prices and the evolution of the fiscal resources of the monarchy

Boisguilbert’s history of the French fiscal system mainly covers three periods: (1) prior to the death of Charles VII in 1461, (2) from 1461 to 1660, and (3) from 1660 to the moment when he was writing. To construct his factual history he relies on the *Memoirs* of Philippe de Commines (1552 quoted in 1695: 586, 621, 1705c: 666), Mézeray’s *Histoire de France* (1643–1651 quoted in 1695: 586, 621, 1705c: 666), Sully’s *Memoirs* (1638 quoted for example in 1705a: 753, 1705b: 898, 903, 912, 1705c: 679, 1707b: 865) or Amelot de Mauregard’s writing (1648 quoted in 1705b: 914, 915, 918).

Boisguilbert also proposes a more quantitative history in which he reflects on prices and the differentiated consequences of inflation upon them, and by extension on the distribution of wealth in the kingdom. According to him, inflation generates illusion: it leads people to believe that the king’s income and the price of grain have increased, whereas in fact they have decreased. “Gold and silver are not and never have been wealth in themselves, are only valuable in relation to each other, and in so far as they can provide the necessities of life, to which they only serve as a pledge and appreciation, it is indifferent whether they have more or less, provided they can produce the same effects” (1695: 588). To make these calculations and compensate for the effect of inflation, Boisguilbert uses different sources. Although he claims to rely on the same sources as previously used for the estimations of the state revenues, we don’t find the same data in Commines’s, Mézeray’s, Amelot de Mauregard’s or Sully’s writings, which, moreover, show little interest in the state revenues. Boisguilbert also relies on “old registers of 1250” for the daily labour wage (1695: 588), on “old registers of the end of the 15th century” (“un maître maçon qui gagnait quatre deniers par jour, il y a trois cents ans, dans Paris, comme l’on voit par des registres publics de ce temps-là”). Boisguilbert might have found the estimation in Bodin (1578: sp. 12th p., although the precise date is not given and seems to be around the beginning of the 16th century). The source of the estimations of the price of grain is not mentioned (1695: 588). So, the main sources of Boisguilbert’s data remain unknown.

Finally, Boisguilbert relies also on his personal experience gained from his duties as police lieutenant. In particular, he describes the methods of collection of the *tailles* and the vexations they engender (for example 1695: 591–597). The prices corresponding to his time or to that of the 1660s come from his personal knowledge of everyday life.

4.2. Prices, inflation, taxes and revenues of the kings of France

Like Gramont (1620), whom he does not cite but who is undoubtedly one of his major sources of inspiration (the idea is shared by Faccarello 1999: 84), Boisguilbert considers that the revenues of kings have not increased, not since Charles V (1364–1380) as Gramont suggests, but certainly since 1461 and the reign of Louis XI, and even more so since 1582 and the reign of Henry III.

While Gramont wanted to show that the ageless complaint of the people concerning the increase of taxes was the consequence of the monetary illusion, Boisguilbert perceived two additional causes. (1) Generally speaking, the burden of taxes seems to be heavier as a result of the decrease in the kingdom’s wealth, which explains the justified perception of a higher tax

pressure. (2) The tax burden seems too high because of an unjust tax system that particularly affects the ploughmen and the countryside (1695: 591).

Like Gramont, Boisguilbert sought to challenge popular errors, and he indirectly contradicts the positions of Malestroict (1566) and Bodin (1568), whom he sees as victims of common sense and monetary illusion (on Gramont's positions and on his critique of Malestroict and Bodin, see Chantrel 2014). Boisguilbert takes up Gramont's distinction between price and dearness. Prices refer to the valuation of goods; dearness to the purchasing power. If the population does not vary and if production increases, purchasing power also increases and dearness decreases even if nominal prices have increased. This is why inflation and the variation of prices have to be considered. Current prices have to be deflated. In this respect Boisguilbert took up some of Gramont's indicators. He relies on rudimentary estimates of the evolution of workers' wages or grain prices, and then sets out what he presents as the king's revenue in current value, although we don't have the sources of his estimations. He concludes that the king's revenues have in reality decreased since François I. During the reign of Louis XIV, both the current and the real revenues have decreased. This is a symptom of the French economic malady.

Estimates of the king's revenues
(1695: ch. 6 and 1705b chs. 6, 7)

| Date | 1250 | 1461 | 1487 | 1525 | François I probably after 1525– 1547 | 1559 | 1582 | Henri IV 1589–1610 | 1624 | 1642 | 1660 | 1695 |
|---|------------------------|------|------|------|--|------|--|-----------------------|------|--------------|------|---|
| Price index Based on daily wage and grain prices | 100 | | | | | | 2000 | | | | | 10,000 |
| | | | | | x 20 | | | | x 5 | | | |
| Daily wage 1695: 588 | 4 deniers by day | | | | | | | | | | | 40 to 50 sols by day |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Grain prices 1695: 588 | | | | | | | 8 sols for one measure of grain | | | | | 40 sols for one measure of grain |
| | | | | | | | | | x 5 | | | |
| King's revenues in current millions | | 1, 8 | 4, 7 | 9 | 16 | 16 | 32 | 35 | 35 | 70 | | 112 or 115 |
| King's revenues in constant millions | | | | | 240 | | 175 | | | | | 112 or 115 |
| | | | | | x 2/3 around | | | | | x 2/3 around | | |

Boisguilbert's idea is that the king's current revenues should double every 30–40 years except in a situation of war. This position would confirm our hypotheses established in section 3.4. The king's revenues double because, since taxes are supposed to be fixed (and proportional), the doubling is the consequence of the increase of wealth, this also being supposed to double every 30–40 years provided the good order prevails. But if Boisguilbert's distinction between current and real prices is taken literally, the idea would be more that the king's real revenues are supposed to be stable: the current revenues double because the prices double. Thus, the tax burden should become lighter over time and with increasing wealth. To be fully consistent, real wealth would indeed double every 30–40 years, but since the doubling of prices is assumed to accompany growth, current wealth would quadruple over the period.

The natural evolution of wealth and the king's revenues (index 100 for state 1)

| Historical state | State 1 | State 2 (State 1 + 30–40 years) |
|-----------------------------------|---------|---------------------------------|
| Price index | 100 | 200 |
| Real wealth | 100 | 200 |
| Wealth expressed in current money | 100 | 400 |
| King's revenues in current money | 100 | 200 |
| King's revenues in constant money | 100 | 100 |

The contemporary situation, in which Boisguilbert was writing, was characterized by an increase in the current king's revenues of one third compared to 1660 despite a decrease of half

in the national income (1695: 587). About half of this one-third increase is explained by the increase in the tax burden, and the rest by the increase in the national territory, which had expanded by a tenth (1695: 587). But the king's real revenues were the lowest since at least the time of François I. The current king's revenues had indeed increased by 1/3 in current value, while real production had halved and prices doubled since 1660. In conclusion and in constant value, the king's revenues had decreased since 1660, despite the higher tax pressure, due to the general impoverishment of the kingdom.

The reign of Louis XIV is therefore condemned both because of the inefficient fiscal system, and because the economic framework, which was responsible of the loss of half of the national wealth. But Louis XIV himself had not become richer.

4.3. Prices, differentiated inflation, and the bad price of grain considered as one cause of French decline

Using the calculations of the evolution of prices, Boisguilbert also wishes to highlight a second consequence of the monetary illusion: the people thought grain was more costly, whereas its real price had in fact decreased since 1660, and even more so after 1700, i.e. after the shortages of 1693–1695. Contrary to popular belief, the shortages of 1693–1695 should have contributed to re-establishing the good price of grain. But the new grain police regulations, adopted to cope with the shortages, had established a grain price that was in bad proportion. By early 1700, grain was being sold at too low a price, at only half of its supposed proportional price.

The question of the price of grain is not central to *Détail de la France*, which is more concerned with examining the fiscal and financial system. In fact Boisguilbert seems hardly to be aware of it. In the *Détail*, current grain prices are supposed to have increased in line with wages and other prices, and are said to have increased fivefold since the reign of Henry III (1695: 588). The grain problem indeed is only mentioned briefly in the *Détail*, in the context of price volatility, which is considered to be detrimental to the population and to the production of wealth, and which is related to the state of the harvest (1695: 615), but also to the marketing structures for grain. Boisguilbert underlines that the grain market is very volatile, given the nature of the merchandise and the nature of the actors (1695: 610). He also points out that foreign merchants no longer come to France to obtain supplies, which contributes to keeping the price low (1695: 615). But in the *Détail*, Boisguilbert doesn't specifically consider the consequences of the volatility of the grain prices.

The perspective changes with the *Traité de la nature, culture, commerce et intérêt des grains*, which was composed as early as 1704 (Hecht 1966 II: 827 note 1). As the title indicates, grain now becomes Boisguilbert's main focus. Nevertheless, it should be noted that the issue of grain remains second as a cause of France's decline, whereas the tax system is held responsible for a decrease of more than 1,000 million in revenue (500 million for the *tailles* [1705b: 934], 800 million for the *aides* (consumption taxes) and the *traites* (custom fees) [1705b: 928]). By comparison, the hindrances to the trade of grain seem less harmful to the wealth of France, being estimated at 250 million (1705b: 934) and later rising to 500 million (1707f: 1014). In his reflections on grain, Boisguilbert seeks to show that from 1704 onwards the constant price of grain had decreased in contrast to the prices of manufactured goods. Moreover, the prices of proportions would be broken, leading him to conclude that the price of grain was too low.

To make his comparisons, Boisguilbert refers to the ordinances of Henry II of 1549 (1707b: 833). He estimates that grain was then at a good price, i.e. 20 sols per setier in 1550 (1707b: 833). For 1600, he refers to common knowledge, the setier was worth 3 livres 10 sols in the common year and a pair of shoes 15 sols (1707b: 833). As all the prices had tripled, the proportional prices had been maintained in 1600 (1707b: 833). For these reasons, in this period “the worker could not complain about buying his grain for three times as much, just like the shoemaker, who sold for fifteen sols the same shoes that he had sold for five in the days when grain was worth three times less” (1707b: 832). The same held in 1650: the grain price was 10 or 11 francs per setier, and so had tripled compared with 1600, but all prices had tripled during the period, “Namely, that shoes which were worth fifteen sols at that time [in 1600] were sold in 1650 for forty-five and fifty sols, and everything else in proportion” (1707b: 833). In conclusion, the proportionate prices were still extant in 1650. The disjuncture would have taken place in the second half of the 17th century, and specifically at the end of the century.

And as in the year 1700 and the following ones in which we are living, all these same commodities, except grain, have assuredly doubled by causes that are very natural, and concerning which we will dedicate a separate chapter, and which are none other than the floods of silver that every day arrive in Europe, we quietly accept that all kinds of goods should take their share of the increase in price, as they have always done since the discovery of the New World; but this justice is denied to grains alone. (1707b: 833)

According to Boisguilbert, by considering inflation, the good current price of grain should be around 18 or 20 livres per setier: in fact it was only 9 or 10 livres (1707b: 834).

Effects of inflation and the estimation of the good price of grain (1705b, ch. 2)

| Date | 1550 | 1600 | 1650 | 1700 |
|---|-----------------|------------------|-----------------|---|
| Daily wage of an agricultural worker | 8 to 16 deniers | | | 8 to 16 sous |
| Price of shoes | 5 sous | 15 sous | 45 to 50 sous | 100 sous or 6 francs |
| Grain price. Price of one setier of wheat | 20 or 21 sous | 3 livres 10 sous | 10 or 11 francs | The good price: 20 or 22 francs; 18 or 20 livres The actual price: 10 francs or 9–10 livres ⁴ |

Indirectly, it is also apparent that the daily wage of the agricultural worker had not sufficiently increased since 1550. Like the grain prices, the agricultural wage had not taken into account the price increase between 1650 and 1705, and the agricultural worker was now suffering from the sectoral disproportion of wealth created by the bad and low price of grain. If we compare the agricultural wage with the wage of a Parisian worker (1695: 588), the latter would be earning at least three times as much (8 to 16 sous compared to 40 to 50 sous), which shows the disproportion of wealth in favour of the manufacturing sector.

⁴ Boisguilbert seems to operate a conversion on the basis of 1 franc = 1.2 livres.

The decline of the French kingdom would therefore also be caused by a disorder in its economic framework which goes unperceived due to the monetary illusion. Thanks to his calculus Boisguilbert is now able to reveal the truth and to justify his criticism of the reign of Louis XIV as part of the necessary reforms he is calling for.

5. Concluding remarks: The superiority of the order of nature over the (dis)order of interests

We have shown the influence on Boisguilbert's thought both of British political arithmetic and of a French economic stream, notably Gramont's analysis. It is plainly important to consider the influence of political arithmetic in giving an account of Boisguilbert's economic thought. Boisguilbert proposes that there is a natural process of growth which takes place if circulation is effective, if money is reduced to its role of "valet of circulation", if individuals know and take into account the general interest in the pursuit of their individual interest, and if regulations are not established that are contrary to the natural law of good order. Boisguilbert is therefore a proponent of the individual interest informed and shaped by the knowledge of good order.

Boisguilbert is also a very moderate supporter of the pursuit of interest conceived as the pursuit of pecuniary gain. This is also limited to the sphere of production and trade. According to him, trade in general, and more particularly "all land trade, both wholesale and retail, as well as in agriculture, is governed only by the interest of entrepreneurs, who have never thought of doing service to or obliging those with whom they enter into contract by their trade; and any innkeeper who sells wine to passers-by has never had the intention to be useful to them, nor to the travellers who stop at his place on their journeys out of fear that their provisions should be lost. It is this reciprocal utility which underpins the harmony of the world and the stability of States; each man thinks of procuring his own personal interest to the highest degree and with [the] greatest ease possible for him" (1705a: 748–749). But while the commercial sphere is governed by interest, it can only function harmoniously if each of the actors is aware of the economic interactions and of the higher economic order. Moreover, there are some parts of the population that should not be subject to the logic of gain and interest: this is the nobility, the ministers of religion and of justice. They should not be self-interested, and in a well-policed state should not capture too much wealth (1705a: 760). Nor should they become entrepreneurs, for disinterestedness and integrity were needed in public affairs (1705a: 765) – something that was signally lacking in Old Regime France, especially with regard to the self-interested stakeholders of the inefficient fiscal-financial system

During the reign of Louis XIV, the good order had indeed been disrupted by an unjust, inefficient and vexatious tax system, by a lack of circulation, and also by the prevalence of monetary illusion. All of these factors had led to the breakdown of the social and economic order, whose structure was now deformed and ill-proportioned. The society of Louis XIV was therefore ill-formed. The monetary illusion contributed to these malformations, and the actors within this society were not even rational, for they were unaware of the illusion that beset them. Market processes or bargaining could not dissipate the monetary illusion; quite the contrary, the illusion allowed certain classes to justify a distribution of wealth that was favourable to them, and to promote their personal interests against the general interest. And this, in the end, was the fundamental motivation behind Boisguilbert's writing: he sought to reveal the good prices and the good order of Providence. For him, certain economic structures or regulations must be put in place so that the good order can be brought into effect. It is through this prism

that Boisguilbert's critique of the fiscal-financial system in the France of Louis XIV should now be re-evaluated, as well as his approach to price fixing and the effects of the free circulation of wealth. Such a re-evaluation will show that Boisguilbert is not a thinker who defends the market as a concrete institution any more than he defends the market as a principle. He is a defender of order and of interests inscribed within that order. According to Nicole (see for example 1670: 169–170), “exchanges only function properly when they are framed by the political order, which holds through the law of basic violence of self-love” (Guion 2004: 59). Boisguilbert is also sensitive to the mental and social representations of economic actors and to their effects on the production of wealth and on the structuring of the economic and social system.

References:

Académie française, 1694. *Le dictionnaire de l'Académie française, dédié au Roy*. 2 vols. Paris : Coignard.

Amelot de Mauregard, J. 1648. *Harangue faite à la Reine au Palais-Royal, le 21 décembre 1648, par Mr. Amelot, Premier Président de la Cour des Aides. Pour la Révocation du Traité des tailles, et le soulagement des officiers et du peuple, avec un récit abrégé de ce qui se passa en la députation de ladite Cour sur ce sujet*, Paris : Denys Langlois.

Aspromourgos, A. 1996. *On the Origins of Classical Economics*. London: Routledge.

Bast, J. H. 1966. “Boisguilbert et le mercantilisme”. In Hecht, J. (ed.). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris : INED. Vol.1, 27–40.

Billoret, Jean-Louis, 1989, « Le circuit et l'équilibre de Boisguilbert dans le courant de l'analyse économique », In Hecht, J. (ed.), *Boisguilbert parmi nous : Actes du colloque international de Rouen (22–23 mai 1975)*, Paris : INED, 59–82.

Blanc, J. 2014. « La France de François Ier à Louis XIV: souveraineté, richesse et falsifications monétaires ». In Blanc J. and Desmedt L., *Les Pensées monétaires dans l'histoire. L'Europe, 1517–1776*. Paris : Classiques Garnier.

Bodin, J. [1568]. « Response aux Paradoxes de Malestroict ». In *Discours de Jean Bodin, sur le rehaussement et diminution des monnoyes, tant d'or que d'argent et le moyen d'y remédier ; et Responce aux Paradoxes de monsieur de Malestroict. Plus un Recueil des principaux advis donnez en l'assemblée de Saint-Germain-des-Prez, au mois d'aoust dernier. Avec les Paradoxes sur le faict des monnoyes par François Garrault*, Paris : J. du Puys, 1578.

Boisguilbert, P. le Pesant de. 1695. *Le Détail de la France. La cause de la diminution de ses biens, et la facilité du remède, en fournissant en un mois tout l'argent dont le Roi a besoin, et enrichissant tout le monde*. In Hecht, J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 581–662.

Boisguilbert, P. le Pesant de. 1696. *La France ruinée sous le regne de Louis XIV par qui et comment. Avec les moyens de la retablir en peu de temps*. Cologne: Marteau.

Boisguilbert, P. le Pesant de. 1704. *Causes de la rareté de l'argent et éclaircissement des mauvais raisonnements cdu public à cet égard*. In Hecht, J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 965–971.

Boisguilbert, P. le Pesant de. 1705a. *Factum de la France, contre les demandeurs en délai pour l'exécution du projet traité dans le « Détail de la France », ou le Nouvel ambassadeur arrivé du pays du peuple. Réflexions sur l'état de la France. Mémoire pour faire voir qu'on ne peut éviter la famine en France de temps en temps qu'en permettant l'enlèvement des blés hors du royaume, hors le temps de cherté*. In Hecht, J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 741–798.

Boisguilbert, P. le Pesant de. 1705b. *Factum de la France, ou Moyens très faciles de faire recevoir au Roi quatre-vingts millions par-dessus la capitation, praticables par deux heures de travail de Messieurs les ministres, et un mois d'exécution de la part des peuples, sans congédier aucun fermier*

général ni particulier, ... et l'on montre à même temps l'impossibilité de sortir autrement de la conjoncture présente. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 879–956.

Boisguilbert, P. le Pesant de. 1705c. *Mémoire sur l'assiette de la taille et de la capitation*, In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 663–740.

Boisguilbert, P. le Pesant de. 1705–1706. *De la nécessité d'un traité de paix entre Paris et le reste du royaume*. (Fragment d'un manuscrit inédit). In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 799–818.

Boisguilbert, P. le Pesant de. 1707a. *Dissertation de la nature des richesses, de l'argent et des tributs, où l'on découvre la fausse idée qui règne dans le monde à l'égard de ces trois articles*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 973–1012.

Boisguilbert, P. le Pesant de. 1707b. *Traité de la nature, culture, commerce et intérêt des grains, tant par rapport au public qu'à toutes les conditions d'un État. Divisé en deux parties. Dont la première fait voir que plus les grains sont à vil prix, plus les pauvres, surtout les ouvriers, sont misérables. Et la seconde, que plus il sort de blés d'un royaume, et plus il se garantit des funestes effets d'une extrême disette*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 827–878.

Boisguilbert, P. le Pesant de. 1707c. *Mémoire qui fait voir en abrégé que plus les blés sont à vil prix, plus les pauvres sont misérables, ainsi que les riches, qui seuls les font subsister ; et que plus il sort de grains du royaume, et plus on se garantit d'une cherté extraordinaire*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 957–962.

Boisguilbert, P. le Pesant de. 1707d. *Traité du mérite et des Lumières de ceux que l'on appelle gens habiles dans la finance ou grands financiers*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 819–826.

Boisguilbert, P. le Pesant de. 1707e. *Sentence du Châtelet de Paris, qui fixe le prix du pain sixième mai 1649. De par le Roi, et Monsieur le Prévôt de Paris, ou son Lieutenant civil*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 963–964.

Boisguilbert, P. le Pesant de. 1707f. *Supplément du Détail de la France*. In Hecht. J. (ed). *Pierre de Boisguilbert ou la naissance de l'économie politique*, Paris: INED. 1966, Vol. 2, 1013–1020.

Boyer, J.-D. 2017. « *Fermiers et Grains : deux moments de confrontation de Quesnay à la science du commerce. Police contre Polices au nom des libertés* », *Cahiers d'Economie Politique*, 2017/2, n°73, 31–65.

Cadet, F. 1870. *Pierre de Boisguilbert: Précurseur des économistes, 1646–1714*. Paris: Guillaumin.

Cantillon, R. 1755a. *Essai sur la nature du commerce en général*, Londres: Fletcher.

Cantillon R. [1755b], *Richard Cantillon's Essay on the Nature of Trade in General: a variorum edition*. Abingdon: Routledge, 2015.

Castel de Saint-Pierre, C. I. [1708–1735], *Écrits sur l'économie, les finances et la fiscalité*. Dornier C and Reungoat S. (eds). Available on <https://www.unicaen.fr/puc/sources/castel/tmEconomie>.

Castel de Saint-Pierre, C. I. 1723. « *Projet de taille tarifée* ». In Dornier C and Reungoat S. (eds). *Écrits sur l'économie, les finances et la fiscalité*. Available on https://www.unicaen.fr/puc/sources/castel/doc/Economie/projet_de_taille.xml.

Castel de Saint-Pierre, C. I. 1725a. « *Mémoire pour l'établissement de banques provinciales* ». In Dornier C and Reungoat S. (eds). *Écrits sur l'économie, les finances et la fiscalité*. Available on https://www.unicaen.fr/puc/sources/castel/doc/Economie/banques_provinciales.xml.

Castel de Saint-Pierre, C. I. 1725b. « *Projet pour perfectionner le commerce de France (1733)* ». In Dornier C and Reungoat S. (eds). *Écrits sur l'économie, les finances et la fiscalité*.

Available on https://www.unicaen.fr/puc/sources/castel/doc/Economie/projet_commerce.xml

Castel de Saint-Pierre, C. I. 1735. « *Observations sur les colonies éloignées* ». In Dornier C and Reungoat S. (eds). *Écrits sur l'économie, les finances et la fiscalité*. Available on <https://www.unicaen.fr/puc/sources/castel/doc/Economie/colonies.xml>

Chalmers, G. 1802. *An Estimate of the Comparative Strength of Great-Britain, During the Present and Four Preceding Reigns: And of the Losses of Her Trade from Every War Since the Revolution; with an Introduction of previous history. New edition corrected and continued to which is now annexed Gregory King's celebrated State of England*. London: Stockdale.

Chantrel, L. 2014. « Présentation ». In Chantrel L. and Sipos J.-P. (2014), *Scipion de Gramont, Le denier royal : traité curieux de l'or et de l'argent [1620]*. Genève: Slatkine, p. 9–57.

Charles L. and Théré C., 2021. « Des inventaires de culture au Tableau économique. Sur les origines empiriques de l'analyse économique physiocratique », *Revue de synthèse*. T. 142, 7e Série, n° 3–4, 309–341.

Charles, G. 1989, « Boisguilbert et les cadres sociaux de son temps », In Hecht, J. (ed.), *Boisguilbert parmi nous : Actes du colloque international de Rouen (22 – 23 mai 1975)*, Paris : INED, 157–162.

Christensen, P. P. 2003. “Epicurean and Stoic sources for Boisguilbert's Physiological and Hippocratic Vision of Nature and Economics”. *History of Political Economy*. 35 (Suppl), 101–128.

Commines, P. de. 1552. *Les mémoires de messire Philippe de Commines, chevalier, seigneur d'Argenton, sur les faits et gestes de Loys onzième et Charles huitième son fils, roys de France*. Paris : De Roigny.

Davenant, C. 1695. *An essay upon ways and means of supplying war*. London: Tonson.

Davenant, C. 1699. *An essay on the probable methods of making a people gainers in the balance of trade*. London: Knapton.

Damien, R. 2003. “Prolégomènes français à une science politique future : Vauban, Lavoisier, Volney, Neufchâteau, Chaptal”. In Martin, T. (ed). *Arithmétique politique dans la France du XVIII^e siècle*. Paris : INED, 17–34.

Defalvard, H. 1992. « Les vues de Boisguilbert sur les marchés », *Cahiers d'économie politique*. n°20–21, 93–112.

Diderot, D. 1751. « Arithmétique politique ». In Diderot, D. and D'Alembert, J. le Rond (eds). *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers, par une société de gens de lettres*. Paris: Briasson, David, Le Breton, Durand. Vol. 1, 678.

Dictionnaire dit de Trévoux, 1704. *Dictionnaire universel français et latin, contenant la signification et la définition tant des mots de l'une et de l'autre langue avec leurs différents usages que des termes propres de chaque état et de chaque profession, la description de toutes choses naturelles et artificielles, leurs figures, leurs espèces, leurs propriétés, l'explication de tout ce que renferment les sciences et les arts, soit libéraux, soit mécaniques, avec des marques d'érudition et de critique*, 3 vols, Trévoux: Ganeau.

Dockès, P. 1989. « La Théorie spatiale de Boisguilbert ». In Hecht, J. (ed.), *Boisguilbert parmi nous : Actes du colloque international de Rouen (22–23 mai 1975)*, Paris : INED, 97–110.

Dubos, J.-B. 1703. *Les interets de l'Angleterre mal-entendus dans la guerre présente. Traduits du livre Anglois intitulé, Englands interest mistaken in the present War*. Amsterdam: Gallet.

Dubos, J.-B. 1704. *Les interets de l'Angleterre mal-entendus dans la guerre présente. Traduits du livre Anglois intitulé, Englands interest mistaken in the present War. Sixième édition, revüe, corrigée et augmentée de Notes Historiques*. Amsterdam: Lorme.

Dutot N. 1738. *Réflexions politiques sur les finances et le commerce. Où l'on examine quelles ont été sur les Revenus, les Denrées, le Change étranger, et conséquemment sur notre Commerce, les influences des Augmentations et des Diminutions des valeurs numéraires des Monnoyes*. La Haye : Frères Vaillant, Prévost, 2 vols.

Ege, R. 2004. “Aristote et Marx : d'un concept de valeur à un autre”, *Economies et Sociétés. Histoire de la pensée économique*. PE, n°35, 8–9/2004, 1409–1430.

Ege, R. & Rivot, S. 2018. « Le libéralisme de Boisguilbert (un pourfendeur de la contre-productivité) ». *Cahiers d'économie Politique*, 74, 7–33

Evans, G. H. 1967. « The law of demand. The roles of Gregory King and Charles Davenant », *Quarterly Journal of Economics*, vol. 71, 245–264.

Faccarello, G. 1986, *Aux origines de l'économie politique libérale, Pierre de Boisguilbert*, Paris: Anthropos.

Faccarello, G. 1999, *The Foundations of “Laissez-Faire”: The Economics of Pierre de Boisguilbert*, London: Routledge.

Faccarello, G. and Steiner, P. 2008, “Interest, sensationism and the science of the legislator: French ‘philosophie économique’, 1695–1830”. *The European Journal of the History of Economic Thought*, 15 :1, 1–23.

Faccarello, G. and Steiner, P. 2012. “‘Philosophie économique’ and money in France, 1750–1776: the stakes of a transformation”, *The European Journal of the History of Economic Thought*. 19:3 325–353.

Forbonnais, F. Véron Duverger de. 1753. *Le négociant anglois, Traduction libre du Livre intitulé The British Merchant, contenant divers Mémoires sur le Commerce de l’Angleterre avec la France, le Portugal et l’Espagne, par Charles King (édition originale de 1721)*. Amsterdam: Changouin ; Dresde, Paris: Estienne.

Forbonnais, F. Véron Duverger de. 1767. *Principes et observations économiques*, Amsterdam: Rey.

Foucault, M. 1966. *Les Mots et les choses*, Paris : Gallimard.

Furetière, A. 1690. *Dictionnaire universel, contenant généralement tous les mots françois tant vieux que modernes, et les termes de toutes les sciences et des arts...* 3 vols. La Haye: Leers.

Gramont S. de. 1620a. *Le denier royal: Traicté cvrievx de l’or et de l’argent*. Paris : Toussaint du Bray.

Gramont S. de. [1620b]. *Scipion de Gramont, Le denier royal : traité curieux de l’or et de l’argent [1620]*. Chantrel L. and Sipos J.-P. (eds), Genève: Slatkine, 2014.

Groenewegen, P. 1994. « La « French connection » : influences françaises sur l’économie politique britannique ». *Dix-Huitième Siècle*, 26, 15–36.

Groenewegen, P. 2001. « Boisguilbert’s Theory of Money, Circular Flow, Effective Demand and Distribution of Wealth ». *History of Economics Review*, 33:1, 33–43,

Guéry, A. 1984. « Le roi dépensier. Le don, la contrainte et l’origine du système financier de la monarchie française d’Ancien Régime ». *Annales. Économies, Sociétés, Civilisations*. 39/6, 1241–1269.

Guion, B. 2004. “ L’amour-propre bien ménagé : des ruses de la Providence à la morale de l’intérêt », in Dagen J., Roger P. (eds). *Un siècle de deux cent ans ? Les XVII^e et XVIII^e siècles : continuités et discontinuités* « L’esprit des Lettres », Paris : Desjonquères, 56–87.

Halévy, E. 1901. *La formation du radicalisme philosophique, La jeunesse de Bentham*. Paris: Alcan.

Hébert R. F. 2011. « Économie, utopisme et l’abbé de Saint-Pierre. Economy, utopism and Saint-Pierre”. In Dornier C. and Poulouin C. *Les Projets de l’abbé Castel de Saint-Pierre (1658–1743) : Pour le plus grand bonheur du plus grand nombre*. Caen : Presses Universitaires de Caen, 221–232.

Hecht, J. (ed) 1966a. *Pierre de Boisguilbert ou la naissance de l’économie politique*. Paris: INED. 2 vols.

Hecht, J. 1966b. « La Vie de Pierre Le Pesant, seigneur de Boisguilbert ». Hecht, J. (ed). *Pierre de Boisguilbert ou la naissance de l’économie politique*. Paris: INED. 1966, Vol. 1, 121–244.

Hecht, J. 1967. « Pierre de Boisguilbert ou la naissance de l’économie politique », *Population*, 22-1, 111–116

Herbert, C.-J. 1755. *Essai sur la police générale des grains sur leurs prix et sur les effets de l’agriculture*. Berlin: s.n.

Jungels, J.-J. 2021. *Pierre de Boisguilbert et la Bible : des moralistes de Port-Royal à l’économie politique*. Thèse de doctorat. Strasbourg : Université de Strasbourg.

King, G. 1696. *Natural and Political Observations and Conclusions upon the State and Condition of England*. In Chalmers, G. 1802, *An Estimate of the Comparative Strength of Great-Britain, During the Present and Four Preceding Reigns: And of the Losses of Her Trade from Every War Since the Revolution; with an Introduction of previous history. New edition corrected and continued to which is now annexed Gregory King’s celebrated State of England*. London: Stockdale, 405–449

King, G. 1697. *Of the Naval Trade of England Ao. 1688 and the National Profit then arising thereby*. In Barnett G. E (ed). *Two Tracts by Gregory King*. Baltimore: Johns Hopkins Press, 1936.

Le Roy Ladurie, E. 1968. “Les comptes fantastiques de Gregory King”. *Annales. Économies, sociétés, civilisations*, 23/5, 1086–1102.

Mac Donald, Stephen L., 1954, “Boisguilbert: a neglected precursor of aggregate demand theorists”, *The Quarterly Journal of Economics*, vol. 68, issue 3, 401–414.

- Mac Donald, S. L. 1955, “Boisguilbert, théoricien précurseur de la demande globale”. *Revue Economique*. n°5, 789–795.
- Malestroict J. Cherruyt seigneur de [1566], *Les paradoxes du seigneur de Malestroict, conseiller du roy & maistre ordinaire de ses comptes, sur le fait des monnoyes : presentez à Sa Maieste au moys de mars 1566*, Paris : J. du Puys, 1578
- Magnot-Ogilvy, F. 2020. *Le Roman et les Echanges au XVIIIe siècle. Pertes et profits dans la fiction des Lumières*. Paris : Classiques Garnier.
- Martin, T. (ed). 2003. *Arithmétique politique dans la France du XVIIIe siècle*. Paris : INED.
- Marx, K. [1859]. *A Contribution to the Critique of Political Economy*. Moscow: Progress Publishers, 1970.
- Meyssonnier. S. 1989, *La Balance et l'Horloge. La genèse de la pensée libérale en France au XVIIIe siècle*, Montreuil: Editions de la passion.
- Melon, J.-F., 1734, *Essai politique sur le commerce*. s.l.: s.n
- Melon, J.-F., 1736, *Essai politique sur le commerce. Nouvelle edition augmentée de sept chapitres, et où les lacunes des editions précédentes sont remplies*. s.l.: s.n
- Mézeray, F. E. de. [1643–1651]. *Histoire de France depuis Faramond jusqu'au règne de Louis le juste : enrichie de plusieurs belles & rares antiquitez & de la vie des reynes*. Nouvelle édition. 3 vols. Paris: Thierry, Guignard, Barbin, 1685.
- Mirabeau, V. de Riqueti, 1757, *L'Ami des hommes, ou Traité de la Population*. 3 parties en un volume. Avignon : s. n.
- Moreau, I. 2005. « Libertinisme et philosophie ». *Revue de synthèse*, 2005/1, pp. 139–160,
- Nicole P. [1670]. *Essais de morale contenus en divers Traités sur plusieurs devoirs importants*. Paris: Desprez. Vol. 2, 1733.
- Perrot, J.-C. [1984] 1992. « La main invisible et le Dieu caché ». In *Une histoire intellectuelle de l'économie politique*. Paris : Editions de l'École des Hautes Etudes, 333–354.
- Perrot, J.-C. 1989. « Portrait des agents économiques dans l'œuvre de Boisguilbert », In Hecht, J. (ed.), *Boisguilbert parmi nous : Actes du colloque international de Rouen (22–23 mai 1975)*, Paris : INED, 141–156.
- Petty, W. 1662. *A Treatise of taxes and contributions*. London : Brooke.
- Petty, W. 1686. *Deux essais d'arithmétique politique, touchant les villes et hospitaux de Londres et Paris. Dediés au Roy, par le chevalier Petty, de la Société Royale*. Londres :B.G., Paris : Vaillant.
- Petty, W. 1687. *Two essays in political arithmetick concerning the people, housing, hospitals, &c. of London and Paris*. London: Lloyd.
- Petty, W. 1690. *Political Arithmetick*. London: Clavel, Mortlock
- Petty, W. 1699. *Five Essays in Political Arithmetick/Cinq Essais sur l'Arithmétique Politique*. London: Clavel, Mortlock.
- Petty, W. [1664]. *Verbum Sapienti*. In Hull, C. H. (ed). 1899. *The Economic writings of Sir William Petty*. Cambridge: Cambridge University Press, Vol. 1, 99–120.
- Pintard R. [1943]. *Le Libertinage érudit dans la première moitié du XVIIe siècle*. Genève : Slatkine, 1983.
- Poulouin, C. 2016, “L'œuvre inclassable de l'abbé de Saint-Pierre”. In Bouchardon M. and Guéret-Laferté M. *L'Œuvre inclassable*, Actes du colloque organisé à l'Université de Rouen en novembre 2015. Publications numériques du CÉRÉDI. available URL: <http://ceredi.labos.univ-rouen.fr/public/?l-oeuvre-inclassable-de-l-abbe-de.html>
- Quesnay, F. 1756, « Fermiers », In Diderot, D. & D'Alembert, J. Le Rond, (eds), *Encyclopédie, ou Dictionnaire raisonné des Sciences, des arts et des Métiers*, vol. 6, Paris : Briasson, David, Le Breton, Durand, 529–540.
- Quesnay, F. 1757 a. « Grains », In Diderot, D. & D'Alembert, J. Le Rond, (eds), *Encyclopédie, ou Dictionnaire raisonné des Sciences, des arts et des Métiers*, vol. 7, Paris : Briasson, David, Le Breton, Durand, 812–831.
- Quesnay, F. 1757 b. “Impôts”. In Théré, C. ; Charles L. and Perrot, J.-C. (eds), *François Quesnay, Œuvres économiques complètes et autres textes*, Paris: INED, vol. 1, 216–256.
- Quesnay, F. 1758. “Tableau économique”. In Théré, C. ; Charles L. and Perrot, J.-C. (eds), *François Quesnay, Œuvres économiques complètes et autres textes*, Paris: INED, vol. 1, 397–411.

- Reungoat, S. 2004. *William Petty. Observateur des Îles britanniques*. Paris: INED.
- Reungoat, S. 2017. “Préface”. In Petty William, *Genèse de l’arithmétique politique*. Reungoat S. (ed). Genève: Slatkine
- Reungoat, S. 2018. “A l’école de l’Angleterre : échos de l’œuvre de William Petty dans la pensée économique française du premier XVIII^e siècle”. In Dornier, C. (ed). *Les écrits de l’abbé Castel de Saint-Pierre*. Caen : Presses universitaires de Caen. Fontes et Paginae – Sources modernes : on line: https://www.unicaen.fr/puc/sources/castel/doc/Economie/intro_petty.xml [consulted on 26/02/2021].
- Rosanvallon, P. 1982. « Boisguilbert et la genèse de l’Etat moderne », *Esprit*, 61 (1), 35–52.
- Rohrbasser J.-M. 1999. « William Petty et le calcul du doublement de la population », *Population*, 54 (4–5), 693–706.
- Schumpeter, J. A. [1954], *History of economic analysis*, London : Taylor & Francis, 2006.
- Simonin, J.-P. 1996, « Des premiers énoncés de la loi de King à sa remise en cause », *Histoire & Mesure*. Volume 11, n°3–4, 213–254.
- Soulligné N. de, 1697. *The Desolation of France Demonstrated ...*, London: Salusbury.
- Spengler, J. J. 1966. “Les théories économiques de Boisguilbert comparées à celles des réformateurs de son temps”. In Hecht, J. (ed.). *Pierre de Boisguilbert ou la naissance de l’économie politique*, Paris : INED. Vol.1, 1–26.
- Sully, M. de Béthune duc de [1638]. *Mémoires de Sully, principal ministre de Henri-le-Grand*. Paris : Bastien. 6 vols. 1788.
- Taylor, J. A. 2005. *British Empiricism and Early Political Economy: Gregory King's 1696 Estimates of National Wealth and Population*. Greenwood Publishing Group
- Van den Berg, R. (ed.). 2015. *Richard Cantillon's Essay on the Nature of Trade in General: a variorum edition*. Abingdon: Routledge.
- Vauban, S. Le Prestre de. 1707. *Projet d'une dixme royale : qui supprimant la Taille, les Aydes, les Douanes d'une province à l'autre, les Décimes du clergé, les Affaires extraordinaires; et tous autres Impôts onereux et non volontaires : Et diminuant le prix du Sel de moitié et plus, produirait au Roy un REVENU CERTAIN ET SUFFISANT, sans frais; et sans être à charge à l'un de ses Sujets plus qu'à l'autre, qui s'augmenteroit considerablement par la meilleure Culture des Terres*. Rouen: s.n.
- Virol, M. 2001. « Connaître et accroître les peuples du royaume : Vauban et la population ». *Population*, 56/5, 845–875.
- Waterman, A. M. C. 2003. “The Changing Theological Context of Economic Analysis since the Eighteenth Century”, *History of Political Economy*. 40 (5), 121–142.