Physiocracy in Spain

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Introduction

Many historians of eighteenth-century Spain have addressed, in one way or another, the introduction of physiocracy and its influence in Spain (Sarrailh 1957, 547, 549; Herr 1958, 45). In general, these references are based on a rather vague definition of the term, one which stresses a kind of agrarianism, holding agriculture to be the most important (but not the only) productive sector. Occasionally there are references to the idea of a single tax (although not necessarily in relation to agricultural production), but not much else. In actuality, physiocracy was defined by a precise conceptual model, created in order to engage in the controversies on economic policies of the period (François Quesnay, 1957; Vaggi 1991). Physiocrats defined themselves more by the almost sectarian defense of this theoretical and conceptual model, and the language that expressed it, than by their proposals on policy questions. This theoretical model, in its core, included the following ideas: that agriculture was the only productive sector, the concept of *produit net* and its circulation through the Tableau oeconomique including, accordingly, the protection of a single tax and of free trade.

Regarding the political sphere, the term "legal despotism" was nor-

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mally used, but with various interpretations: despotism based on law (that is to say, constitutionalism), or despotism protected by law (or despotism *tout court*). Clearly, the physiocrats had different positions vis-à-vis the political order. Attitudes ranged from those of the highly reactionary Mirabeau to the revolutionary ramblings of Dupont (a *feuillant* monarchist who was forced to emigrate to the United States). Common to all, however, was the opinion that, within the framework of the *Ancien Régime* in which they lived, the only possible way in which to carry out the reforms they advocated was from a position of power. Consequently, they directed their advice and their warnings to those positions of power. The despot had to be a reformist, and even in that case, reforms were not easily carried out (Fox-Genovese 1976). Despite this, the proposals maintained a liberal component, although it was consistently limited to the economic sphere.

Using these definitions, the scale of the doctrine's influence can be seen as much by the way in which the physiocrats' writings became known in Spain, as by the extent to which later Spanish authors demonstrated their famililarity with concepts and terms commonly employed by the French authors. With this in mind, this article will consider the significant impact of the physiocratic doctrine, beginning with a description of the characteristics of the Spanish economy and society that fostered its supposed prominence. In the next three sections, we analyze various possible influences, ranging from the eighteenth-century translations to those from the beginning of the 1820s, as well as the works of several early ninteenth-century authors whose writings show a distinct physiocratic flavor.

Spain in the Eighteenth Century

The eighteenth century was, for Spain, the century during which the economy began to overcome a long phase of decline. The arrival of a new dynasty, the Bourbons, with new ideas for development policy, and the impetus given by demographic acceleration, heralded this upward movement. This trend was common to all European countries, and Spain, especially in the second half of the century, was no exception. The country underwent a movement away from a regionalized economy— almost exclusively agrarian, and based on a feudal system—toward an integrated economic system with commercial agriculture and a growing manufacturing sector. During this time, as a result of their support for the

Austrian pretender (later the Emperor of Austria), a certain "Austrian" vision persisted in the kingdoms of the Crown of Aragon, one of the two units that formed the Kingdom of Spain after the War of the Spanish Succession.

The upward economic trend benefitted greatly from the arrival of Carlos III, who succeeded his brother Fernando VI in 1759. Formerly King of Naples, Carlos III brought with him Italian officials whose education and practical experience in government had been molded in one of the most brilliant intellectual milieux of the period.

The basically agrarian economy of Spain at that time was, however, seriously distorted. The predominance of excessively small holdings in the north and excessively large holdings in the south created a dichotomy that persisted into the twentieth century. To the enlightened minds of the time, this dichotomy posed a basic problem—one which was not necessarily to be solved, but certainly to be circumvented. Large parts of the southern *latifundia* were not cultivated at all, and production techniques were archaic in most areas, except for the Atlantic basin and parts of the Mediterranean region. Most of the land was cultivated under a three-field system, quite different from the continental system. The three-field system used in Spain allowed each field two years fallow period; during the first year fallow the stubble was used for grazing. In the most advanced areas of the Mediterranean, the two-field rotation system was dominant. This system was also widespread in southern France, and was called *petite culture* by the physiocrats.

Other problems existed as well. Large areas of fertile land were held in mortmain; other vast tracts could not be enclosed due to the grazing rights of the Mesta guild. This was the powerful sheep-owners' guild that had been granted the right to pasture their flocks as they were herded south and north each year. As a result, the properties could not be fenced, and the free use of private property on the land was seriously limited.

Despite these distortions, the upward trend of the economy created potentially favorable conditions for almost all involved in the agrarian process, especially the landlords, whether they farmed the land themselves or rented it out to farmers. Higher prices and rents resulted from the process of development, and everyone wanted to benefit from them (Anes 1969).

The evolution of economic conditions in Spain meant that the basic elements of the absolutist state remained intact through the fourth decade of the nineteenth century, with only two brief periods of political turmoil—during the Napoleonic invasion (1808–12) and the Liberal Triennium (1820–23). Until these periods of turmoil, physiocracy had sympathizers, and reforms of a physiocratic type were proposed. Indeed, Spain's agrarian state could be seen as a field of experiment for physiocratic modernization proposals. The southern *latifundia*, feudal in origin and nature, could (incorrectly) be viewed as the most prominent example of the *grande* culture, if *grande* was to be understood as a definition by size only, leaving aside the legal and technical considerations that were so essential to the physiocratic vision. Certainly, some Spanish authors did misread the term in this way. At the same time, free trade in grain was seen as a possible solution to recurrent shortages in production, and the State was suffering a heavy fiscal crisis, calling for an immediate solution.

Diffusion of physiocratic ideas could be explained by other facts as well, including the major French intellectual influence on the Spanish elite beginning when the Bourbons came to power in 1714. As a result, enlightened thinkers in Spain debated almost all the problems simultaneously being discussed in France (Sarrailh 1957): the size of the holdings and their tenancy; free trade in corn; as well as fiscal reform, including proposals for a single tax, and new agricultural production techniques that could bring higher incomes to landlords, farmers, and the State. This common interest was perputuated by the creation of the *Sociedades económicas de amigos del pais*, which was defended by the Count of Campomanes, a senior government official and economist. The Spanish economic and agricultural literature during this period centers on the same issues as those taken up by the French when physiocracy was at its height, and consequently, this literature has a distinctly physiocratic flavor (Herr 1958).

The Translations

The earliest relevant translations were of an essay by Mirabeau (which later became part of *L'Ami des hommes*), translated by Serafín Trigueros, and of Quesnay's *Maximes générales du gouvernement d'un royaume agricole*, translated by Manuel Belgrano (Mirabeau 1764; Quesnay 1794).

Mirabeau's essay is significant in that it was the first product of his collaboration with Quesnay. They proposed that wheat cultivation should become widespread, with an agrarian organization system based on *grande* culture. It was published in part 5 of L'Ami des hommes, along with a synopsis of the treatise on new agronomy by the Englishman Thomas Hale—another indication that plans were being proposed to modernize agriculture.

Much more important than the work by Mirabeau, however, is the *Maximes*, not only because of the nature of the work, but also (and equally) because of the identity of the translator, Belgrano. The last part of the article "Grains," published by Quesnay in the *Enyclopédie* in 1757, contained 14 maxims. In the first edition of the *Tableau Economique* these numbered 22, under the title "Remarques sur les variations de la distribution des revenues d'une Nation"; 23 in the second edition of the *Tableau*, and 24 in the third. In the final version of the work, published on its own, there are 30; they have grown in size, and their expression is more intransigent (all in *François Quesnay*, 1957). The *Maximes* is, in fact, a summary of all the physiocratic ideas, even if the theoretical model behind the doctrine is absent. This last version was the one translated into Spanish by Manuel Belgrano.

Belgrano, an Argentinean national hero, studied in Salamanca, Oviedo, and Valladolid, returning to his birthplace of Buenos Aires in 1794. Appointed Consulate Secretary in the same year, he combined his political career with the task of spreading the physiocratic doctrine through his *Memorias* (in Belgrano 1954)—a work without equal in the Peninsula. In addition to his translation of Quesnay, he also published the *Principios de la ciencia económica*, by the Conde de C., in fact a translation of "Abregé des Principes de la Science Economique," an article in the *Nouvelles ephemérides* in 1775. This article was almost an exact translation of paragraphs 3 to 21 of the work *De l'origine et progrès d'une science nouvelle*, written by Dupont de Nemours (1767). Along with this translation, Belgrano published the *Compendio de los principios de la economia política* by the Margrave of Baden, a known physiocrat (Conde de C. 1796).

We should note that although Belgrano was responsible, with the translation of these three texts, for the work that was most influential in introducing physiocracy in Spain, his faithfulness to their principles in his own work is questionable. There are clear cases of deviation: in several of his works, Belgrano literally copies statements by Genovesi. One example of this is the way in which he reduces the unique productivity of agriculture to a pure agrarianist position; the production of wealth in the agricultural sector is characterized as more "sure"; while in other sectors, it is more "precarious" (Belgrano 1954).

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Nevertheless, in one particular instance, Belgrano appears to have defended Quesnay's theory to the letter. Before the Congress of Tucumán, along with General San Martín, Belgrano presented a proposal aimed at establishing a monarchical government headed by a sovereign of Inca descent. Not coincidentally, one of Quesnay's works was entitled "Analyze du gouvernement des Incas de Pérou." Quesnay was full of praise for this system of government, which he compared with his own proposal for a despotic political order (even though his first great model was China, described in "Despotisme de la Chine" (*François Quesnay*, 1957, 913–16), which was to some extent plagiarized from work by Roussel de Surgy (Mattei 1975).

The next translation of importance was of Essai sur l'amélioration des terres by Henri Patullo, an Irish agronomist settled in France who was consulted by the physiocrats about the "new agriculture" on the other side of the channel. Patullo's translations included a large part of "Hommes," an article by Quesnay for the Encyclopédie, although the translation was not published at that time and was not rediscovered until 1899 by Stephan Bauer. The translation, which renders the title as Discurso sobre el mejoramiento de los terrenos, dates from 1774, the same year Campomanes published his Discurso sobre el fomento de la industria popular. The translator of Patullo's piece, Pedro Dabout, was an associate of Campomanes, and, according to some sources, a fervent physiocrat. A comparison of Campomanes's two Discursos and Patullo's Discurso seems to suggest a joint publication-the three form a collection; if this is so, Campomanes abandoned the idea of publishing his Discurso sobre la agricultura and decided to publish a physiocratic work, in spite of his criticism of the physiocrats in his Discurso sobre el fomento de la industria popular (Campomanes 1774; Patullo 1774; Llombart 1976; 1992).

In the translator's introduction, Dabout mentions the waste lands of Andalusia, which "maintain a form of the advantageous agriculture" that Patullo proposes ("grande culture"). The subject was beginning to take on real importance, but the interpretation was wrong: the big estates in northern Europe and England were a consequence of an enclosure movement, and they were capitalist in nature, while the southern Spanish *latifundia* was a remnant of the process of reconquest from Arab invaders, organized in accordance with strict feudal norms. They retained this form until the twentieth century. Dabout also translated a dissertation from the University of Uppsala written by Laurentius Elkmark in 1771, *Disertatio ideal ordinis socialis*, which constituted an accurate synthesis of the physiocratic doctrine (Lluch and Sandels 1985).

One unusual way in which physiocracy was introduced to Spain can be found in the Spanish translation of *The Wealth of Nations* by Josef Alonso Ortiz. He included with his translation a "Brief Exposition of Adam Smith's Doctrine Compared with That of the French Economists," which had been published in a French edition (Smith 1794, vol. 4) translated by Germain Garnier, a physiocrat sympathizer. This exposition stresses Smith's physiocratic tendencies, that is to say, that agriculture, if not the only productive sector, is at least more productive than the others, for it allows farmers to pay for the rent of land. Indeed, Smith is presented as a sympathizer, though a critical one, of the physiocratic doctrine. In fact, Garnier's objective was to mark the differences between Smith and the French authors, and Ortiz probably included the "brief exposition" in order to convert Spanish sympathizers of physiocracy to the new theory.

The controversy between Valentín de Foronda and Pierre Paul Le Mercier de la Rivièra on the subject of the Banco de San Carlos is another example of the indirect dissemination of physiocracy, a doctrine with which Foronda maintained an unusual relationship (Foronda 1787). If we distinguish between the philosophy, the analytical contributions, and the economic policy of the physiocrats, Foronda took the three components in unequal measure. With regard to the philosophical principles, Foronda was influenced by Guillaume Grivel, who came late to physiocracy and formed the link between the physiocrats' absolutist despotism and Foronda's anti-absolutist liberalism. Nevertheless, Foronda was strongly attracted by some of the reflections of the physiocrats (Barrenechea 1985).

Another Basque economist, Nicolás de Arriquivar, debated at length many of the arguments examined by Mirabeau in *L'Ami des hommes*. His divergences from true physiocracy, however, are obvious: Arriquivar concentrated on the first three parts of Mirabeau's work, the pre-physiocratic parts (which contain a number of pieces echoing Cantillon); and he distanced himself from many subjects that later constituted physiocratic orthodoxy, such as the debate on the comparative use of oxen and mules (Arriquivar 1779).

The Agronomists and the Scientists

After the French Revolution, the situation in Spain changed, and any French work became suspect. As a result, the influence that physiocracy could have on the authors discussed in this section, who were writing at the beginning of the nineteenth century, took a different form than those previously discussed. Most of these authors were scientists who developed ideas linked to their fields of knowledge.

These works also introduce the material in a new form, for instance, in the influx of ideas of the "new agriculture." In many cases, the scope of the new agronomists went beyond the strict limits of agronomy to deal with economic principles. This is the case of agronomers such as H. L. Duhamel de Monceau, whose work was translated due to the influence of Campomanes, and M. Dupuy-Demportes, whose work was translated by José Valcarcel (Duhamel de Monceau 1751; Valcarcel 1765–95). Both works were welcomed at the time by the physiocrats, who had their own agronomists, like Patullo, but who nonetheless were the product of what has been called "French underdevelopment" in comparison with England. Duhamel and Dupuy translated and adapted English works, although what they wrote actually constitutes something new, and indeed, in the case of Duhamel, a landmark in the new agronomy in France.

The agricultural and economic themes that make up the physiocrats' theoretical model and their policy proposals were addressed by a large number of Spanish authors. The idea of a natural order—a possible starting point for liberalism—the idea of free grain trade, the defense of new agricultural techniques, and the idea of a fiscal reform that would impose a single tax were all matters for debate in Spain in the second half of the eighteenth century and the first years of the nineteenth century.

Works on agricultural subjects published in this period contain numerous references to these ideas, and in certain proposals the influence of physiocracy is quite noticeable, such as the idea of working the land faster with mules, something implicit in *grande* culture (although the French proposed the use of horses). But we should stress that in Spain these proposals differed markedly in two ways from those put forward at the same time by the physiocrats and their followers. First, in Spain the proposals had no theoretical basis, whereas those of the French did; these were proposals for isolated situations, which, though not arbitrary, did not go beyond one particular problem and a few—very few—of its related elements. Second, the characteristics of the situation in Spain often imposed so many modifications on the proposals that they became blurred in comparison with the same proposals as advocated by the physiocrats. Their proposals were radical and intransigent, in accordance with the form of their theoretical and practical model (Argemí 1989; Lluch and Argemí 1985).

We should bear in mind that the techniques that comprised the new agriculture, the work of Jethro Tull and H. L. Duhamel, were well suited to the form of agriculture in practice in Atlantic areas, with their particular characteristics of climate and soil. Unfortunately, it would have been hard to adapt them to the Mediterranean region, except at great cost; but few authors realized this. Those who advocated the application of part of the system, and those who, like Vidal i Cabases, supported the system as a whole, all believed it would be an instant cure for all the agricultural ills of the country (Argemí 1984). Some, however, like Fernández Vallejo, were aware of the great agricultural differences in various regions of Spain, which Campomanes had noted previously. They viewed the Cantabrian cornice as a perfect setting for all the reforms proposed by the new agronomy, but saw one idea (the large estates) as potentially a greater problem than the technical aspects (Argemí 1989).

This movement culminated in Jovellanos's *Informe*. Although it did not incorporate elements of agronomist technique, it did speak of the need for agronomist publications (Jovellanos 1795; Varela 1988). Its publication coincided with the peak of the revolution in France and marked the end of an epoch.

With the coming of the new century, the agronomists who lived through the period of Napoleonic domination and the reign of Fernando VII carried out the reforms. The treatises of Arias, Boutelou, and others are fairly accurate syntheses of the techniques that comprised the new agriculture: crop rotation, fertilization, irrigation, and so on (Arias 1808; Botelou 1817; Quinto 1818).

In these treatises, however, any concern for the economic structure of agriculture disappears. The form and size of the property, the forms of tenancy, and legislation on trade are hardly considered; if they are, a classical form of organization, that of *latifundia*, or in some cases of tenant farming, is taken for granted. Neither the economics of agriculture nor the concept of an agrarian law to modify the prevailing structures are mentioned—subjects that seemed far too dangerous after the upheaval in France.

Besides the "orthodox" physiocrats, there were also a number of dissenting voices at odds with the doctrine in Spain. Turgot's followers or protégés were especially important because his ideas went beyond the physiocratic plan to present what would be called classical political economics in its complete form at the time of Smith. The outstanding figures were two scientists from different spheres, Antoine Lavoisier and Jean Antoine Caritat, Marquis of Condorcet, who made several incursions into the field of political economy.

Lavoisier made empirical calculations concerning wheat along physiocratic lines and complemented them with calculations of the French national product during the Revolution (which finally devoured him). A short article on this subject was translated in a Spanish review (Lavoisier 1798). Condorcet's influence was more significant since his *Compendio de la riqueza de las naciones* (1792) was translated: the work bears witness to the classical character of Turgot, and the relationship between Smith and the physiocrats who had such a profound influence on him (Argemí and Lluch 1987).

But both in terms of the translations of the physiocrats and agronomists' work and of the knowledge that the Spanish had of their proposals, the overall picture is one of a partial, uneven influence. There was no unifying element for all the theories and the policy proposals. This unity could have been provided by the text (discussed below) that shows the greatest physiocratic influence; but it did not arrive in Spain until a much later date, during the Liberal Triennium (1820–23).

The Synthesis

The last works in which a physiocratic influence may be detected were published in the 1820s. The most important of these was Mercier de la Rivière's well-known work, *El orden natural y esencial de las sociedades políticas*, translated by Juan del Castillo y Carroz, published in Valencia in 1820 and again in 1823. What differentiates the translation from the original are the translator's notes; in 1820, they have a constitutionalist ring, but by 1823, they are absolutist in tone. The translator, born in Valencia in 1760 to an aristocratic family, held various positions as a doctor of law until embarking on a diplomatic career in 1790. On his return to the country in 1802, he entered the state secretariat, in which he became first officer and later director general. He returned briefly to diplomacy, but his wife died and he then joined the priesthood. He became chaplain of the Real Maestranza and died in 1828.

A man with strong links to ultra-Royalist absolutism as well as to

the university world, his work represents an attempt to give ideological coherence to counterrevolutionary currents. The differences between the notes in 1820 and 1823 are of interest. At the later date, Castillo y Carroz says that the 1820 notes were pervaded by "certain forms of the system that were fashionable"; in contrast, the 1823 notes appear without these "disguises, blemishes and imperfections" (iii). The last of these notes, also the longest, is a résumé of Mercier de la Rivière's work and, to a certain extent, of Castillo's own ideas.

The last note begins with the principles of property, security, and freedom (those of Locke and the physiocrats). From them, the basic institutions of society are constructed: natural laws, security in property, tutelary authority personified by an absolute monarchy, a body of magistrates with duties and rights, and an interpretation of the laws that allows the exercise—accepted by the people—of despotic authority. These institutions work if natural economic laws are respected, if a single tax is imposed, industry neglected, and free trade permitted. In addition, he says, power should be exercised by a single authority, without checks by the executive and legislative bodies. Magistrates should form an autonomous body, chosen by royal appointment, in the manner of Chinese Mandarins: a clear example of legal despotism.

As a whole, Castillo's legal despotism was fully physiocratic, although it tended toward more inflexibly conservative positions than those espoused by Mercier de la Rivière in the original work. More strongly than in the original, Castillo defends the hereditary monarch who has both legislative and executive powers, with the only mediation between him and the people being a body of magistrates who are the public servants executing the monarch's decisions. In another note, Castillo defends the aristocracy from attacks made by Mercier de la Rivière, who feared the despotic attitude of aristocracy. Castillo says that in Spain this type of despotism no longer exists.

Mercier's work offered an accurate summary of the physiocratic doctrine and reached a wide audience. The translation was done fifty years after the original; this may be due to the succession of events that took place in the interim, both in Spain and in France. During the Constitutional Triennium, the introduction of the Enlightenment was completed in Spain, and with it, its main economic component, physiocracy.

Yet vestiges of physiocracy survived for some time. In 1846, a few months before Richard Cobden's triumphant journey through Spain, a series of articles were published in *La Esmeralda* with the expressive

title "La industria no es productiva" under the name L. M. de D. (Lluch 1980). Even in the twentieth century, the Spanish Georgists, especially the Andalusians, called themselves physiocrats: one of their broadsheets was entitled *Los fisiócratas modernos* (Albendín 1911). But theirs is a quite different story; in spite of their intentional use of the name, they had little to do with true physiocrats.

Conclusion

Cameralism, new agronomy, and physiocracy were complementary elements and currents stimulating a progressive process within the framework of the *Ancien Régime* (Soboul 1977). But the theoretical influence of the three and their diffusion was unequal (Venturi 1970).

Physiocracy was, in fact, the economic formalization of a capitalist economic system constructed on a basis of agriculture in which other sectors of the economy were of limited importance. It is curious that the technical organization of agriculture that the physiocrats defended (the three-field system) was not considered modern at all in the eighteenth century. They spoke in passing of the new agronomy, which they admired, but it was not integrated into the core of their proposals. As a result, physiocracy and new agronomy must be seen as complementary parts of the same, often overlapping, vision. On the other hand, cameralism had its strongest influences in countries where the *Ancien Régime* was stronger.

The reforms defended by the physiocrats and agronomists favored the incipient bourgeois order. Higher productivity meant higher profits, and state despotism meant that it was possible to eliminate the obstacles to the new order. But given different conditions, the reforms had different interpretations. If the land was largely the property of the aristocracy, and if the state was of the *Ancien Régime*, higher productivity meant higher income from the land and more income for the aristocracy; despotism signified the maintenance of an absolute monarch. Because of this ambiguity, physiocracy was received in different ways, depending on whether bourgeois order had been established. More precisely, as Tocqueville noted, its influences were clearest in post-Revolutionary France.

In eighteenth-century Spain, it is clear that physiocrats and agronomists were accepted insofar as they were revolutionary, and they were representatives of a capitalist order waiting impatiently to be born. This is especially true in the kingdoms of the Crown of Castile as opposed to those under the Crown of Aragon, which was more linked to the Austrian vision, which developed cameralism as basic theoretical instrument. The more strictly analytical nucleus of the physiocratic proposals is, however, conspicuous by its absence. The diffusion of physiocratic doctrine in Spain was similar to its pattern in Germany or Italy (Venturi 1970).

During the nineteenth century, after the French Revolution, physiocrats and new agronomists' ideas were accepted because of their reactionary and conservative aspects both in Castile and in Valencia, two regions of the two different kingdoms. Only Catalonia and the Basque Country developed a new class, which was interested in a new political order with industrial interests that did not coincide with the physiocratic vision.

Before the turn of the century, Belgrano and Foronda represent a progressive movement. In the nineteenth century, Castillo y Carroz and a number of agronomists such as Boutelou represented change. The first two were liberals, and the others conservative, even reactionary. But both liberal and conservative elements were present in physiocracy, albeit with differing degrees of importance, just as they were during the Enlightenment as a whole. What is interesting is how progressives and reactionaries looked for inspiration in different moments and situations, and sometimes in the same authors.

References

Albendín, Antonio. 1911. Los fisiócratas modernos. Ronda: Rondeña.

- Anes, Gonzalo. 1969. Economía e ilustración en la España del siglo XVIII. Esplugues: Ariel.
- Argemí, Lluís, ed. 1989. Agricultura e ilustración. Madrid: MAPA.
- . Llibertat mitigada per a l'agricultura. L'avenç 64:40-44.
- Argemí, Lluís, and E. Lluch. 1987. La difusión en España de los trabajos económicos de Condorcet y Lavoisier. *Hacienda pública Española* 108–9:147–76.
- Arias, Sandalio de. 1808. Cartilla elemental de agricultura, acomodada a nuestro suelo y clima. Madrid: Gomez Fuentenebro.
- Arriquivar, Nicolás de. [1779] 1987. Recreación política. Edited by J. Astigarraga and J. M. Barrenechea. Bilbao: Instituto Vasco de Estadística.
- Barrenechea, J. M. 1985. Valentín de Fonda ante la Fisiocracia. In Lluch and Argemí 1985.
- Belgrano, M. 1954. Estudios económicos. Buenos Aires: Raigal.
- Boutelou, Claudio. 1817. Elementos de agricultura. Madrid: Martinez Davila.
- Campomanes, Pedro Rodriquez, Conde de. 1774. Discurso sobre el fomento de la industria popular. Madrid: Sancha.
- Conde de C. 1796. Principios de la ciencia económica. Buenos Aires: Real Imprenta

de Niños Expósitos.

- Condorcet, Marqués de. 1792. Compendio de la obra inglesa intitulada riqueza de las naciones. Madrid: Imprenta Real.
- Duhamel de Monceau, H. L. 1751. Tratado del cultivo de las tierras según los principios de Mons. Tul, inglés. Madrid: Orga.
- Dupont de Nemours, P. S. 1767. *De l'origine et des progrès d'une science nouvelle.* Paris.
- Elkmark, Laurentius. 1771. Disertatio ideam ordinis socialis. Translated by Pedro Dabout. Uppsala.
- Foronda, Valentin de. 1787. *Miscelanea, o colección de varios discursos*. Madrid: Benito Cano.
- Fox-Genovese, Elizabeth. 1976. The Origins of Physiocracy. Ithaca: Cornell University Press.
- François Quesnay et la physiocratie. 1957. Paris: Institut National d'Etudes Demographique.
- Herr, Richard. 1958. *The Eighteenth-Century Revolution in Spain*. Princeton: Princeton University Press.
- Jovellanos, Gaspar Melchor de. 1795. Informe sobre la ley agraria. Madrid: Sancha.
- Lavoisier, Antoine Laurent. 1798. Resultados de algunos experimentos de agricultura. Semanario de Agricultura y Artes. Madrid.
- Llompart, Vicente. 1976. Ley agraria y sociedades de agricultura: la idea de Campomanes. *Información comercial Española* 512:57-74.

- Lluch, Ernest, and Morj Sandels. 1985. Una traducción castellana de un fisiócrata sueco. *Trienio* 6 (November): 209–13.
- Lluch, Ernest, and Lluís Argemí. 1985. Agronomía y fisiocracia en España, 1750-1820. Valencia: Alfonso V el Magnánimo.

Lluch, Ernest. [1846] 1980. La gira triomfal de Cobden per España. Recerques 21.

- Mattei, Aldo. 1975. Un plagio di F. Quesnay: el dispotismo della Cina. L'idea di stato nell iluminismo francese. Roma: Studio.
- Mercier de la Rivière, Pierre Paul. [1820] 1823. El orden natural y esencial de las sociedades políticas, traducido con notas por Justo Linda Calle y Zorcar. Valencia: Benito Monfort.
- Mirabeau, Marquis Victor Riquetti de. 1764. Disertación sobre el cultivo de trigos que la academia de agricultura de la ciudad de Berna premió en el año 1760. Madrid: M. Ruiz.
- Patullo, Henri. 1774. *Discurso sobre el mejoramiento de los terrenos*. Translated by Pedro Dabout. Madrid: Real Compañía de Impresores y Libreros del Reino.
- Quesnay, François. [1794] 1984. Máximas generales del gobierno de un reino agricultor. Máximas generales de François Quesnay. Translated by Manuel Belgrano. Madrid: Instituto de Cooperación Iberoamericana.
- Quinto, Agustin de. 1818. Curso de agricultura práctica, conforme a los últimos adelantamientos hechos en esta ciencia, y a las mejores prácticas agrarias de Europa. Madrid: Collado.

- Sarrailh, Jean. 1957. La España ilustrada de la segunda mitad del siglo XVIII. Mexico: Fondo de Cultura Económica.
- Smith, A. 1806. La riqueza de las naciones. Translated by José Alonso Ortíz, with notes and illustrations relative to Spain. Valladolid: Viuda e hijos de Santander.
- Soboul, Albert, et al. 1977. Le siècle des lumières. Paris: Presses Universitaires de France.
- Varela, Javier. 1988. Jovellanos. Madrid: Alianza.
- Valcárcel, José Antonio. 1765–95. Agricultura general y gobierno de la casa de Campo, compuesta por el noble agricultor de "M. Dupuy" y de los autores que mejor han tratado este arte, y de otras varias observaciones particulares. Valencia: Monfort.
- Venturi, Franco. 1970. Utopia e riforma nell'illuminismo. Torino: Einaudi.
- Vaggi, Gianni. The Economics of François Quesnay. Cambridge: Cambridge University Press.