

Título: “Humboldt and the classical economists on natural resources, institutions and underdevelopment”

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Resumo: O artigo examina como os economistas clássicos, em parte informados pelo relato detalhado e pioneiro por Humboldt sobre um país tropical (México), interpretaram as conexões entre recursos naturais, instituições e crescimento econômico. O paradoxo aparente de uma relação negativa entre riqueza natural e crescimento foi notado primeiramente por David Hume. Adam Smith introduziu o papel das instituições para explicar a performance econômica inferior da América Latina comparada à América do Norte. A ênfase de Humboldt no alto grau de desigualdade econômica no México atraiu a atenção de Malthus, que utilizou como importante elemento de sua visão de que a fertilidade do solo pode estar associada com baixo crescimento se houver deficiência de demanda efetiva. Cairnes sugeriu que o efeito perverso de um súbito aumento na produção de um recurso natural sobre o resto da economia é compatível com o aparato Ricardiano de vantagens comparativas. Finalmente, o artigo mostra como J.S. Mill articulou plenamente os efeitos perversos da riqueza natural sobre instituições fracas e então sobre crescimento baixo, um tema conspícuo na moderna literatura sobre a “maldição dos recursos naturais”.

Palavras-chave: instituições, recursos naturais, crescimento, Humboldt, economia clássica

Abstract. The paper discusses how classical economists, sometimes informed by Alexander Humboldt’s pioneer detailed report on a tropical country (Mexico), interpreted the connections between natural resources, institutions and growth. The apparent paradox of a negative relation between natural wealth and growth was first noticed by David Hume. Adam Smith brought in the role of institutions in explaining the inferior economic performance of Latin America as compared to North America. Humboldt’s emphasis on the high degree of income inequality in Mexico caught Malthus’s attention, who turned it into an important element of his view that the fertility of soil may be associated with poor growth if there is a lack of effective demand. Cairnes suggested that the perverse effects of a natural resource boom on the rest of the economy is compatible with the Ricardian comparative-advantage framework. Finally, the paper shows how J.S. Mill fully articulated the perverse effects of natural wealth on institutions and therefore on growth, a theme conspicuous in the modern literature about the “natural resource curse”.

Key words: Institutions, Natural Resources, Growth, Humboldt, Classical Economics

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Humboldt and the Classical Economists on Natural Resources, Institutions and Underdevelopment

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1. Introduction

Although the field of development economics was established in the 1940s and 1950s (Arndt 1987), some economic features of “unimproved” or “backward” countries - particularly Ireland and India (see McKinley 1955; Black 1960; Barber 1975, 1994) - had already been investigated by British classical economists. Of course, the classics’ interest in the economic dynamics of poor countries was part of their overall study of the process of economic growth, which, in its Ricardian formulation, would strongly influence the economic development literature of the 1950s through Lewis 1954 (see Barber 1994; Boianovsky 2010a, section 4). The publication of Alexander Humboldt’s ([1808-11] 1811-12) celebrated reports of his travels to the vice-kingdom of New Spain (Mexico, which at the time included California and Texas) made available for the first time a detailed description of the socio-economic structure of a Latin American country (Allen 1810, pp. 62-64; Minguet 1969, p. 603), which caught the attention of some classical economists, especially T. R. Malthus. Humboldt brought to the fore the role played by physical factors and the institutional framework in explaining the relative underdevelopment of the Spanish and Portuguese colonies in general, and of Mexico in particular. Adam Smith ([1776] 1976, book IV, chapter VII) had pointed out the influence of different institutional patterns in his account of the economic success of North American colonies as compared to Latin American ones. In this connection, the puzzle that entertained classical economists was the relatively poor economic record of countries with large supplies of natural resources, which apparently defied the pure growth “models” advanced by both Smith and David Ricardo.

The key role of institutions in the interpretation of long-run economic performance has been, of course, stressed by Douglass North in modern literature. According to North (1990, p. 116), the US economic history has featured a federal political system and a basic structure of property rights that have encouraged the long-term contracting necessary to capital accumulation and economic growth. Latin American economic history, in contrast, “has perpetuated the centralized, bureaucratic traditions carried over from its Spanish/Portuguese heritage” (ibid; see also pp. 102-03). That notion - that exogenous differences in national heritage may account for the differential path of development across the Americas - has been criticized by Stanley Engerman and Kenneth Sokoloff (1997, 2000) in a series of influential papers. Although

sharing North's neo-institutional approach to economic history and growth, Engerman and Sokoloff have argued instead that institutional differences may be ascribed to the extremely different environments in which the European established their colonies and to the ensuing distinct degrees of economic inequality. The prevailing factor endowments configuration (relative amounts and quality of land, labor and capital) in Latin America in the colonial period brought about, according to these authors, high levels of concentration of landownership and wealth, in contrast with the northern colonies of British North America. The consequent concentration of power led to the creation of institutions that protected the privileges of the elites interests instead of protecting the property rights of most of the society. Engerman and Sokoloff's interpretation links up with the "natural resources curse" thesis, a term coined by Richard Auty (1993) to describe the negative empirical association often found between natural wealth and economic growth.

The present paper discusses how classical economists (including pre-classical remarks by David Hume), sometimes informed by Humboldt's accounts, interpreted the connections between natural resources, institutions and growth. Malthus ([1836] 1951, book II, chapter 1, section 4) used the information provided by Humboldt about income inequality and land distribution in New Spain to bring up the role of effective demand and by that challenge what he perceived as Ricardo's assumption of a necessary positive relation between natural resources availability and economic growth. J. E. Cairnes (1873, chapter I), on the other hand, rejected Humboldt's view - that the apparently perverse effects of the discovery and exploration of gold and silver mines on the economy of Spain and its colonies was due to their poor institutional framework - and argued instead that the structural effects of natural resource booms were perfectly consistent with the Ricardian theory of comparative advantages. Cairnes's interpretation may be seen as an anticipation of the modern theme of the so-called "Dutch Disease" phenomena. Finally, J. S. Mill ([1848] 1987, book I, chapter VII, sections 2 and 3) fully articulated the view that natural advantages may have perverse effects on institutions and the supply of effort, which would explain the historical negative association between natural wealth and economic performance. Mill's discussion was part of his interest on the topic of "national characters", which had been introduced into the literature by Montesquieu and Hume (see Romani 2002).

2. Before Humboldt: Hume and Smith

David Hume ([1777] 1987, pp. 266-67) advanced, in the closing paragraphs of his essay on commerce (published originally in 1752), the apparently "odd proposition" that the poverty of large parts of the population in France, Italy in Spain (as compared to England) in mid 18th century was in some measure due to the "superior riches of the soil and happiness of the climate" in those countries. The justification of this "paradox" is that in the fertile soil of some southern regions of Europe, "agriculture is an easy art" that requires little effort, capital and technique.

All the art, which the farmer knows, is to leave his ground fallow for a year, as soon as it is exhausted; and the warmth of the sun alone and temperature of the climate enrich it, and restores its fertility. Such poor peasants, therefore, require only a simple maintenance for their labor. They have no stock or riches, which claim more; and at the same time they are for ever dependent on their landlord,

who gives no leases, nor fears that his land will be spoiled by the ill methods of cultivation (p. 266).

In contrast, in England the land is rich but coarse; it must be cultivated with higher costs and carefully managed over a longer time span. Hence, a “farmer in England must have a considerable stock, and a long lease, which beget proportional profits” (ibid). Hume extended the argument to compare tropical and temperate countries. Tropical climate was associated with lower demand for goods in general, and, by that, reduced wealth and less necessity for government authority and laws to settle economic disputes.

What is the reason why no people living between the tropics could ever yet attain to any art or civility, or reach even any police in their government, and any military discipline; while few nations in the temperate climates have been altogether deprived of these advantages? It is probable that one cause of this phenomenon is the warmth and equality of weather in the torrid zone, which renders clothes and houses less requisite for the inhabitants, and thereby remove, in part, that necessity, which is the great spur to industry and invention... Not to mention that the fewer goods or possessions of this kind any people enjoy, the fewer quarrels are likely to arise amongst them, and the less necessity will there be for settled police or regular authority to protect and defend them from foreigner enemies, or from each other (p. 267).

The passage about the cultural and economic inferiority of tropical regions is a further elaboration of Hume’s ([1777] 1987, p. 207) remark, advanced in his 1748 essay on national characters, that “all the nations, which live between the tropics, are inferior to the rest of the species, and are incapable of all the higher attainments of the human mind”. Hume argued, against Montesquieu, that the “indolence” of the southern habitants of the globe was provoked by their “few necessities”, not strictly by “physical causes” associated with climate and land fertility as claimed by the French philosopher.¹ Although Hume stressed the role of “moral causes” instead of purely physical ones in his explanation of the character and progress of nations (see Glacken 1967, ch. 12; Chamley 1975), there was scope in his framework for the effect of climate and fertility on the demand for goods, a connection that would be developed in different guises by Ricardo, Malthus and Stuart Mill as discussed below.

Another important element in Hume’s approach to growth was his well-known analysis of monetary dynamics in the essay on money. As part of his path-breaking discussion of the positive effects of an increase in money supply in the transition from one monetary equilibrium to another, Hume argued in his 1752 essay on money that the discovery of precious metals in the Latin American colonies had not benefited Spain or Portugal. Since “the discovery of the mines in America, industry has increased in all nations of Europe, except in the possessors of those mines; and this may just be ascribed, amongst other reasons, to the increase of gold and silver” ([1777] 19887, p. 286). That was a first description of what would much later be called “Dutch Disease”, that is, the potentially perverse effects of a natural resource boom on the production of other goods (especially manufactures) within the country. Montesquieu ([1748] 1914, book 21, ch. 22) too held the view that the economic decline of Spain was caused by the discovery of precious metals which, as mere “representatives of wealth” whose value varies in inverse proportion with its amount, had diverted resources from “natural riches” such as agriculture.

Smith ([1776] 1976, p. 220) mentioned the dominant opinion that, since the discovery of America, economic growth was positive in most European countries, with

the exception of Spain and Portugal, which “are supposed to have gone backwards”. Smith did not agree entirely with the general view of the extent of economic decline in Spain, since that country was already “very poor” in the beginning of the 16th century. Smith’s main concern, in that regard, was the effect of Spanish rules on the economic development of Latin American colonies. Despite the fact that the Spanish colonies “are under a government in many respects less favorable to agriculture, improvement and population than that of the English colonies ... they seem to be advancing in all these much more rapidly than any country in Europe”. Just like other colonies, Latin America benefited from a “fertile soil, happy climate and cheapness of land”, which represented “so great an advantage as to compensate many defects in civil government” (p. 221). That was not the case of Bengal and some of other fertile English settlements in the East Indies, where the funds destined for the maintenance of labor declined steadily and famine was widespread. “The difference between the genius of the British constitution which protects and governs North America, and that of the mercantile company which oppresses and domineers in the East Indies, cannot perhaps be better illustrated than by the different state of those countries” (p. 91).

Hence, according to Smith, the economic growth of Latin American colonies exceeded the average rate in Europe and differed sharply from Bengal, but, despite the abundance of fertile land and mines, was quite below the North American record.

In the plenty of good land the English colonies of North America, though, no doubt, very abundantly provided, are, however, inferior to those of the Spaniards and Portuguese, and not superior to some of those possessed by the French before the late war. But the political institutions of the English colonies have been more favorable to the improvement and cultivation of this land, than those of any of the other three nations (p. 572).

The “political institutions” discussed by Smith (pp. 572-75) were the restrictions on the encroachment of uncultivated land and to the right of primogeniture, as well as the moderation of taxes and the lesser degree of monopoly of external trade in the English colonies as compared to the Spanish and Portuguese ones. Smith’s comparative analysis fits well with his judgment, formed under the influence of Hume, that “what forms the character of every nation” is “the nature of their government” (p. 586).

3. Humboldt on New Spain

The celebrated geographer, scientific traveler and naturalist Alexander Humboldt (1769-1859) was regarded as the most famous German of his time (see Beck 1968). As argued by Susan Cannon (1978, p. 105), the great novelty in professional science in the first half of the 19th century was “Humboldtian science”, understood as “the accurate, measured study of widespread but interconnected real phenomena in order to find a definite law and a dynamical cause” (see also Walls 2009, pp. 120-29). The 23 volumes of his travel reports, of which 4 correspond to the essay on New Spain, were published between 1805 and 1834. In his essay on New Spain Humboldt laid the foundations of modern regional geography on the basis of physical, empirical and social geography, using Mexico as his case study after his visit to that country between 1803 and 1804 (Bowen 1981, chapter 7; before arriving in Mexico, Humboldt traveled to what are now Venezuela, Peru, Ecuador, Colombia and Cuba between 1799 and 1803). As pointed out by Laura Walls (2009, p. 123), the *Political Essays* may be considered as an “instruction manual for the economic development” of Mexico once it becomes

independent from Spanish colonialism. His portrait of colonial rule and of the socio-economic-geographic structure is based on extensive statistical evidence and observation, as Humboldt managed to get access to the rich Spanish colonial archives. The 4 volumes include a detailed account of the physical geography of the country, its population dynamics and social classes, agriculture, mines, industry, trade and public finance (see Minguet 1969, esp. pp. 603-18). As explained by Humboldt, he decided to write his political essay on Mexico because of his interest in understanding the main features of an economy that was growing but remained in many aspects a relatively poor one.

I arrived in Mexico by the South Sea in March 1803, and resided a year in that vast kingdom. I had recently visited the province of Caracas, the banks of the Orenoco, the Rio Negro, New Granada, Quito, and the coast of Peru, and I could not avoid being struck with the contrast between the civilization of New Spain, and the scanty cultivation of those parts of South America which had fallen under my notice. This contrast excited me to a particular study of the statistics of Mexico, and to an investigation of the causes which have had the greatest influence on the progress of the population and national industry (Humboldt 1811-1812, book I, p. 1).

What kept Mexican economic performance below the North-American one was the difference in the respective “degrees of perfection of their social institutions” (book I, p. 14), regarded by Humboldt as the main factor in economic growth. Humboldt’s (1811-12, book II, chapter IV) statistical research confirmed Adam Smith’s - the “celebrated author of the *Wealth of Nations* “, as described on book IV, p. 97 of the *Political Essays* - conjecture that the population (and therefore aggregate production) of New Spain was growing rapidly (double the population every 27.5 years), although not as fast as its natural resources allowed and not as fast as the population of the United States. Humboldt’s (1811-12, book II, p. 107, n.) approach to population growth followed Malthus’ 1798 essay, which he regarded as “one of the most profound works in political economy which has ever appeared”. The main feature of Mexican society was widespread inequality, in its regional, demographic, economic and cultural dimensions.

Mexico is the country of inequality. Nowhere does there exist such a fearful difference in the distribution of fortune, civilization, cultivation of the soil and population... The capital and several other cities have scientific establishments, which will bear a comparison with those of Europe. the architecture of the public and private edifices, the elegance of the furniture, the equipages, the luxury and dress of the women, the tone of society, all announce a refinement to which the nakedness, ignorance, and vulgarity of the lower people form the most striking contrast... The Mexican Indians, when we consider them *en masse*, offer a picture of extreme misery. Banished into the most barren districts, and indolent from nature, and more still from their political situation, the natives live only from mouth to mouth (book II, pp. 184-85).

One of the main factors behind economic inequality was the *encomienda* system, introduced by the Spaniards at the outset of the colonization in Mexico, Peru and other regions with relatively high population of natives (Humboldt, 1811-12, book II, pp. 181-84). The encomiendas consisted in the distribution among few colonizers of claims to huge blocs of native labor, land and mineral resources That system was the most important and long-lasting institution established by Spain in Latin America, which

defined the contractual framework of the occupation of the new territories (Furtado [1969] 1970, chapter 2; Engerman and Sokoloff 1997, 2002).

In chapter IX of book IV of the *Political Essays* Humboldt discussed the main agricultural goods and their role in the nourishment of the population. He called attention to the cultivation of banana: “I doubt whether there is another plant on the globe which on so small a space of ground can produce so considerable a mass of nutritive subsistence” (p. 372). Humboldt calculated that in a fertile country like Mexico, a demi hectare cultivated with bananas is capable of maintaining 50 people, whereas the same area in Europe would yield annually only a quantity inferior to the subsistence of 2 individuals. “Accordingly, a European newly arrived in the torrid zone is struck with nothing so much as the extreme smallness of the spots under cultivation round a cabin which contains a numerous family of Indians” (pp. 378-79). Such high fertility of the soil (which also applies to other goods such as maize), however, is accompanied by low effort supply and income level.

We hear it frequently repeated in the Spanish colonies, that the inhabitants of the warm region will never awake from the state of apathy in which for centuries they have been plunged, till a royal cedula shall order the destruction of the banana plantations... It is to be hoped that industry will make progress among the Mexicans without recurring to means of destruction. When we consider, however, the facility with which our species can be maintained in a climate where bananas are produced, we are not astonished that in the equinoxial region of the new continent civilization first commenced on the mountains in a soil of inferior quality, and a sky less favorable to the development of organized beings, in whom necessity even awakes industry. At the foot of the Cordillera...a man who merely employs two days in the week in a work by no means laborious, may produce subsistence for a whole family. Yet such is the love of his native soil, that the inhabitants of the mountains...never thinks of descending into the fertile but thinly inhabited plains, where nature showers in vain her blessings and her treasures (pp. 380-81).

Humboldt would return to that theme in his *Personal Narratives* of his travels to South America, in a passage that brings him close to the so-called “environmental theory” of the progress of civilizations, that is, the proposition, firstly advanced as part of Greek classic economic thought and further elaborated by Jean Bodin and Montesquieu, that the degree of civilization attained by peoples bears an inverse relationship to the fertility of their soil and their climate and natural conditions, which may be expressed in the view that “necessity is the mother of invention” (see Glacken 1967, ch. 11; Toynbee 1934, vol. I).

These considerations on the agriculture of the torrid zone remind us of the intimate connection that exists between the extent of land cleared and the progress of society. That richness of the soil, that vigor of organic life, which multiply the means of subsistence, retard the progress of nations toward civilization. Under so mild and uniform a climate the only urgent want of man is that of food ... And we may easily conceive why in the midst of abundance the intellectual faculties unfold themselves less rapidly than under a rigorous sky (Humboldt [1817] 1818, p. 14).

Apart from the effect of labor supply on food production, Humboldt elaborated on the impact of consumption demand and on the connections between mining and agriculture. Against widespread opinion, the main economic activity in Mexico was

agriculture (even if relatively underdeveloped), not mining. The notion that there is a trade-off between mining and agriculture only applied to small portions of territory. It cannot explain “why in countries of three or four times the extent of France agriculture is in a state of languor”. Humboldt’s explanation - which is somewhat reminiscent of Adam Smith’s - was the fragile institutional framework that prevailed in Spanish America.

The same physical and moral causes which fetter the progress of national industry in the Spanish colonies have been inimical to a better cultivation of the soil. It cannot be doubted that under improved social institutions the countries which most abound with mineral production will be as well if not better cultivated than those in which no such productions are to be found (1811-12, book IV, chapter IX, pp. 357-58).

Humboldt rejected the association - claimed by Montesquieu and others - between poverty in Spain and its colonies and the discovery of precious metals in America, which he regarded as a gross simplification.

The desire natural to man of simplifying the causes of everything has introduced into works of political economy a species of reasoning which is perpetuated because it flatters the mental indolence of the multitude. The depopulation of Spanish America, the state of neglect in which the most fertile lands are found, and the want of manufacturing industry, are attributed to the metallic wealth, to the abundance of gold and silver; as, according to the same logic, all the evils of Spain are attributed to the discovery of America, or the wandering race of the merinos, or the religious intolerance of the clergy! (p. 358)

Instead, Humboldt argued that the working of the mines, far from impeding the cultivation of the soil, had favored cultivation of the uninhabited regions because of its effect on demand for food. “Want soon awakens industry... Farms are established in the neighborhood of the mine”. Reflecting Smith’s influence, Humboldt claimed that without any interference from the colonial government, “from the hope of gain alone, and the motives of mutual interest, which are the most powerful bonds of society... a mine which first appeared insulated in the midst of the wild and desert mountains, becomes in a short time connected with the lands which have long been under cultivation” (pp. 359-60). More generally, the underdevelopment of Mexican agriculture was caused by the lack of consumers - associated to the income distribution pattern - and transportation problems, not by scarcity of fertile land, since it could provide subsistence for a “population eight or ten times more numerous” (p. 421).

4. Reacting to Humboldt: Malthus, Ricardo and Cairnes on growth and natural resources

The French edition of Humboldt’s *Political Essays* was reviewed anonymously (as was usually the case) in detail in the *Edinburgh Review* by John Allen.² The reviewer agreed with Humboldt’s refutation of the notion that the backwardness of agriculture in Spanish America was due to its mines of gold and silver (1811, p. 182). The obstacles to the improvement of agriculture were partly derived from “nature”, and partly from “positive institution”. The latter were “chiefly the vast accumulations of landed property in the hands of a few persons, held under all the strictness of Spanish entails, and the

extensive tracts of country possessed in common, and therefore ill cultivated and neglected” by the clergy and others (p. 187).

Although the lengthy reviews should have made Humboldt’s book known to British economists, it was apparently only after a letter of 4 September 1817 from Ricardo that Malthus became acquainted with the *Political Essay* (Sraffa 1973, pp. 184-5). It was a reply to another letter of 17 August from Malthus about some conclusions drawn from his journey to Ireland. Ricardo informed him that “Humboldt in his account of New Spain points out the very same evils as you do in Ireland, proceeding from the same causes. The land there yields a great abundance of Bananas, Manioc, Potatoes and Wheat with very little labor, and the people having no taste for luxuries, and having abundance of food, have the privilege of being idle”. However, differently from Malthus’s interpretation put forward a few years later in his *Principles*, idleness was not seen by Ricardo necessarily as an economic problem.

Happiness is the object to be desired, and we cannot be quite sure that provided he is equally well fed, a man may not be happier in the enjoyment of the luxury of idleness than in the enjoyment of the luxuries of a neat cottage, and good clothes. And after all we do not know if these would fall to his share. His labor might only increase the enjoyment of his employer.³

In what we may describe as the first encounter between economics and geography, Malthus turned Humboldt’s *Essay* into the main source of empirical information in his polemic against Ricardo about the role of natural resources, capital and effective demand in economic growth, developed in the section titled “On the fertility of the soil, considered as the stimulus to the continued increase of wealth”, included in the first (1820) edition of his *Principles* and kept in the second (1836) edition without changes (see also Mitchell [1918] 1967, p. 354; Glacken 1967, p. 643; Winch 1996, pp. 365-68; Hollander 1997, pp. 575-79).

That section was part of Malthus’s critical reaction to Ricardo’s ([1821] 1951, pp. 291-92) proposition - known as “Say’s Law” - that, since “productions are always bought by productions”, there cannot be a glut of every commodity. Hence, “if I had food and necessaries at my disposal, I should not be long in want of workmen who would put me in possession of some objects most useful or desirable to me.” According to Malthus ([1836] 1951, p. 333), Ricardo’s argument would not apply if the worker preferred indolence to further labor, after the necessaries of life were obtained with very little labor. Malthus attempted to establish his case by comparing the proportion of workers employed in the primary sector in “unimproved countries” - that is, regions with low levels of income per capita, capital and population - and in improved ones like England. He claimed that the evidence pointed to the fact that that proportion was higher in relatively underpopulated countries, despite the fact that only rich soils are cultivated. This indicated that

If the facility of production which rich land gives has the effect, under certain circumstances, of preventing the growth of industry and skill, the land may become practically less productive, compared with the number of persons employed upon it, than if it were not distinguished for its richness (Malthus [1836] 1951, p. 335).

In order to illustrate his argument, Malthus examined the economic situation of the Spanish colonies in America, based on extensive quotations from the French edition of the *Political Essay* (most of them reproduced in section 3 above). According to Humboldt, the high fertility of the soil was accompanied by reduced labor supply and

widespread poverty in the region. This indicated, as claimed by Malthus (p. 337), that “the extreme fertility of these countries”, instead of encouraging the growth of income and population, “has produced, under the actual circumstances in which they have been placed, a degree of indolence which has kept them poor and thinly populated after the lapse of ages.”

Malthus (p. 335) generalized the argument that the abundance of fertile land may become a curse if, through its perverse effect on labor supply and taste for industrial goods, it “prevents the growth of industry and skill” (see also Fiaschi and Signorino 2003, section 4). In particular, Malthus claimed that the indolence and deficient wealth of a fertile country were brought about mainly by “want of demand [rather] than want of capital.” Low effective demand was explained by insufficient “vent ... for the raw materials in foreign commerce” and especially by the “extreme inequality of landed property” (p. 340). The key role of effective demand was made evident, as Malthus observed on the basis of Humboldt’s account, by the intense cultivation which takes place in the neighborhood of a new mine. The actual state of demand for produce in most of the region, and the actual state of “ignorance and indolence”, prevent the potential native tenants from being able to pay to great proprietors a rent equal to what the land would yield in its uncultivated state to support a “few hundreds of cattle” instead of “thousands of people” (pp. 341-42). The slow progress of New Spain, compared with its “prodigious resources”, was then clearly accounted for.

Of that encouragement to the increase of population, which arises from the division and subdivision of land as new families are brought into being, the country is deprived by the original state of property, and the feudal customs and habits which it necessarily tends to generate. And under these circumstances, if a comparative deficiency of commerce and manufactures, which great inequality of property tends rather to perpetuate than to correct, prevents the growth of that demand for labor and produce, which can alone remedy the discouragement to population occasioned by this inequality, it is obvious that Spanish America may remain for ages thinly peopled and poor, compared with her natural resources (pp. 342-43).⁴

The upshot is that fertility of soil alone is not an adequate stimulus to continuous economic growth (p. 344). Probably influenced by Ricardo’s letter quoted above, Malthus (pp. 344-51) adapted a similar argument to explain widespread poverty in Ireland, with emphasis on indolence provoked by the abundance and role of potato in the diet of the working class, lack of taste for “conveniences and luxuries”, and want of “perfect security of property”. Malthus (p. 373) contrasted the economic performance of New Spain and Ireland with the North American record. The “rapid increase of the United States” was influenced by demand coming from foreign trade, but the main factor was the “easy division of landed property”.

The facility with which even common workmen, if they are industrious and economical for some years, could become new settlers and small proprietors of land, has given prodigious effect to that high money price of labor, which could not have taken place without foreign commerce: and together they have occasioned yearly that extraordinary increase of exchangeable value, which has so distinguished the progress of the establishments in North America, compared with any others with which we are acquainted.

Ricardo ([1921] 1951, pp. 99-100) dealt briefly with the issue of poverty in Ireland, Poland, some parts of Asia and the “South Seas” (that is, Latin America) in his *Principles*, without referring to Humboldt though. In contrast with long settled countries such as England, the evils of “want and famine” in countries with abundance of fertile land (like Latin America) were not caused by the pressure of population on diminishing returns from land, but by the slow pace of capital accumulation. The “ignorance, indolence and barbarism” of the inhabitants proceed from institutional elements such as “bad government, insecurity of property and want of education”.

To be made happier they require only to be better governed and instructed, as the augmentation of capital, beyond the augmentation of people, would be the inevitable result. No increase of population can be too great, as the powers of production are still greater... In poor countries, where there are abundant means of production in store, from fertile land not yet brought into cultivation, [capital accumulation] is the only safe and efficacious means of removing the evil, particularly as its effect would be to elevate all classes of the people (pp. 99-100).

Hence, Malthus and Ricardo drew different conclusions about the role of capital accumulation in the growth process of poor countries with abundant natural resources. In his notes on Malthus’s *Principles*, Ricardo retorted that Malthus’s statements about the economy of New Spain were on the whole consistent with Ricardo’s own analytical framework, and, more importantly, that they were irrelevant as evidence against Ricardo’s economics, which was about “improved countries” like England (Sraffa 1951, pp. 331-50, esp. notes 223, 224, 226 and 230).

John E. Cairnes was another classical economist who paid careful - if mostly critical - attention to Humboldt’s *Political Essay*. Cairnes was especially interested on Humboldt’s interpretation of the effects of gold and silver mining on the economy of the Spanish colonies, which he used as a starting-point of his own study (originally published in 1859) on the economic impact of the discovery of large quantities of gold in the Australian provinces of New South Wales and Victoria in 1851. After quoting Humboldt’s criticism of the suggested association between gold and silver mining and economic underdevelopment in Spanish America (and in Spain itself), Cairnes (1873, pp. 31-32) claimed that the assumption of poor institutions was not necessary to account for the low activity level in sectors other than mining, a phenomenon deemed perfectly consistent with the Ricardian comparative advantage framework.

Without disputing the “opinion of so competent a witness that the neglect of agriculture in some of the States of Spanish America was due in a large degree to defects in their social institutions...I yet venture to question the doctrine...that speaking with reference to a country *in which occupation has been effected and society established*, the possession of mineral treasures is favorable, or can be otherwise than unfavorable, to the cultivation of the soil” (Cairnes 1873, p. 32). Under the assumption of full-employment, the theory of comparative advantage states that the possession by a country of any singular advantage in production operates, “in proportion to the extent of the advantage, as a premium against all other industrial pursuits” (ibid). The possession of those exceptional facilities makes it profitable to satisfy the country’s wants by other commodities through international exchange rather than direct domestic production. That was how Cairnes explained Humboldt’s observation about the general underdevelopment of agriculture in the Spanish America, which had also raised Malthus’s interest, as discussed above.

I therefore find it impossible to believe that the mineral resources of the Spanish American States did not exercise in these countries an influence prejudicial to the progress of their agriculture, and that these were among the causes which contributed to that backward state of cultivation which Humboldt notices and describes (pp. 32-33).

The notion that a quick increase in exports earnings (particularly caused by the discovery or increase in the prices of mineral resources like oil) may bring about structural changes in the economy, accompanied by the coexistence of booming and lagging sectors, has been called since the 1970s “Dutch disease”. Although the emphasis of that literature is on medium-term desindustrialization, Cairnes’s discussion of the perverse effects on agricultural production (which we may call “decultivation”) may be considered an early statement of some aspects of Dutch disease phenomena (see Corden 1984, p. 359). Cairnes illustrated his argument with a detailed examination of the effects of gold discovery in Australia in mid 19th century, which led to the unprecedented “spectacle of a country, possessing an immense unoccupied territory, and a soil of more than average fertility, importing more than one-half of its food” (Cairnes, p. 33). The high money-wages brought about by the discovery of gold had made it difficult for Australian employers to compete with foreign suppliers of agricultural and industrial goods.

The extension of agriculture in Australia has thus, though stimulated for the moment, suffered a real check from the gold discoveries; and the same influence has been felt throughout every branch of industry in that country, gold mining excepted ... All in strict conformity with the established principles of economic science (pp. 35-36).

Cairnes (pp. 40-43) stressed that such changes were not accompanied by a reduction in aggregate income. Gold discoveries had apparently enabled Australia to enjoy a higher level of income through its participation in foreign trade according to the principles of comparative advantage (see also Goodwin 1970; Bordo 1975).

5. J. S. Mill on the link between natural resources and institutions

Although John Stuart Mill did not refer to Alexander Humboldt in his *Principles*, he probably was aware of the essay on New Spain.⁵ Sections 2 and 3 of chapter VII (titled “On what depends the degree of productiveness of productive agents”) of the first book of Mill’s *Principles of Political Economy* may be regarded as the *locus classicus* of the discussion about the relation between natural resource availability and economic growth. Mill put together the different threads of the argument that we found in Hume, Smith, Ricardo and to some extent Malthus. He started by stating in section 2 that “the most evident cause of superior productiveness is what are called natural advantages” ([1848] 1909, p. 102). Such advantages are the fertility of soil, a favorable climate, abundance of mineral production in suitable location, and convenient maritime situation. The theoretical value of such natural advantages, *ceteris paribus*, is “too obvious to be ever underrated”. The historical record, however, according to Mill, did not confirm the purely theoretical model.

But experience testifies that natural advantages scarcely ever do for a community, no more than fortune and station do for an individual, anything like what it lies in their nature, or in their capacity, to do. Neither now nor in former

ages have the nations possessing the best climate and soil been either the richest or the most powerful; but (in so far as regards the mass of the people) generally among the poorest, though, in the midst of poverty, probably on the whole the most enjoying (Mill [1848] 1909, p. 104).

The last sentence testifies to Mill's utilitarianism (just like Ricardo's), in the sense that leisure, not just income, may be a source of utility. Mill's statement of what is nowadays called the "natural resources curse" thesis was based on two different links. The first was the perverse effect of natural resources abundance on effort supply.

Human life in those countries can be supported on so little, that the poor seldom suffer from anxiety, and in climates in which mere existence is a pleasure, the luxury which they prefer is that of repose. Energy, at the call of passion, they possess in abundance, but not that which is manifested in sustained and persevering labor... It is difficulties, not facilities, that nourish bodily and mental energy (ibid).⁵

The second factor behind the negative relation between natural wealth and productivity was the weakened institutional quality of those countries. Similarly to effort supply, the lack of concern with the future path of income affects negatively the institutional capacity.

As they seldom concern themselves enough about remote objects to establish good political institutions, the incentives to industry are further weakened by imperfect protection of its fruits (ibid).

Mill's discussion should be seen as part of his interest in the formation of "national characters", which he had named "Political Ethology" in his *Logic* (Mill 1843, book VI, ch. 9. par. 4). Mill ([1848] 1909, p. 701) further claimed that the improvement of the "security of person and property" would call into fuller activity the "productive capabilities" of the economy. Moreover, he argued in Ricardian fashion the "ignorance and misgovernment in which many of the regions most favored by nature are still groveling" meant that it would take many generations until those countries could reach the productivity level of Western Europe (ibid). In particular, the explanation of the poverty of "many fertile tracts of Asia" was the very low degree of security brought about by the appropriation of substantial parts of agricultural output by the government (pp. 12 and 113). The solution to the slow pace of capital accumulation - not just in Asia but also in underdeveloped parts of Europe such as Russia, Turkey, Spain and Ireland - was threefold: "better government" (meaning more complete security of property, moderate taxes and a more advantageous tenure of land), "improvement of the public intelligence" by means of education, and "the introduction of foreign arts and import of foreign capital" (pp. 189-90; see also Spengler 1960).

6. Conclusion

Classical economists found in the interaction between natural resources endowment and institutions, together with effort supply, the key to explaining the apparent paradox that quite often countries or regions which are rich in natural wealth have a poor economic record. Humboldt's pioneer description and interpretation of the socio-economic dynamics of a tropical region was a crucial source of information and analysis - even if sometimes contradicted by Cairnes's discussion of the structural effects of natural

resource booms. Malthus's insight about the close association between the institutional features of Latin American society, its degree of inequality and economic underdevelopment may be found under another guise in some modern discussions of the relation between institutions, factor endowments and growth in Latin American economic history (see also Boianovsky 2010b). In particular, J.S. Mill's view that the perverse effect of natural resources abundance on economic growth works through its influence on the formation of weak institutions represents an anticipation of an important aspect of the recent literature on the so-called "natural resources curse" (see e.g. Easterly and Levine 2003; Isham, Woolcock, Pritchett and Busby 2005; Mehlun, Moene and Torvik 2006), without referring to Mill though.

Notes

1. "The barrenness of the earth renders men industrious, sober, inured to hardship, courageous, and fit for war; they are obliged to procure by labor what the earth refuses to bestow spontaneously. The fertility of a country gives ease, effeminacy ["mollesse" in the French original, which may be also translated as "indolence"], and a certain fondness for the preservation of life" (Montesquieu [1748] 1914, book 18, chapter IV).

2. The attribution was made by Frank Fetter. See Rutherford 1996.

3. As pointed out by W.C. Mitchell ([1918] 1967, p. 353), Ricardo's letter to Malthus is one of the rare instances where he proceeded on the welfare level instead of in terms of money or commodities.

4. Malthus would again refer to Humboldt in his *Summary View of the Principle of Population*. "The countries most resembling the United States of America are those territories of the New World which lately belonged to Spain. In abundance and fertility of soil they are indeed superior; but almost all the vices in the government of the mother country were introduced into her colonial possessions, and particularly that very unequal distribution of landed property which takes place under the feudal system. These evils, and the circumstance of a very large part of the population being Indians in a depressed state, and inferior in industry and energy to Europeans, necessarily prevent that rapid increase of numbers which the abundance and fertility of land would admit of" (Malthus [1830] 1985, p. 234).

5. He did refer to Alexander's brother, the well-known philosopher Wilhelm Humboldt, who influenced Mill's 1859 essay *On Liberty*.

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