

Friedrich List and the economic fate of tropical countries

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In the second half of the twentieth century those interested in stimulating the economic expansion of states in the Third World could still find inspiration in List's doctrines. List's true claim to fame was as a "prophet of the ambitions of all underdeveloped countries" (Henderson 1983, p. 163; the phrase in quotation marks is cited from Von Laue 1963, p. 57)

Nobody should be writing about development of underdeveloped countries without first becoming an apprentice with [List] that great forefather of the theory of growth and the politics of development (Salin 1962, p. 347; as quoted and translated by Szporluk 1988, p. 13)

Any attempt to found a native manufacturing power would be most injurious to the tropics. Unfitted by nature for such a course, they will make far greater advances in national wealth and civilization if they continue to exchange their products for the manufactures of temperate countries (List [1841] 1909, p. 308)

1. Introduction

The opening quotations, cited from two well-known List scholars, are illustrative of the widespread view that Friedrich List's concept of "national economic development", originally devised in mid 19th century for Germany, the United States and a few other "developing" economies of that period, is also relevant for underdeveloped countries of the 20th century and later. These correspond approximately to what List used to call "tropical", "torrid" or "hot" zone,

as in the passage reproduced above. Differently from the description - by Henderson, Salin and other historians of thought - of List as a champion of the Third World, the German-American economist often pointed out that his discussion of economic development policy (particularly the famous “infant industry” argument) applied only to a relatively small group of nations, which, among other features, belonged to the temperate climate zone. List’s sense of “tropical” and “temperate” areas was not exact, as shown by his treatment of the whole South American continent (including Chile, Uruguay, Argentina and the south of Brazil) as a tropical zone. List’s division of the world economy into two broad set of nations is better rendered by the distinction between the industrialized/industrializing “North” (or “centre”) and the primary commodities exporters of the “South” (or “periphery”).

The goal of the present paper is twofold. It examines how List’s interpretation of the economic dynamics of “tropical” countries fits in his overall analytical framework and accords with his emphasis on the explanatory value of environmental factors and on the role of colonialism in the development of the “temperate” nations. List’s thoughts in that regard are compared to some of his contemporaries’. This is followed by a selective investigation of the reception of List’s ideas in some Latin American countries (particularly Brazil) between late 19th and mid 20th centuries, as an attempt to establish whether List’s readers in those countries took any notice of List’s point that such economies should not embark on an industrialization process. The appendix discusses List’s deep interest in setting up a commercial treaty between Germany and Brazil in the 1840s, which did not materialize. Of course, List’s distinction between the growth patterns of tropical and temperate countries has not escaped the attention of commentators. Nevertheless, his remarks have been often seen as an “odd” reflection of his “prejudice” (Senghaas 1989, p. 65) or “not clear” at all (Shafaeddin 2005, p. 51). An important exception is Monique Anson-Meyer’s (1982, pp. 104-15) monograph on List as a “development economist in the 19th century”, which, however, does not deal with the issue of the absorption of List’s concepts in “tropical” countries.

Sure enough, regardless of List’s explicit caveats, his theory and policy of economic development were generalized and applied to countries such as India, where he was, “surprisingly” enough, celebrated as the “patron-saint of a nationalist path to industrialization and economic development”, as pointed out by Andrea Maneschi (1998, pp. 92, 97). In the same vein, Leonard Gomes (2003, p. 81) observed that “those who see List as a champion of

industrialization in underdeveloped countries forget that he saw no future for many of these countries along that road". While List's claim - that national political and economic development is an exclusive attribute of the nations of the "temperate zone" - was largely overlooked or rejected in underdeveloped countries, List became the "favorite theorist of those 'torrid zone' nations about whose future he had so little to say", similarly to Marx's great success in Russia (Szporluk 1988, p. 151). However, whereas List's influence in India is relatively well documented in the literature (see Arndt 1987, p. 18; Dasgupta 1993, pp. 119-20; Szporluk, pp. 203-04 and references there cited), his impact in Latin America and underdeveloped areas in general is harder to assess (see Henderson 1983, p. 217; Waterbury 1999, p. 328).¹

List's key influence in the spread of economic nationalism in Chile at the end of the 19th century has been discussed by Aníbal Pinto (1968, p. 133) and Joseph Love (1996a, p. 210). Love's suggestion that List had little influence elsewhere on the continent around that period is not warranted, though, as shown below. After the Second War, Latin American development thinking and (to some extent) policy became dominated by the United Nations Economic Commission for Latin America (CEPAL, in Spanish and Portuguese), led by Celso Furtado and especially Raul Prebisch, born in Brazil and Argentina respectively. Development policy was based on import-substituting industrialization, which has been often interpreted as an application of the infant-industry argument (see e.g. Ray 1998, ch. 17). However, List was seldom mentioned by CEPAL economists at the time; hence, his influence on import substitution theory and policy remains an open issue, which is also tackled here.

The reception of List in underdeveloped countries should be seen as an instance of the process of international transmission of economic ideas studied by Joseph Spengler (1970) and others. Moreover, the absorption, appropriation or rejection of List's texts and ideas by different "interpretive communities" (Fish 1980, pp. 14-16; Weintraub 1991, ch. 1), such as historians of thought, trade theorists, political scientists, development economists and policy-makers, indicate that, like J.M. Keynes and other influential economists (see Weintraub 1994), List was (is) alive in different contexts, times and places.

2. Trade, climate and national economic development

Friedrich List (b.1789; d.1846) is not usually regarded by historians of thought as a keen economic theoretician (see e.g. Schumpeter 1954, pp. 504-05; Tribe 1988, p. 19), but this has not prevented him from being the most widely read German economist after Marx. His main contributions are contained in the 1841 volume *Das nationale System der Politischen Oekonomie* (translated into English in 1856 in the United States and in 1885 in England), which, as indicated by its title, focused on the “national” - which was his sense of “political” - dimension of economic thought and policy. List’s *System* may be regarded as the foremost expression of “economic nationalism” in the 19th century (see Hont 2005, pp. 148, 154). It was preceded by two shorter versions: the 1827 *Outlines of American Political Economy*, written during his stay in America between 1825 and 1832, and the 1837 French prize essay on the *Système Naturel D’Économie Politique*, which remained unpublished until its inclusion in List’s *Werke* in 1927; it was edited and translated by W.O. Henderson in 1983. Although highly successful as part of the tradition of the “American system” of national political economy (see e.g. Dorfman 1966, ch. 22; Spiegel 1987), the *Outlines* would become well-known outside the United States only after its reproduction by Margaret Hirst (1909). Hence, although it is important to refer to those three books in order to trace the evolution of his ideas, List’s international influence is based primarily on the *National System*. The 1885 translation is the most used one, but it lacks List’s 1841 introduction - a summing up of the main points of the book - which was translated in Hirst 1909.

List’s argument was organized around an extended criticism of the economics of Adam Smith, J.B. Say and other classical economists that formed what he called the “school” of “cosmopolitical economy”, which he contrasted with his own “political economy” based on the role of the nation (see List [1841] 1885, ch. 11). As maintained by Keith Tribe (1988; 1995, ch. 3), in order to understand the reasons behind the popularity and influence of List’s critique of the classics, it is necessary to reconstruct his economic discourse and the variety of conditions that may account for its relative success. It was his exposure to American economic growth and the related debate on protectionism and industrialization (started by Alexander Hamilton at the end of the 18th century and continued by Daniel Raymond in the 1820s) that led List to understand economic development as the result of the working of economic forces on an international scale divided into heterogeneous national entities (Tribe 1988, pp. 29-30; 1995, pp. 44-55; see also

Schumpeter p. 505 on List's "Americanization"). The main concern of List's political economy of nationalism was power, not just welfare, as pointed out by Edward Earle (1944, p. 142). The cosmopolitical economists' priority of the markets over the states, and its reduction of politics to a sum of individual actions, had lost sight of the interconnection between trade and national politics (Hont, 2005, p. 150). This was made clear in the *Outlines*:

The idea of national economy arises with the idea of nations. A nation is the medium between individuals and mankind, a separate society of individuals, who ... constitute one body, free and independent, following only the dictates of its interests, as regards other independent bodies, and possessing power to regulate the interest of the individuals constituting that body, in order to create the greatest quantity of common welfare in the interior and the greatest quantity of security in regards other nations. The object of the economy of this body is not only wealth, but power and wealth, because national wealth is increased and secured by national power, as national power is increased and secured by national wealth. Its leading principles are therefore not only economical, but political too (List [1827] 1909, p. 162).

List's understanding of national economy and its political and economic growth were based on the concept of a nation's "productive power" - which may be regarded his main theoretical achievement (Szporluk 1988, p. 140; Levi-Faur 1997) - as opposed to the emphasis on material "exchange values" he ascribed to the "school" of Smith and Say (and to the Physiocrats before them). Aggregate wealth (that is, the sum of national assets) grows not in proportion with the stock of material capital accumulated by a nation, but as a function of the development of its "productive powers", formed by three different kinds of capital: "capital of nature", "capital of mind" and "capital of productive matter" (List [1827] 1909, p. 188). The productivity of the latter depends upon the two former, that is upon the fertility of nature and especially upon "the intelligence and social conditions of a nation", which comprises advances in science and technology, legal-institutional framework, educational system, transport and communication network, etc. Powers of production are, therefore, the means whereby wealth can be increased in the future (List [1841] 1885, p. 108), a concept which arose from the criticism of the classical notions of "productive labour" and its division. Productivity depends not only on the division of labour *per se*, but on the union of efforts to a common end. Accordingly, in List's

perspective Smith missed the interdependence dimension of the division of social labour and the interaction between different economic sectors (see Tribe 1988, p. 34). Hence, as observed by Marcello de Cecco (1974, p. 9), whereas the *primum mobile* of the economy in Smith is the attempt to maximize the individual's welfare, in List the *primum mobile* is represented by "man's desire to congregate in extra-familial units".

However industrious, thrifty, enterprising, moral and intelligent the individuals may be, without national unity, national division of labour, and national co-operation of productive powers the nation will never reach a high level of prosperity and power ... The principle of division of labour has not been fully grasped up to the present. Productivity depends not only on the division of various manufacturing operations among many individuals, but still more on the moral and physical co-operation of these individuals to a common end ... Division of labour and co-operation of productive powers exist where the intellectual activity of the nation bears a proper ratio to its material production, where agriculture, industry and trade are equally and harmoniously developed (List [1841] 1909, pp. 306-07).

List's "productive powers" are culturally grounded and nationally bounded, as pointed out by David Levi-Faur (1997, p. 165). The economic role of the state is to protect and enlarge the national productive powers mainly through industrial development, since manufacturing is perceived as closely associated with technical progress, art, improved infrastructure, political freedom, urbanization and methods of warfare (List [1841] 1885, ch. 17). The development of national productive powers takes place historically through a sequence of growth stages: (a) the savage stage, (b) the pastoral stage, (c) the agricultural stage, (d) the agricultural and manufacturing stage, and (e) the agricultural, manufacturing, and commercial stage (List [1841] 1909, p. 303; [1841] 1885, p. 143). List's stages theory was first elaborated and discussed in detail in his *Natural System* (List [1837] 1983). It was part of an old and broad tradition that had informed the interpretation of social progress since the Greeks through the 18th century philosophy of enlightenment (see Hoselitz 1960, pp. 195-203). List's stages are not only a scheme to study the development of national economies through time, but also an instrument of comparison between nations at any given time (see Szporluk 1988, p. 134). The crux of List's growth theory, as pointed out by Hoselitz (pp. 199-200), is the passage from stage (c) to (d), that

is, the transformation of a mature agricultural state into one with higher productive powers by the introduction of industries. Such process depends on whether the industrializing nations are at the same level of development - in which case it can be accomplished by free trade - or some nations have outdistanced others in manufactures, which makes it necessary the adoption of a protective tariff system by less advanced nations in order to be able to compete in the international economy (List [1841] 1909, pp. 304-05). Hence, economic development policy was perceived as stage-specific.

List's discussion of the protection of infant industries (a term he did not use)² should be seen in the context of his stages theory of the development of national productive powers. He suggested a corresponding succession of four periods relating economic growth and international trade (List [1841] 1909, p. 311). Initially, home agriculture is promoted by exporting part of its output and importing manufactures. This is followed by import-substitution until domestic manufacturing dominates the home-market. Finally, the nation becomes a large exporter of industrial goods and importer of raw materials and agricultural products. It was only in the second and third periods that protective tariffs should be introduced in order to foster "national industrial *education*" (ibid; italics in the original), meaning the development of productive powers.

The notion of "industrial education" was the focus of List's ([1839] 1928) French article on "Political economy before the court of history", where he sustained that, since economics (like medicine) was based on observation and experience, one should found economic propositions on the study of history. The article is a powerful anticipation of the main arguments and method of the 1841 book, particularly the historical approach that made List a precursor of the German Historical School. History, claimed List ([1839] 1928; [1841] 1885, ch. 10), provided evidence that protectionism was a general feature of the industrialization of all nations, including England, the first industrial power. In a phrase that would become famous, List ([1841] 1885, p. 295) charged that, under the inspiration of Smith's "school", British administrations had proclaimed that other countries should follow the principles of free trade and, by that, "kicked away the ladder" by which Great Britain had climbed up.

The infant industry argument had been advanced before List by, among others, Hamilton and John Rae, and would be further elaborated a few years after the *National System* by J.S. Mill, through whose *Principles* it penetrated orthodox economics (see Maneschi 1998, ch. 5; Irwin

1996, ch. 8). However, whereas Mill and Rae focused on the advantages of protecting particular processes, List had in mind the aggregate effects on manufacturing activity through e.g. training of labour, prevalence of industrial know-how and research - that is, what Alfred Marshall would later call “external economies”, though not restricted (as in Marshall) to the expansion of particular industries. As pointed out by Lionel Robbins, this is how List’s argument about the positive effects of tariff protection on productive powers and industrialization should be interpreted.

It was this kind of influence which, much earlier than Marshall, had been the focus of List’s various disquisitions on the development of productive powers... Divested of its sound and fury, there remains surely a core of truth in his contention that the fostering of certain industries in certain historic context may carry with it an increase of productive potential, not to be measured merely in the value of particular outputs or the growth of capital values (Robbins 1968, p. 116).

Indeed, in chapter 13 of the *Natural System* List discussed how industries interact with one another in complementary fashion in the late industrialization process fostered by tariff protection.

It is ... obvious that the success of one branch of industry always depends upon the success of another branch of industry. An iron-master who makes pig iron cannot make a profit if he is unable to secure supplies of cheap fuel because the local collieries have not been sufficiently developed. Nor can he make a profit unless there are in existence enough foundries, steelworks, and engineering plants to buy the pig iron that he produces. Every factor needs to operate in association with countless other enterprises which supply raw materials, buy the finished product, or construct and maintain machinery. No factory reaches its maximum efficiency unless all the factories with which it is linked have also reached their maximum efficiency. We believe that we have now shown what difficulties have to be overcome by all new manufacturing enterprises. We have shown that all factories are linked together and that one cannot succeed unless the others also succeed. And we have explained why it takes such a long time for a factory to reach its full potential and maximum efficiency (List [1837] 1983, pp. 72-73).

Similar passages may be found in the *Outlines*, where List ([1827] 1909, pp. 223-24) asserted that in new industrial nations, “the advancement of every kind of manufactories depends upon the advancement of many other kinds, upon the proper construction of houses and works, of instruments and machinery”. This means that the start of a new industry is “extremely difficult, whilst the undertakers have to contend with a want of labourers of skill and experience”. Moreover, “the first cost of starting a business is the heaviest of all”. Because of fixed costs, the size of the market is essential, as indicated by List’s ([1827] 1909, p. 231) remarks about what Marshall would later call “increasing returns”. It is common knowledge, writes List, that “the cost of production in manufacturing business depends a great deal on the quantity that is manufactured”. After an example illustrating how average costs fall with the increase in production and sales, List concludes that this circumstance has a “mighty influence in the rise and fall of manufacturing power”, as determined by the assurance of a “large supply of the home market”.³ The argument is summed up in one of the final chapters of the *National System*. Historical experience has shown that

All individual branches of industry have the closest reciprocal effect on one another; that the perfecting of one branch prepares and promotes the perfecting of all others; that no one of them can be neglected without the effects of that neglect being felt by all; that, in short, the whole manufacturing power of a nation constitutes an inseparable whole (List [1841] 1885, pp. 310-11).

List’s stress on external economies and complementarities between firms and sectors - and the difficulties they pose to starting the development process – resurfaced in the economic literature of the 1940s and 1950s on underdevelopment as a coordination failure, represented mainly by Paul Rosenstein-Rodan and Ragnar Nurkse (see Hoselitz 1960, p. 202, n.).⁴

List’s argument about the dynamic welfare repercussions of trade tariffs may be expressed in terms of the learning by doing, spillover and increasing return effects that comprise the modern approach to infant industry protection (see e.g. Ray 1998, pp. 669-73; Shafaeddin 2005, pp. 49-50). Protection was only justified for countries which had progressed beyond the initial growth stages, achieved a mature agricultural state and a certain development of productive powers, and had a large area and population. The economic improvement of nations in their early stages, with a “low level of intelligence and culture”, is best accomplished “through

free trade with highly cultivated, rich and industrious nations” and any attempt to plant industries in those countries through tariff protection was deemed “premature and injurious” (List [1841] 1909, p. 312).

At first, List ([1837] 1983) argued that, in principle, (most) underdeveloped nations would eventually reach a stage of growth at which the adoption of protectionist tariffs and their industrialization was warranted. That was the basis for List’s ([1837] 1983, pp. 86, 183) claim that, since “most countries are potentially capable of establishing and developing all kinds of industries” and, moreover, “agriculture is dependent upon natural processes that man can do little to modify”, international trade tends to be largely dominated by agricultural goods produced in different climates and soil. Classical economists, by failing to distinguish between agriculture and manufacturing, had not appreciated correctly the influence of climate and nature on the international division of labour and the production of wealth (see also List [1841] 1885, p. 131).

They proclaim that nature utterly rejects restrictions on commerce because she has endowed different peoples with different resources and the ability to produce different products ... This argument is all very fine but we have shown that it applies only to agricultural products. As far as the output of manufactured goods is concerned it is obvious that the major states of the temperate zone ... are all equally capable of establishing great industries (List [1837] 1983, p. 183; see also [1841] 1885, p. 172).

That was List’s first brief reference to the “temperate zone”. Whereas in the *Natural System* the theory of growth stages - and the infant industry argument associated with it - was generally applied to all countries, List would turn the 1837 passing mention to temperate countries (and implicitly to tropical ones) into one of the backbones of his approach to trade and growth in the *National System*. Nature, he would argue, also plays a role in manufacturing activity, but of another sort. Differently from his earlier books, List now divided the world economy into two broad geographical areas: the industrialized (or industrializing) temperate zone and the agricultural tropical zone (see also Tribe 1987, p. 218; Coustillac 2009, p. 221). Such division was based, according to List, on the effects of climate on the supply of physical and mental effort.

Countries with a temperate climate are (almost without exception) adapted for factories and manufacturing industry. The moderate temperature of the air promotes the

development and exertion of power far more than a hot temperature (List [1841] 1885, p. 172).

Nature lays down certain conditions for the existence of agriculture and manufactures, but these conditions are not always the same. As far as natural resources are concerned the lands of the temperate zone are peculiarly fitted for the development of a manufacturing power, since a temperate climate is the natural home of physical and mental effort (List [1841] 1909, p. 308).

While List may be criticized for resorting to a very “rudimentary” form of the theory of climates as a convenient way to justify his colonialism (Anson-Meyer 1982, pp. 110-112; Coustillac 2009, p. 221), it should be noted that his argument about the influence of climate and nature on national characters fits well with the “environmentalism” thought, regarded by Schumpeter (1954, p. 434) as one of the main ingredients of the *Zeitgeist* of the period. It was an important element of Marx’s (see Cowen and Shenton 1996, pp. 145 and 164) and especially J.S. Mill’s explanation of the observation that economic progress is often less intense in tropical areas with plenty of natural resources, which has become known in the literature as the “banana parable” after Alexander von Humboldt’s reports on the perverse effects of the fertility of tropical land on effort supply in New Spain (Mexico) at the beginning of the 19th century (see Boianovsky 2013). Although its origins may be traced to Hellenic medical and political thinkers, it was only after Montesquieu’s *L’Esprit des Lois* that it became influential (Glacken 1967, ch. 12). List had been, since young age, a keen reader of Montesquieu (Coustillac 2009, p. 203). Environmentalism is also present in List’s rendition of the so-called “no pain no gain” argument.

The severe season of the year, which appears to the superficial observer as an unfavorable effect of nature, is the most powerful promoter of habits of energetic activity, of forethought, order, and economy ... A man [under these circumstances] must necessarily become far more industrious and economical than the one who merely requires protection from the rain, and into whose mouth the fruits are ready to drop during the whole year. Diligence, economy, order, and forethought are at first produced by necessity, afterwards by habit, and by the steady cultivation of those virtues (List [1841] 1885, p. 172).

Tropical nations are deemed “ill-suited for manufactures”. Instead, they possess the natural monopoly of agricultural products that are in high demand by the countries of the temperate zone. List ([1841] 1909, pp. 308 and 310) identified the exchange of the manufactures of temperate countries for the tropical (“colonial”) goods as the dominant form of international trade, which would benefit both groups of nations. They become, in Margaret Hirst’s (1909, p. 128) words, “two non-competing groups” between which exchange can take place. Hence, in contrast with classical economists, List understood national economic development in the international order in terms of complementary and interdependent economic relations between nations. Such international division of labour would in principle bring about a balanced growth of the world economy - similarly to the harmonious relation between agriculture and industry within temperate nations - which List called “civilizing process” (see De Cecco 1974, pp. 10-11; Tribe 1988, pp. 33-35). Although the tropical zone could benefit from such process, its pace of economic development would be probably lower than growth in industrialized countries, as discussed next.

3. Civilization, markets and colonies

As mentioned above, List did not initially restrict his growth stages theory to countries of the temperate zone. Indeed, after a critical comment on the adoption of protectionist policies in South America (which will be further discussed below), List [1837] 1983, p. 44) maintained that if the government of a backward nation encouraged imports of “cheap manufactured goods” from abroad and the exports of raw materials and agricultural goods, it would “gradually stimulate the demand at home for a greater diversity of manufactured goods”. This would stimulate people to increase their output of primary commodities so as to be able to purchase foreign industrial goods, which would be accompanied by larger effort supply, savings and educational facilities. In this way, according to List, “a backward nation can develop into a progressive state”. In the same vein, List ([1827] 1909, p. 205; see also p. 165) stated in his *Outlines* that “Mexico and the Southern Republics” (that is, South America) would make a mistake if they restricted free trade. Their people, “being yet uninstructed, indolent, and not accustomed to many enjoyments, must first be led by a desire of enjoyment to laborious habits,

and the improvement of their intellectual and social conditions”. There was yet no reference to climate (tropical or otherwise). The underdeveloped agricultural/mineral stage of Latin American nations was seen as transitory - even if a long transition at that.

Although List changed his mind in the *National System* about the growth pattern of Latin American and other tropical countries, he still maintained that in their permanent role as suppliers of primary commodities, such nations would benefit from “advances in national wealth and civilization”. True enough, this recommended free trade policy “leaves the tropics in a state of dependence” from powerful industrialized countries. Such political and economic dependence would only take place, however, if power were monopolized by a single country (presumably England, the first industrial nation). It would disappear if - through protectionist tariffs - countries of the temperate zone reached the same level of industrial development and, therefore, competed politically and economically among themselves, as List wrote in the introduction to the *National System* (List [1841] 1909, p. 309).⁵ The aggregate economic growth of temperate nations via industrialization increases their demand for primary commodities, with positive effects on the development of the tropical countries. Through its exports of primary commodities and imports of manufactures, the tropical region becomes a complementary unit to the temperate zone, leading to a cumulative process of economic growth on an international scale (List [1841] 1885, pp. 154-55; see also Anson-Meyer 1982, pp. 108-09). This shows, in List’s (p. 156; italics in the original) view, that the trade policy more conducive to world welfare is the “system of protection, which aims at developing *the manufacturing power of the whole temperate zone*, for the benefit of *the agriculture of the whole torrid zone*”.

However, industrial temperate countries tend to grow faster than the agricultural tropical ones, since manufacturing takes place at increasing returns, as implied by List’s infant industry argument quoted in section 2 (see also De Cecco 1974, p. 10; Gomes 2003, p. 82). This may be also inferred from List’s ([1841] 1909, p. 310) remark that as a general principle, a nation is rich and powerful “in the proportion in which it exports manufactures, imports raw materials, and consumes tropical products”. The “reciprocal operation” between the production of tropical commodities and manufactured goods is an important source of increase of productive powers and market for industrial countries:

The most important articles of importation of the nations of the temperate zone consist in the products of tropical climates ... By far the greatest part of these products is paid for

with manufactured goods. *In this interchange chiefly consists the cause of the progress of industry in manufacturing countries of the temperate zone, and of the progress of civilization and production in the countries of the torrid zone.* This constitutes the division of labour, and combination of the powers of production to their greater extent ... [Thanks to this] the production of the manufactured goods which are required to pay for the colonial products occupies a larger number of manufacturers; manufactories and manufacturing business can be conducted on a much larger scale, and consequently more profitably (List [1841] 1885, pp. 211-12; italics added).

The role of tropical markets for the economic development of industrial nations was first discussed by List during his stay in America. According to List ([1827] 1909, p. 252), the political independence of Latin American countries from Portugal and Spain presented the opportunity of a large market for the United States' manufactures. Indeed, List (p. 183) listed the emancipation of the South American republics as one of the most important world political events that had taken place after the publication of the *Wealth of Nations*. American growth strategy should be based on the protection of its infant industry from English competition, followed by an effort to share with England the new South American market (p. 252). In List's view, England had promoted the political independence of South America to get the market away from the control of Spain.⁶ The United States should act quickly to capture those markets and dominate, through their growing industrial power, commerce and navigation in the region (see also Dorfman 1966, pp. 579-80). By the time List set to write the *National System* he expected that Latin American domination - as signaled by the conquest of Texas - would eventually enable the United States to overpower Great Britain. He imagined the latter would in the future form a European coalition to curb American power, just like in mid 19th century the French and Germans should establish a Continental alliance against British political-economic supremacy (see also Earle 1944, pp. 146-47).

The same causes which have raised Great Britain to her present exalted position will (probably in the course of the next century) raise the United States of America to a degree of industry, wealth and power which will surpass the position in which England stands ... They will diffuse their population, their institutions, their civilization, and their spirit over the whole of Central and South America, just as they have diffused them over the

neighboring Mexican province. The Federal Union will comprise all these immense territories... (List [1841] 1885, p. 339).

But, long before that, Great Britain should, as the mid 19th century dominant power, use her influence “in all the barbarous and half-civilized countries of Central and South America, of Asia and Africa” in order to bring about changes associated with the “civilizing process” - such as introduction of security of persons and property, construction of transportation system, promotion of education and morality, and elimination of superstition and idleness. These “operations of civilization” - necessary as they were for increasing the production of tropical goods - would be more successful to the extent that Great Britain gave up her policy of monopolistic control of tropical markets through commercial privileges - such as the commercial treaty established with Brazil after its independence (see the appendix below) - and opened those markets to the Continental nations and the US (List [1841] 1885, p. 153). List was especially critical of the adoption of protective tariffs by South American states, which he condemned as a huge economic policy mistake that had not been prevented by the orthodox classical school of thought (p. 151).⁷ In his 1839 French article, List ([1839] 1928, p. 110) referred to the “disastrous consequences” of the restrictions to free trade in South America. This had been explained in the *Natural System*:

In South America protective tariffs cannot at a stroke turn an ignorant people into well educated, industrious and inventive people. Only a few weak factories would be established in South America (under the shelter of a tariff) and they would produce only expensive goods of poor quality. No competition would develop at home to encourage the manufacture of better goods at lower prices. In these circumstances foreigners would hesitate to invest their capital and skill in backward South American states ... And, if by chance, in exceptional circumstances, a foreigner would venture his capital and skill in South America his sole object would be to make his fortune as quickly as possible before returning to his native land (List [1837] 1983, p. 44).

The South American market played an important role in List’s ([1841] 1885, ch. 36) plea for a larger participation of the German economic union (the *Zollverein*) in trade with tropical countries and promotion of “civilization” in those areas. German emigration to Central and South

America - instead of North America - should be encouraged in order to increase the demand for German manufactured goods and assist those areas in rising to a “higher grade of civilization”. Since those countries “will never make great progress in manufacturing industry”, the industrial nation that set up firm commercial relations with Latin America “may remain in possession ... for all future time ... of [this] new and rich market for manufactured goods” (List [1841] 1885, p. 346). The other area suggested by List (p. 347) for German colonization effort through the expansion of the *Zollverein* was South-Eastern Europe, which would provide food and raw materials to industrialized Germany (Henderson 1983, pp. 104-07). List originated the ideology of German economic colonialism as an important element of the economic development of the country (Smith 1974, pp. 644-45; see also Semmel 1993, pp. 67-68). Such program for overseas and continental expansion would probably entail the risk of war, as List was aware (see also Earle 1944, pp. 144-45).

The essentially asymmetric character of the international economy was often stressed by List. The development of the productive powers of nations of the temperate zone enabled them to make the countries of “tropical climates and of inferior civilization” tributary to themselves and, by that, use the international division of labour for “their own enrichment” (List [1841] 1885, p. 131). Such asymmetry was perceived as a permanent, not transitory, feature. The tropical zone included not just the incipient Latin American republics but also old civilizations like India and other Asian nations, whose culture was “retrograding”.

This exchange between the countries of the temperate zone and the countries of the torrid zone is based upon natural causes, and will be so for all time. Hence India has given up her manufacturing power with her independency to England; hence all Asiatic countries of the torrid zone will pass gradually under the domination of the manufacturing commercial nations of the temperate zone ... and the States of South America will always remain dependent to a certain degree on the manufacturing commercial nations (List [1841] 1885, pp. 216-17).

This contradicts List’s remarks made in the introduction to the *National System* (quoted in section 2 above) that tropical countries would not be dependent if only industrialization spread over the whole temperate zone. As far as India was concerned, List acknowledged her lost of manufacturing power to England, but claimed that she gained even more by expanding her

output of agricultural goods for the domestic and foreign markets. In any event, the “destruction” of substantial parts of Hindu and Asian industry by capital-intensive European competition, in List’s view, was compensated by the supply of large amounts of manufactured goods to tropical Asian countries at low prices (List [1841] 1885, pp. 214, 233; see also Maneschi 1998, pp. 97-98). The “regeneration” of India and other Asian nations could only take place by an “infusion of European vital power” and free exchange of agricultural products for industrial goods (List [1841] 1885, pp. 336-37).

List’s “Eurocentric” interpretation of world economy and politics, as well as his support of colonialism, was not an exception, but the rule in mid 19th century economics. It was part of what Bernard Semmel (1970) has described as “free trade imperialism”. Economists as distinct as J.B. Say and Karl Marx agreed on the useful role of British rule in India, and, in the case of Marx, approved of the destruction of Indian industry by foreign competition, which would contribute to the extinction of “feudal” societies in Asia. Again, just like List, Marx wrote positively of the “regenerating” function of colonizers - but, unlike List, expressed preference for the British over other empires (Semmel 1970, pp. 209-10; Szporluk 1988, p. 127; Arndt 1987, p. 36). In the same vein, F. Engels celebrated the conquest of Texas by the United States at the expenses of Mexico, as List had already done.

The “imperialist” view was closely associated with the notion that trusteeship was a necessary ingredient of economic development, in the sense that underdeveloped societies should be guided by those societies where the conditions of development were already present. Trusteeship has been identified by Cowen and Shenton (1996, ch. 1) as the defining element of 19th century doctrine of development. It could be also found in the influence of the experience of 19th century imperialism on J.S. Mill’s political and economic thought on development in “barbaric” and “civilized” nations (Jahn 2005). Indeed, as documented by Arndt (1978, p. 24), that notion of development goes back to *la mission civilisatrice* of colonialism in the days of Louis XIV in France. It remains to be investigated in what extent - if any - readers of List in Latin America and other “tropical” regions realized his sharp distinction between the growth dynamics of industrial and agricultural countries in the working of the 19th century international economy.

4. Aspects of List's reception in Latin America

4.1. Economic nationalism and tariffs (1870s-1920s)

During the period between the last quarter of the 19th and the first quarter of the 20th centuries exports of primary commodities from Latin America to the temperate countries of Europe and North America expanded as part of international economic growth. Although it is true that Latin American economies (especially Argentina, Uruguay, Brazil, Chile and Mexico) benefited from industrial development in Europe and the US, Arndt's (1987, p. 21) inference - that the region was an exception to the role of nationalism as the catalyst of modernization that had taken place in Japan, China, India and other underdeveloped countries in late 19th and early 20th centuries - does not necessarily follow.

Henryk Szlajfer (1990) maintained that nationalism, although of a different sort, was a feature of South American agrarian nations at the time. As recalled by Szlajfer (p. 64), List had not argued that agrarian-raw materials specialization of the "barbarian" countries assured their equal participation in the gains from international trade, but just their access to the long-run benefits of the "work of civilization". Hence, "there is no reason why List's theory ... should not be interpreted in a broader way as economic nationalism of agricultural and raw materials peripheries aimed against the domination of industrial metropolises ... [although] it is paradoxical that the said Eurocentric 'stage' aspect of List's theory was not only in the 19th but also in the first decades of the 20th century a peculiar creed of agrarian raw-material nationalism" (Szlajfer, pp. 64-65). The aim of such nationalism, and the corresponding role of the state associated with it, was not, according to Szlajfer (pp. 85-86), autonomous industrialization, but the increase of the benefits from trade by smoothing out cyclical fluctuations in demand for primary commodities caused by crises in the world economy. The Brazilian 1906 introduction of the coffee valorization scheme as an attempt to control the international coffee price (see e.g. Furtado [1969] 1970, ch. 17) was interpreted by Szlajfer as a clear illustration of that kind of protection of "national interests".

Although Latin American economies were predominantly agrarian, export expansion - through its effects on the diversification in the pattern of demand and ensuing growth of the

domestic market - induced the formation of an industrial nucleus producing nondurable consumer goods. That was the first phase of the industrialization process of the main Latin American countries, which lasted until the late 1920s (see Furtado [1969] 1970, ch. 10) and was accompanied by the emergence of economic nationalism of the industrial kind. Hence, Szlajfer's interpretation captures just part of the picture; in particular, although there was indeed a "paradox", it had to do with industrial, not agrarian nationalism. As discussed in section 3, List had already noticed and criticized the high tariff rates that prevailed in Latin America in the mid 1800s. List's critical comments go against the still influential view that free trade dominated Latin American commercial policy before the 1930s. However, they have been confirmed by John Coatsworth and Jeffrey Williamson's (2004) study showing that Latin America was the most protectionist region in the world from the mid 1800s to World War I. Coatsworth and Williamson argue that protectionist tariffs were determined mainly by revenue targets, not by a policy to foster industrial growth, whose earliest phases date from the later 1870s (see also Szlajfer 1990, pp. 84-85). Indeed, one of the complaints of Latin American protectionists at the time was the chaotic state of the tariffs system, which often did not discriminate between revenue and protection goals (see e.g. Luz 1961, ch 4).

Even though it is well established that the debate about protectionism - and the adoption of corresponding policies - intensified in the main Latin American countries after the 1870s, following the trend in Europe and North America, it is not so clear the role played by List's ideas in that context. In his study about the "revolution" represented by the introduction of industrialization concepts and policies in Latin America, Pedro Teichert (1958) asserted that during the first phase of industrialization (end of the 19th century), Latin America's economic policy was strongly influenced by List.

List's ideas seem to have served as a guide to Latin American development policy ... Perhaps no other economist was as responsible for the initiation of the Latin American economic policy revolution as Friedrich List. Until the arrival of Keynesian economics ... List was the economist referred to most often in connection with the formulation and justification of Latin America's industrial development policies (Teichert 1958, pp. 236, 244).

Teichert may be right, but he did not provide any textual evidence of frequent references to List in Latin American economic literature. The only indirect evidence he used was the examination of the Uruguayan protectionist policy that followed the Customs Law of 1875, generally regarded as the first of its kind in the region. Teichert (p. 248) quoted a passage from an Uruguayan document of 1888 stating that “the making of a nation and of economic independence depends on domestic industry, that is to say, on the proportional development of productive forces for the employment of the national labour force, and on permanent capital investments”. This sounds very much like List (whose name is not mentioned in the quotation), but Teichert’s claim seemed just to assume that any infant-industry like argument deployed in the region was necessarily influenced by List, arguably its main formulator and popularizer. It also illustrates the difficulty of attributing specific influence to List, who became the conduit through whom the ideas of others (like Hamilton) were disseminated.

The role of nationalism in the first stages of industrialization of the tropical periphery comes out clearly in Nícia V. Luz’s (1961) careful study of how the “battle for industrialization in Brazil” was fought in the period 1880-1910 between pressure groups with distinct ideologies (see also Stein 1963). Luz’s book originated from a commission from the Harvard Research Center in Entrepreneurial History to investigate economic nationalism and its connection with the beginning of industrialization in Brazil. The organization of pressure groups behind the industrialization movement effectively started in the 1880s (Luz, ch. 3), but the first signs of change could already be seen in 1844, when the commercial treaty with Great Britain - which had been denounced by List a couple of years earlier, as mentioned in section 3 and discussed further in the appendix - expired and was not renewed. In that same year, a new customs tariff was published, raising import duties from 15% to 30-60% *ad valorem* (Luz 1961, pp. 24-25). Further protectionist changes in the tariff system in 1879, together with balance of payments problems caused by the cyclical fall in economic activity in industrial countries in the late 1870s and early 1880s, helped to form a favourable environment for the creation of the Industrial Association. It was in that context that Antonio Felício dos Santos, president of that association, mentioned in 1881 “the great economist List” in a document demanding a broader protectionist legislation (Carone 1977, p. 151). A couple of years earlier, Brazilian industrialists had pushed the publication of a Portuguese translation of Henry Carey’s 1876 letters to the *Times* in defence of protectionism in developing economies (Carey [1876] 1878).⁸

The Brazilian nationalist movement for industrialization and tariff protection intensified during the 1890s and the first decade of the 20th century. According to Luz (1961, ch. 3), its main leaders were Amaro Cavalcanti and Serzedelo Correia, who both quoted List and were influenced by his ideas about infant industry and productive powers. This is not discussed by Luz (1961), but the textual evidence from Cavalcanti's and Correias's writings is clear enough. Amaro Cavalcanti (b. 1849; d. 1922) graduated in law in Albany (NY) in 1881, where he witnessed the process of economic growth of the United States and was exposed to the American "National System", represented not just by Hamilton and List, but also Henry Carey. Indeed, Cavalcanti would become one of the main supporters of that system of thought in Brazil and a follower of List (see Vieira 1960; Silva and Fernandes 2003). Upon his return from the US, Cavalcanti started a successful career in Brazilian politics as member of the Congress, Minister of Justice and Finance, member of the Supreme Court and diplomat (Luz 1961, p. 71, n. 9).

Cavalcanti's main contributions to the Brazilian debate on protectionism may be found in his 1903 article about tariffs. In support of his argument for the *temporary* protection of the Brazilian industry, Cavalcanti (1903, pp. 10-11) quoted List as well as J. S. Mill's ([1848] 1909, p. 922) famous paragraph about infant-industry protection. Against the criticism that protectionism increased the price of imported goods and reduced the current welfare of consumers, Cavalcanti (pp. 21-22) reproduced List's ([1841] 1885, pp. 117-18) contention that it was not a matter of comparing exchange values but productive powers.⁹ Like List, Cavalcanti (p. 22) advocated steady but "temporary and moderate" protectionism until full development of national industry, aiming at free-trade as the ultimate goal. In an address to the Congress delivered in 1892, Cavalcanti claimed, in Listian terms, that, just "like every child", national industry needed protection (and the ensuing attraction of foreign capital) during its "initial or *educative* period" (Cavalcanti 1892, p. 324; italics in the original). Without protectionist tariffs Brazilian industries would be "suffocated at *birth*", according to Cavalcanti (1896, p. 220; italics in the original).

Serzedelo Correia (b. 1853; d. 1932) started his career as an officer of the Brazilian army and later acted, like Cavalcanti, as a member of the Congress and Ministry of Finance and War (Luz 1961, p. 79, n. 30). He played an important role in the committee in charge of the revision of the tariff legislation in 1896, and in 1902 became president of the new Centro Industrial do Brasil (Brazilian Industrial Center). Next year Correia collected his ideas about industry and

protection in a book that started by referring to List's [1841] 1885, p. 142) concept of "normal state". Brazil's main economic problem was the absence of a developed industrial sector, which is why it could not be considered a "normal nation".

We are, indeed, a free and politically independent people, but in the realm of economic interests, we are, still today, a colony ... Societies which are not economically independent can never constitute the kind of great nation that List, the initiator of the *Zollverein*, described when he wrote that an independent and well organized nation must possess - together with a common language, literature, large territory and numerous population - agriculture, manufacturing industry, commerce and navigation harmonically developed, while the arts, sciences and the means of culture and education rise themselves on equal footing with material production (Correia [1903] 1980, p.19; my translation).

Elsewhere in the book, Correia (pp. 134-35) claimed that history had shown that "reasonable protection" was necessary in order to develop the "productive powers of new countries" through "educative" tariffs that prevent the annihilation of domestic "infant production" by competition from old industrial nations. Correia and Cavalcanti referred also to other protectionist authors, like the Frenchman Paul L. Cauwès (1881), who illustrates the presence of Listian ideas in France (see Schumpeter 1954, p. 853). In fact, List's exposure to French protectionist ideas (especially Jean Antoine Chaptal's), even before coming to America, had helped convert him to protectionism (Henderson 1989).

Another Brazilian nationalist mentioned by Nícia Luz (1961) is Luiz Raphael Vieira Souto (b. 1849; d. 1922), an engineer, entrepreneur and professor of economics who in 1904 replaced Serzedelo Correia as president of the Centro Industrial do Brasil. According to Paul Hugon ([1955] 1994, p. 365), Vieira Souto's protectionist views were formed under the influence of List. Hugon apparently was the source of Love's (1996a, p. 210, n. 5) assertion that Vieira Souto was one of the few Latin Americans influenced by List at the turn of the century. Although such an influence cannot be ruled out in view of the wording of some passages, it should be noted that Vieira Souto referred to protectionist authors like the German-Russian Heinrich von Storch and the American Henry Carey – influential as a populariser - in his writings and in the reading list for his course in political economy, but not to List (see Correa, 2010). Be as it may,

some passages by Vieira Souto are quite reminiscent of List, and they may have reached him through another route. For instance, he used the child metaphor in his defence of tariffs, and sustained that all nations (including England) started their industrial lives by protecting their industries (Vieira Souto [1902] 1980, pp. 470-71). In the same vein, he maintained in a document written in 1904 that high tariffs should not be “permanent”, but last only until increased production and competition between domestic firms reduced costs and prices of national manufactured goods (Carone 1977, pp. 51-53).

Like the Brazilian experience, economic nationalism and protectionism became an important feature of Chile’s society by the end of the 19th century. List’s influence on Malaquías Concha (1889), one of the founders and leader of the Chilean nationalist Democratic Party in 1886, has been mentioned by Pinto (1968, p. 133) and Love (1996a, p. 210). Francisco Encina (1912, pp. 30-33), in a classic book, reacted against Concha’s assumption that the reason for the “economic inferiority of Chile” was industrial underdevelopment caused by the absence of high tariffs. Encina referred to Concha’s use of an argument attributed to List that economically and politically weak nations tend to be “absorbed” by powerful ones, unless tariff protection is deployed. However, according to Encina, in Chile (where protectionism was effectively introduced in 1897) sheltered industries did not develop at a higher rate than unprotected ones. Chile “lacked all the conditions demanded by industrial life”, such as advanced agriculture and economic capacity of workers for industrial activities. Encina developed the thesis that, instead of protectionism, Chile’s economic growth needed changes in the education system and economic policy in general. This was not far from List’s own advice to South American countries, but Encina did not seem to realize that.

The most prominent Chilean economist to embrace nationalism and protectionism in the first decades of the 20th century was Guillermo Subercaseaux (b. 1871; d. 1959), professor of political economy at the University of Chile and founder, together with F. Encina, of the political party Nationalist Union which existed between 1915 and 1920 (see also Pinto 1968, p. 133).¹⁰ In his 1924 history of economic thought in South America, Subercaseaux (1924, ch. 8) discussed the factors that had brought about the beginning of the industrialization process and the nationalist wave in the region. The main intellectual influence was the reaction - informed by F. List and H. Carey’s support of protectionism - against the “free trade absolutism” of the classical school. Such evolution was also helped by the general influence in Latin American countries of

the approach of the German “historical or realist” school represented by W. Roscher and G. Schmoller (Subercaseaux, pp. 71-72) - without any mention of the differences between the respective approaches of those two authors.

Although the Brazilian and Chilean authors discussed so far were important instances of the impact of List’s ideas in South America, the individual who best illustrates that influence is Alejandro Bunge (b. 1880; d. 1943), founder in 1918 of the *Revista de Economía Argentina*, professor at the University of Buenos Aires and Argentina’s foremost theorist of protectionist economic development. Around the 1920s, Bunge promoted and elaborated List’s arguments as the basis for a model of national development (see Salberg 1979, p. 30; FitzGerald 1994, p. 95; Lucchini, Blanco and Cerra 2000-2001). List’s ideas had been introduced in Argentina in the 1870s by Vicente Fidel López (b. 1815; d. 1903), who at the time was professor of political economy in Buenos Aires and would become in the early 1890s Minister of Finance of President Carlos Pellegrini (b. 1846; d. 1906), his former student. As members of the Argentine Congress in the 1870s, they both participated in the debates about tariff reform, when Pellegrini stated that “free trade kills the infant-industry” (Popescu 1997, p. 247), and formed what Popescu (1997, ch. 14) has called the “López-Pellegrini school”. Popescu (p. 249) has regarded Bunge as a follower of López and Pellegrini, but his statement that Bunge did not refer to their writings is inaccurate (see Bunge 1928, pp. 110-11, where he reproduces passages from a 1897 speech by Pellegrini in support of tariff protection). Moreover, like López and Pellegrini, but differently from List, Bunge argued for tariff protection not just of the manufacturing industries but also of the agricultural sector, which was quite powerful economically and politically in Argentina (see also Lucchini et al 2000-2001). Hence, it was not just a matter of Listian industrial nationalism but also of what Szlajfer (1990) has called “agrarian nationalism”.

Bunge studied engineering in Germany between 1900 and 1905, where he was exposed to List’s ideas and to the *Zollverein* experience. In an address delivered at the University of Chicago in 1922, Bunge (1930, pp. 105-06) argued that, although Argentina should keep increasing its agricultural and cattle production, it would be highly detrimental to its economy if such increase was not accompanied by an equivalent development of manufacturing industries. “We find ourselves in an economic moment similar to Germany at the time of the economist List and to the United States forty years ago.” Bunge’s most ambitious economic project – which may be regarded as an embryo of the current Mercosur - was the reproduction of the German

Zollverein in part of South America. Bunge's plan for a "Unión económica del Sud" [Economic union of the South] was first discussed in a public lecture presented by him in 1909 in Mannheim under an invitation of the German *Volksverein*, and was further elaborated in several articles collected in his *Economía Argentina*. By the late 1920s, the plan was also supported by G. Subercaseaux in Chile. Bunge aimed at the creation of a customs union formed by countries of the south cone of the continent (Argentina, Chile, Uruguay, Bolivia and Paraguay). Brazil was not listed by Bunge, who only much later would reluctantly include it in the proposed union. The process should be led by Argentina - the main South American economic power at the time - which would play a role similar to Prussia in the German *Zollverein*.

List's insights on the "normal nation" and the division of the world economy in great economic blocks are visible in Bunge's 1922 American lecture. Bunge (1930, p. 88) sustained that only "great nations" could play a meaningful role in international economy and politics. One of the objectives of the common market of the south cone was to challenge the United States's hegemony in South America. "Great nations" should feature a large territory with abundance of fertile land and mineral resources, "white race", and nutrition based on beef and wheat. Countries with large natural assets but populated by a "mediocre ethnic type" fed on tropical vegetables were beset by an "organic disequilibrium between man and the physical environment" and therefore were unfit for industrialization.

It is implicit in Bunge's argument that purely tropical countries were economically inferior, a notion that, unlike List's (see Szporluk 1988, p. 128), seemed to be partly based on racial discrimination. Of course, the proposed economic union contained "subtropical" areas in Argentine territory and a "torrid zone" corresponding to Paraguay and Bolivia, whose agricultural and mineral production was "valuable", as Bunge stated in an article published in *Revista de Economía Argentina* in 1929, titled "A great economic union: the customs union of the south", reprinted in his collection of essays (Bunge 1930, pp.47, 49). Apparently, Bunge would apply to those countries his remark that "inside our political borders we possess our own colonial dominions, something similar to the African subtropical colonies" (Bunge 1928a, p. 226; article published originally in the newspaper *La Nación* in 1927). Another interesting parallel between Bunge and List is that they shared the view that national economic development was closely related to the expansion of the transportation network, especially in the form of the railway system, as Bunge (1928b, ch. 10) set out to show statistically for the Argentine economy

(on List as the “railway pioneer” see Henderson 1983, ch. 3; Tribe 1995, pp. 62-65). During the early 1920s the young Raúl Prebisch (b. 1901; d. 1986) - who after the Second Great War would become secretary-executive of CEPAL and Latin America’s leading development economist - interacted with Bunge as his student and research assistant. Prebisch was “intrigued” by Bunge’s campaign for the Southern Cone economic integration, but remained unimpressed at the time by the argument for protectionism instead of free trade (Dosman 2008, pp. 30-31).

4.2. CEPAL, infant industry and import substitution (1930s-1950s)

With the intense fall of external demand and prices of exported goods during the Great Depression of the 1930s, the change in relative prices spurred an increase in the demand for domestically produced manufactured goods, which marked the start of the second phase of the industrialization process in Latin American countries, known as import-substituting industrialization, or ISI (see Furtado [1969] 1970, ch. 11). Although List’s national economy continued to be a background influence, references to his texts fell in comparison with the preceding period. This can be in part explained by the publication of Mihail Manoilescu’s (1929) book on the theory of protection and international trade, which was soon translated into Portuguese (Manoilescu [1929] 1931), English and other languages. The Portuguese translation was published by the Centre of Industries of São Paulo, under the initiative of some of the leading Brazilian industrialists, such as Roberto Simonsen. It was quickly used as the “scientific” basis of their protectionist arguments during the 1930s (see Love 1996a, pp. 211-12; 1996b, ch. 9).

Simonsen (1931, p. 89) referred positively to List’s argument for the abolition of custom tariffs between the 39 states that would form the German empire Zollverein, which in his opinion contrasted with the inter-state taxes that prevailed in Brazil. In his classic study about the industrial evolution of Brazil, Simonsen ([1939] 1973, pp. 54-55) pointed out the role of industries in fostering the progress of science and formation of national elites. In Listian fashion, he stated that the economic and political independence of the nation could only exist if agriculture and industry were harmonically developed (cp. a similar quotation from Serzedelo Correia given in section 4.1). However, Simonsen (1931, pp. 90- 93) felt uneasy about what he

perceived as a contradiction between protectionist practices and the rejection of protectionism by many academic economists, a situation he expected would change with the “scientific bases” provided by Manoilescu’s book.

As Minister of Commerce and Industry of Rumania, Manoilescu was an economist and policy maker from a small underdeveloped country, which in the mid 19th century was part of the European region that List thought should be colonized by the *Zollverein*. The *National System* had been translated into Rumanian in 1887, the same year a protectionist law was approved in the country (see Szporluk 1988, p. 161). Manoilescu (1929, paragraphs 31 and 182-200) criticized List’s infant-industry argument, with its implication that tariff protection should be temporary and only justified for countries that are large and civilized enough. In his view, List’s system, based on cultural and political factors, lacked a strictly economic justification for protection – a remark that illustrates the fact that List’s argument about external economies, increasing returns and complementarities would only become part and parcel of development economics in the 1950s. For the first time List was criticized by a supporter of protectionism who, differently from List himself, challenged the very theoretical foundations of comparative advantages and free trade.

Manoilescu’s starting point was that factor prices may fail to reflect social marginal products. Different factor proportions might exist side by side in the same (dual) economy, which offers the possibility of increasing output by factor redistribution. Low productivity and disguised unemployment prevail in agriculture - in the sense that wages are higher than the marginal productivity of labour and aggregate output may be increased through reallocation of labour to other sectors. Hence, Manoilescu recommended tariffs on imports of manufactured goods to induce shifts of workers out of agriculture, where its private return exceeds its social return, into industry, where the opposite is true. The wage differential between industry and agriculture hinders the full realization of the potential comparative advantage an agricultural country may have in producing manufactured goods (see Irwin 1996, ch. 10). The overall theme of Manoilescu’s analysis - sectoral wage differentials reflecting productivity differentials - would become an important aspect of the new field of development economics in the next few decades.

The infant-industry argument was gradually interpreted and absorbed by neoclassical trade economists as minor deviations from the static optimum, whereas the “Manoilescu’s type of argument” for protection was further elaborated by development economists, as surveyed by

Hla Myint (1963) at the 1961 meetings of the International Economic Association on trade theory and development. Eugenio Gudín, the leading Brazilian orthodox economist at the time, stated at the debates which followed Myint's presentation that protection was beneficial for underdeveloped areas because they needed time to build up external economies. He objected, however, that "infants were so slow in growing", and complained that in fact List's recommendation that tariffs should be set around 25% and last for no more than 30 years had often been ignored.¹¹ In Gudín's (1963, p. 464) view, developing countries needed both "the carrot and the stick", the latter consisting of a gradual reduction in the rate of protection. He rejected the Manoilescu's type of argument, on the grounds that disguised unemployment was not a general feature of Latin American countries. In his polemic with Roberto Simonsen about the role of economic planning, Gudín ([1945] 1977, p. 107) had already mentioned, against Simonsen, List's point that protection should be "moderate and temporary".

The "appropriation" of infant-industry theory by main-stream economics in Latin America and elsewhere after the Second Great War (see e.g. Viner 1953 pp. 41-42) came out in clear fashion in an important report written by Prebisch for CEPAL in 1954, where the Manoilescu's type of argument was deployed. According to Prebisch (see CEPAL 1954, pp. 60-62), protection is justified because of differences of productivity between developed industrialized countries and underdeveloped agricultural ones, caused by disparities in the capital-labour ratio and technology. It is conceivable that a decrease in the wage levels of underdeveloped countries could offset such differences. However, apart from the practical issues involved, such wage fall would cause a drop in export prices through the working of the wage-price mechanism. For given import prices, this would bring about a "deterioration of the terms of trade" - Prebisch's favourite thesis - with perverse effects on economic growth. The upshot is that protection is necessary to offset the differences in productivity. In contrast with the infant-industry tenet, protection should not be restricted to incipient industrialization, but continue so long as productivity remained lower than in industrialized countries and to the extent that such differential were not compensated by wage differences.

Within the classical school of economic thought, protective measures are condoned during the initial phase of industrialization until such time as industry can be strengthened and has ability to meet foreign competition. It is certainly possible that, in a developing country, a given industry may achieve the same capital density and the same

productivity as in the large industrial countries. In such a case, in view of lower wages, it would cease to be an infant industry requiring protection, even before reaching the same degree of productivity. But this could hardly be the case for all the industries which a developing country requires, to expand, as a means of absorbing the actively employed population not required by other sectors. For this purpose it would be necessary to obtain a volume of capital per person similar to that of highly developed countries ... [which] is hardly likely to occur ... As a result, the argument employed here to demonstrate the inevitability of protection enlarges the scope of the classical argument (CEPAL 1954, p. 61).

Such arguments, further elaborated by Prebisch (1959), indicate that CEPAL's case for import-substituting industrialization was not based on the infant-industry concept (see also Rodríguez 1981, p. 160; Bielschowsky 1988, p. 14). Juan Noyola ([1956] 1996, p. 312), an economist of the CEPAL team, noticed that "to List's traditional arguments" for industrialization it is now added the "more powerful" one "outlined by Manoilescu in the 1920s" and "elaborated by CEPAL" in the 1950s. Despite the similarity with Manoilescu (1929), Prebisch never referred to the Rumanian economist or acknowledged any influence in that regard (see Love 1996b, ch. 8). Neither did Prebisch mention List, which, in view of the latter's criticism of the application of the infant-industry idea to underdeveloped countries, should not be totally surprising.

However, one should not dismiss broad List's influence on CEPAL so easily. Prebisch was probably influenced by List's nationalist approach to economic development, as suggested by Dudley Seers, who worked at CEPAL between the late 1950s and early 1960s. As recollected by Seers (1983, p. 52), "Prebisch once told me he had been influenced by List". Indeed, some points made by List reemerged in Prebisch's writings at CEPAL and UNCTAD, such as the positive effect of protective tariffs on foreign investments, and the role of exports of manufactured goods in the final stage of the industrialization process (see Waterbury 1999, p. 329). The two economists also shared the notion that the world economy was divided into a developed industrial centre and an underdeveloped periphery, which is discussed further below.

Celso Furtado was another CEPAL economist who, as director of its economic development department between 1950 and 1957, contributed to the formation of development economics in Latin America (see Boianovsky 2010). As recollected by Furtado in his

autobiography and elsewhere, discussions about the notions of “social productivity” and appropriate technology and their application to economic planning at CEPAL in the early 1950s led him to revisit at the time List’s concept of a system of productive powers (Furtado 1985, p. 133). According to Furtado (1980, p. 211), List’s idea, by highlighting the interdependence and complementarity of productive activities, provided the first step towards formulating a theory of production regarded as a social process, not as an aggregate of isolated entities (see also Dantas 1997). “In this way *external economies*, which are of considerable importance in the study of development, can be included in the theory of production. Thus the inadequacy of microeconomic criteria of rationality for defining a model of social productivity becomes obvious” (ibid; italics in the original).¹²

Furtado was also influenced by List’s application of the notion of productive powers to the study of the relation between trade and growth, as described in his 1987 World Bank lecture:

The view of productivity as a holistic social phenomenon brought me back to the concept of the system of productive forces introduced by Friedrich List a century earlier. Productive activities could be seen as an articulated whole. Understanding of this whole had to precede that of its parts. This approach shed new light on the nature of external relations, whose role was that of “dynamic center” or force behind the changes on which the development of these economies was based during the primary-export phase.

Indeed, Furtado investigated in his books and essays on economic history how the Brazilian and other Latin American economies had gone through a succession of phases (or stages) and, in particular, the role played by the exports of primary commodities in the transition to industrialization in those countries (see Boianovsky 2010, sections 1 and 2). Despite the absence of references to List by Furtado - who was probably exposed to his ideas during doctoral studies at the Sorbonne in the late 1940s - this could be seen as a generalization of some aspects of List’s stages model to tropical countries, unlike List’s own perspective.

As a result of the translation of List (1841) into Spanish in 1942 and its publication in Mexico, the Latin American scholarship on List started to pick up.¹³ The translation and the biographical note that preceded it were done by Manuel Sánchez Sarto, a Spanish expert on German economic thought who had immigrated to Mexico City in the 1930s. Just before the translation came out, Sánchez Sarto (1941) wrote a thorough essay on the evolution of List’s

thought that remains the best piece about List ever published in Latin America. Covering approximately the same ground that Mechthild Coustillac (2009) would explore later, Sánchez Sarto examined the increasing influence of the “imperial” perspective on List’s “geopolitical” thought, with its implications about the division of the world into political-economic blocks dominated by a few temperate industrial “normal nations” and their respective zones of influence formed by tropical countries (Sanchez Sarto 1941, p. 313).

Another study of List’s ideas would come out in Mexico again and in the same journal, this time motivated by the new general interest in economic development. Carola Ravell (1956) discussed critically List’s ideas about the international division of labor between two climatic zones, and compared with Prebisch’s (1950) “centre-periphery” concept which was becoming popular among development economists at the time. As it is well-known, Prebisch had sustained that the fact of the deterioration of terms of trade against primary commodities prevented agricultural countries from sharing with the industrialized ones the fruits of industrial technical progress. Hence, as noticed by Ravell (1956, pp. 150-52), although there are some apparent similarities between List’s and Prebisch’s descriptions of the actual international division of labor, their respective conceptual bases are different. The issue, as far as List ([1841] 1885) was concerned, was not whether there would be “convergence” between tropical and temperate countries, but whether the former would be better off by specializing in primary commodities or embarking on industrialization. Furthermore, List and Prebisch were far apart regarding the normative or policy implications of their interpretations of the division of the world economy into two areas.

5. Discussion

As documented above, List’s distinction between “temperate” and “tropical” zones (which from his perspective included Latin America as a whole), and his restrictions concerning the industrialization of the latter, were largely ignored by economists who were influenced by his ideas in Latin America. The few exceptions, represented by academic studies about List’s work that started to appear in the 1940s and 1950s (apart from Sánchez Sarto 1941 and Ravell 1956,

see also Teichert 1958, pp. 245-46), failed to penetrate the literature that sought in List's works the theoretical foundations for economic development policies. The same applies to other tropical regions like India, where, despite List's clear opposition to India's industrialization and his support of colonialism, his ideas influenced important Hindu economists such as Mahadev G. Ranade 1899 (on List's influence on Ranade see Arndt 1987, p. 18; Dasgupta 1993, pp. 119-20).

It is possible that economists from underdeveloped countries tended to disregard List's argument about the fate of tropical countries because it was not part of the "central message" he wanted to convey. As suggested by Don Patinkin (1982, p. 17), historians of thought should try to pass a regression line through a scholar's work that will represent its "central message". Is List's argument about the inaptitude of tropical nations for industrialization part of that regression line, or just a noise? As discussed and documented in sections 2 and 3 above, the distinction between the economic dynamics of temperate and tropical countries was considered by List important enough to be included in his 1841 introduction, which summed up the main results of the book. Sure enough, he did not write a separate chapter about that, but spread his remarks along the whole book.

Some commentators have picked up such remarks and observed their relevance for List's framework. That was the case of the famous critical review written anonymously by John Austin in the *Edinburgh Review* just after the publication of the book (on Austin's authorship see Morison 1982, p. 28). As pointed out by Austin (1842, pp. 528-31), the division of the world into two zones was a key feature of List's trade theory and policy. The same is true of Margaret Hirst (1909) and more recent historians referred to above. It was mentioned by Charles Gide and Charles Rist ([1900] 1947, p. 305) in their well-known chapter about List, without any elaboration though. However, despite its relevance, the concept of "central message" is problematic because it assumes that the message thus derived can be measured up against its reception. In particular, it tends to overlook that readers can diverge from what the author tried to convey by using the author's argument for their own purposes, and old issue in the hermeneutics literature (see e.g. Hirsch 1967; Skinner 1988). For instance, Austin's (1842) extensive discussion of List's interpretation of the pattern of international trade was an attempt to use it against List by arguing that comparative advantages should determine commercial exchange between all countries, not just between "tropical" and "temperate" regions.

Then again, reading a complex economist like List is no easy task. Development economist Frederick Clairmonte ([1958] 1963, ch. 1), for instance, suggested reading List as the first foremost anti-liberal economist. According to Clairmonte (p. 75), List “did not trust the advantages of specialization in the relations between technologically developed countries and backward agrarian regions”. Moreover, Clairmonte (p. 98) maintained that List was “profoundly influenced by the forced application of liberal principles in India”, which would explain why Ranade and other Hindu economists were influenced by him. However, both statements by Clairmonte distort List’s meaning, as documented above. More recently, Erik Reinert (2005, p. 61) has claimed that according to List “only when the asymmetries of colonial and neocolonial trade had been eliminated and every nation had achieved a comparative advantage in increasing return activities would all parties benefit from free trade”, which is also far from the *National System*.

Of course, List was not the first to reflect about the economic asymmetries between “tropical” and “temperate” countries. David Hume ([1777] 1987, p. 267) had already asked the reason “why no people living between the tropics could ever yet attain to any art or civility ... while few nations in the temperate climates have been altogether deprived of these advantages?” His answer, similarly to List’s later treatment, was based on the supposed perverse effects of climate on demand for goods, institutions and national character (see Boianovsky 2013, section 2). When development economics established itself as a new field in the 1940s and 1950s, Douglas Lee (1957) was one of the very few authors who regarded climate as an important factor in explaining income gaps across the world economy, without referring to List though. Since the inspection of the “natural resource curse” thesis in the 1990s, the investigation of the empirical regularity that the standard of living in “tropical” countries tends to be systematically lower than in “temperate” zones - which had caught Hume’s and List’s attention – has been resumed by economists (see e.g. Sachs 2001; Easterly and Levine 2003). However, differently from List, the modern literature does not see the perverse influence of geographic endowments as an immutable feature but as condition that may be changed through the adoption of appropriate technology and/or new institutional patterns.

List’s suggestion that “tropical” countries would benefit from industrialization in the “temperate” regions has been largely confirmed in the 19th century historical experience - when terms of trade moved favourably to primary commodities - even if accompanied by divergence in

economic growth rates (see Williamson 2011), which is also compatible with his framework. As argued by Williamson (*ibid*, chapter 10), the real drag on the economic development of Third World countries, as far as trade is concerned, has been export price volatility instead of the long-run trend of terms of trade against manufactured goods. Interestingly enough, List had claimed that countries that specialize in exports of primary commodities suffered from oscillations in price and quantities associated with the “fickleness of foreign demand”, which posed a serious problem for such economies, whose private and public levels of expenditure were usually adjusted to previous periods of peak of exports.

Agricultural prosperity would under these circumstances act like the stimulant of opium or strong drink, stimulating merely for a moment, but weakening for a whole lifetime... A period of temporary and passing prosperity in agriculture is a far greater misfortune than uniform and lasting poverty. If prosperity is to bring real benefit to individuals and nations, it must be continuous... And only by the possession of manufacturing power of their own, can well-developed nations possess any guarantee for the steady and permanent increase... (List [1841] 1885, p. 198).

The selective reading of List by the interpretive communities formed by South American economists from the end of the 19th to mid 20th centuries probably reflects the fact that they got from him what they were looking for, regardless of the accuracy of that reading. By doing so, they applied to their own countries ideas that had been originally designed for Germany or the United States. In his methodological study about the international transmission of economic ideas, Spengler (1970, p. 144) mentioned the reception of List’s nationalist ideas in India as an example of the importance of content in explaining the degree of success of the transmission process. List’s overall success in developing countries (despite partial exceptions such as Manoilescu, who however paid his respects to List in the process) may be also explained by his key contribution to the change in the role of economists as active players in the formulation of economic development policies (see Boetke and Horwitz 2005, pp. 22-23).

Indeed, as observed by Jacob Viner (1953, p. 12) in his Brazilian lectures, the emerging field of development economics, with its challenge to classical trade theory, was “quite ‘Listian’ in character, even when not directly derived from List”. In the same vein, Harry Johnson (1967, pp. 131-32) would argue that List’s nationalist and interventionist ideas were transmitted

indirectly to Anglo-Saxon economics by Central European economists who migrated to Britain in the inter-war period (Mandelbaum, Kaldor, Rosentein-Rodan, Balogh and others) and had lived through the adoption of nationalist economic policies in the Balkan states following the breakup of the Austro-Hungarian Empire. The “infiltration” of ideas from Central Europe into the Anglo-Saxon tradition, regretted by Johnson, played an important role in disseminating nationalist instead of cosmopolitan thinking in Western development economics and in establishing the “fictional” concept of the nation as an economic entity. Such perspective was naturally associated with the need for industrialization through protectionism, which became the “conventional wisdom” of development economics (Johnson, *ibid*). From that perspective, it is understandable that List’s restrictions to the industrialization of “tropical” countries would fall into the background or get overlooked altogether.

Notes

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1. The reception of List’s ideas in European countries has been studied in the collection of essays edited by Eugen Wendler 1996. A fascinating account of List’s influence in Japan may be found in Metzler (2006).

2. The term “infant industry” and the argument associated with it go back to the 17th and 18th centuries (see Viner 1937, pp. 71-72; Irwin 1996, pp. 116-18). List ([1841] 1885, p. 240) used the “child” metaphor himself.

3. The close connection between increasing returns and the infant-industry argument was made clear by Marshall ([1890] 1990, p. 385). Elsewhere in the book, Marshall pointed out that the “brilliant genius” of List showed that “the Ricardians had taken but little account of the indirect effects of free trade” (p. 633).

4. They did not, however, share his view that protectionism was the main policy instrument to move the economy away from its low-level equilibrium trap. According to Nurkse (1953, pp. 105-06), infant-industry protection alone was ineffective to promote economic growth because it overlooked the problem of capital supply, which would explain why it had failed to solve the

economic development problem. Nurkse's criticism of List is reminiscent of Adam Smith's ([1776] 1976, IV.ii, pp. 13-14) rejection of infant-industry argument on the grounds that "the industry of the society can augment only in proportion as its capital augments". List ([1841] 1885, pp. 226-27) had disputed Smith's remarks by claiming that national income depended not only on the nation's material capital, but on its "productive powers" broadly considered.

5. In the 1856 translation it is written "this competition [between temperate countries] will not only assure a full supply of manufactures at low prices..." (List [1841] 1856, p. 76). However, the expression "low prices" is not in the German original.

6. James Mill (1809, pp. 279, 280) had already called attention, from the perspective of Great Britain, to the "brilliant prospects which seem to be opened up for our species in the New World" and that "every eye will ultimately rest on South America" after its emancipation.

7. List ([1841] 1885, p. 152) would also include Egypt in his short-list of countries that should not embrace the "foolish idea" of attempting, in their "present state of culture", to establish industry by means of protection. List's reference to Egypt suggests that he was not completely oblivious - if critical - to the early import-substitution experiment carried out by Mohamed Ali in that country in the first half of the 19th century, contrary to Waterbury's (1999, p. 325) remark. On Egypt's failed attempt to industrialize at the time, see Williamson (2011, pp. 66-68) and references there cited.

8. Although influenced by List, Carey did not share the former's view about the benefits - to all parties involved - from the division of the world economy into two broad economic zones (see Semmel 1993, chapter 4).

9. "The foreign trade of a nation must not be estimated in the way in which individual merchants judge it, solely and only according to the theory of values ... the nation is bound to keep steadily in view all these conditions on which its present and future existence, prosperity and power depend." And "it is true that protective duties at first increase the price of manufactured goods; but it is just as true ... that in the course of time ... those goods are produced more cheaply at home ... If, therefore, a sacrifice of *value* is caused by protective duties, it is made good by the gain of a *power of production*" (List [1841] 1885, pp. 117-17; italics in the original).

10. Subercaseaux was probably one of the very few Latin American economists read in Europe and the US at the time, thanks to his 1912 book about paper money, which was also translated into French (see Boianovsky 2011).

11. Cp. List ([1841] 1885, p. 251): "It may in general be assumed that where any technical industry cannot be established by means of an original protection of forty to sixty per cent and cannot continue to maintain itself under a continued protection of twenty to thirty per cent the fundamental conditions of manufacturing power are lacking."

12. External economies as an important phenomenon at the level of the industrial sector as a whole (not just at the microeconomic level assumed e.g. by Gudin) were also stressed by

development economist K. William Kapp ([1962] 1963) in his praise of List's relevance for India and other developing countries.

13. The Portuguese translation came out in Brazil in 1983 (List [1841, 1885] 1983). It was, however, a second-hand translation made from the English version. In the introduction, Cristovam Buarque (1983, p. xxiv) suggested that List's colonialism and Eurocentrism were determined by his national German interests, and contradicted his theory of productive powers.

Appendix: List and the attempted trade treaty between Germany and Brazil in 1843-45

Brazil was the tropical country that attracted especial attention from List, who was critical of the trade treaty that had been in effect between the South-American country and Britain since 1827, as mentioned in section 3. The treaty of 1827 - signed a few years after Brazilian independence and due to remain in force for 15 years - was in fact a reproduction of the 1810 treaty between Portugal and Britain, and by that represented a continuation of British preeminence in Brazil started with the (in)famous Methuen Treaty of 1703 (see Manchester 1933 classic book).¹ In a note to chapter 36 of *Das nationale System*, published as part of an appendix excluded from both English translations, List (1841, p. 589) observed that the Anglo-Brazilian treaty was about to expire. Under those circumstances, "it would be very much desirable that the *Zollverein* took the opportune steps to prevent the renewal of that treaty." In 1842 Prince Adalbert of Prussia made a timely diplomatic visit to Rio, but, as shown by Alan Manchester's 1933 (chapter 11) blow-by-blow account, it was mainly the Brazilian dissatisfaction that determined the end of that treaty in 1844 after two years of intense negotiations.

After the publication of *Das nationale System*, List became increasingly absorbed by discussions about the commercial policy of the *Zollverein*, until his ultimate death in 1846. Much of his output came out in the periodical *Zollvereinsblatt*, started in 1843 under List's initiative, who also wrote most of the articles (Henderson 1983, p. 85). It was mainly from the pages of the *Zollvereinsblatt* that List commented upon the trade negotiations undertaken by Brazil not just with Britain but also with Germany. Many of List's articles have been reproduced in volume 7 of his *Schriften*, with extended notes by the editors. The foundation of the new periodical marked the beginning of a new phase in List's thought, when the concept of transitional educational

tariffs gave place to a concern with the development of Germany as an imperial power (see Sánchez 1941, pp. 308-15).

In the first semester of 1843, List commented about the failure of British diplomat Henry Ellis to negotiate the renewal of the Anglo-Brazilian treaty in his mission to Rio (see also Manchester 1933, pp. 290-95). The 1827 treaty had established a maximum 15 per cent import duties levied on British goods, extended in 1828 to all countries. By 1842, about one-half of total Brazilian imports came from Britain; as pointed out by *The Economist* (1843, p. 1), Brazil was the fourth largest market for British industrial exports. On the other hand, the main primary commodities exported by Brazil were excluded from the British market because of very high duties (300 per cent on sugar and 200 per cent on coffee). Instead, Britain gave preference to commodities imported from her own colonies. As noticed by List ([1843] 1931, p. 221), Ellis had returned from Rio “empty-handed”; this would give Germany - which is “involved in Brazil’s tariff question more than any other country” - the opportunity to step in. List expected that “after the press has reached the point of making Brazilians understand how they are mistreated by England”, it should be possible to bring them to understand the benefits of direct trade with the states of the *Zollverein*, which have “no colonies of their own”.

The matter attracted the attention of another economic periodical launched also in 1843, but that would last much longer. The opening report in the very first issue of *The Economist* was about the expiring commercial treaty with Brazil. The English periodical pointed out that it was no surprise that the “Brazilians should have felt very strongly the unfavourable position” in which they were placed in their trade with Britain and should “have been exceedingly anxious to get rid of so partial a treaty as early as possible”. The main demand of Brazilian negotiators, as informed by *The Economist*, was that their produce should be admitted into Britain at a duty not exceeding by more than 10 per cent that charged on British colonial produce (see also Manchester 1933, p. 294). *The Economist* warned that in Germany “the hope of inducing the Brazilian government to conclude a treaty with them favourable to their [industrial] goods is daily becoming stronger”. The report quoted to that effect an extract from a letter published in a Bremen newspaper, which sounded very much like List. The letter stated that German industrial power was restricted only by the lack of a suitable commercial policy. Almost all markets abroad, according to the letter, “are now supplied with the British manufactures in preponderating quantities and principally the Brazilian market, which is now almost exclusively

in the possession of British industry, would be constrained to make a greater use of German manufactures, as soon as the United Germany had the courage to impose differential duties on the products of those countries ... till they are convinced of the indispensability of the great German consuming markets, and see the necessity of making reciprocal concessions”.

Trade agreements between a “highly civilized” temperate country and a tropical one with “low culture” would bring about important benefits for both parts involved, argued List ([1844a] 1931, p. 225). Since Germany did not possess any colonies at the time, she was in principle able to grant free tropical countries differential duties much lower than the tariffs charged by England, France and the Netherlands.² This would enable the *Zollverein* states to capture a substantial part of the international market for manufactured goods, as envisaged by List (ibid). Brazil was regarded by List (ibid, p. 228), next to the United States (a country located on the “hem of the tropical region”), the overseas nation with which Germany was capable of the most favourable trade agreement. One of the main reasons why the *Zollverein* states had a small share of both the North-American and Brazilian markets was the fact that most staple articles (e.g. cotton) were introduced into Germany indirectly via England (ibid, p. 231; see also Manchester 1933 p. 315 on the triangular pattern of international exchange between Brazil and European countries).

Soon after the definite expiration of the Anglo-Brazilian treaty in November 1844, the high officer Visconde de Abrantes was sent to Berlin to negotiate a commercial agreement with the *Zollverein*.³ Documents pertaining to Abrantes’s mission were collected in his detailed account published in two volumes in 1853. Abrantes arrived in Berlin in February 1845, after spending a couple of months in London and Paris dealing with diplomatic and commercial matters. Upon his arrival in Berlin, Abrantes started conversations with Friedrich von Rönne (president of the new Prussian Board of Trade and generally sympathetic to List’s ideas) and F. von Bülow-Cummerow (Prussian Minister of Foreign Affairs, often criticized by List as a follower of free trade), who asked him to draft a project of commercial treaty between Brazil and the *Zollverein*. According to Abrantes’s (1853, p. 70), his mission to Berlin attracted a good deal of attention from the European press, and was surrounded by attempts by French, English and Dutch diplomacies to undermine it. In a letter of 17 April 1845 he expressed his feeling that Prussian statesmen were willing to introduce a system of differential duties with Brazil, as had been done before by Britain, France and the United States with other countries. In May 1845

Abrantes submitted to the Prussian government his draft of a treaty agreement, based on the proposal of tariffs on Brazilian goods 25 per cent lower than those generally charged by the *Zollverein*, and vice-versa for goods imported by Brazil from the *Zollverein* states (ibid, pp. 134-35).

After months of negotiation, Bülow-Cummerow was replaced as Minister by Karl E. von Canitz und Dallwitz, who, according to Abrantes (1853, p. 222), changed the guidelines of Prussian commercial policy. In November 1845 Abrantes was informed by Canitz und Dallwitz that the proposed differential tariff system could not be accepted by the *Zollverein* because it would have to be extended to other countries as well. Moreover, the Prussian Minister complained that the higher general tariffs on manufactured imported goods introduced by the Brazilian Empire in August 1844 (see section 4.1 above) affected negatively the price of the *Zollverein* goods in Brazil (Abrantes 1853, pp. 222-26) and was contrary to the principle of reciprocity. In his reply, Abrantes (ibid, pp. 296-99) pointed out that the fact that the *Zollverein* states had no colonies and formed an emerging industrial power had played a key role in the South-American country's effort to set up a trade agreement. At the same time, he stressed that differential duties were an "essential condition" for the agreement and denied that the recent increase in Brazilian tariffs made unfeasible the import of German goods. The negotiations then reached a dead end and the commercial treaty was not signed.

List followed closely the development of Abrantes's mission in Berlin. He was critical of the *Zollverein's* principle to exclude the differential tariffs system, which he defended enthusiastically in connection with the attempted trade treaty with Brazil (List [1844] 1931, pp. 233-34). In September 30 1845 List wrote an article in the *Zollvereinsblatt* titled "The agreement with Brazil has failed", where he showed his disappointment at the fact that Abrantes was about to go back to Rio after the failure to reach an agreement which "for a while looked so close" (Salin et al 1931, p. 612). In particular, List objected to von Rönne's argument that the differential tariffs system tended to bring about an (inefficient) allocation of economic activities according with the specific demands of each country involved. This was not true of the envisaged agreement, since the *Zollverein* potential exports to Brazil could be extended to any other countries of the torrid zone, and there was demand for Brazilian commodities in other European countries as well. It is not clear whether Abrantes was aware of List's support of the trade treaty with Brazil. This might had been the case, as indicated by Abrantes's (1853, vol. 2,

p. 90) reference to the protectionist ideas of the “adherents of Friedrich List’s National Economy system, the ablest among German Publicists”.⁴

Notes to the Appendix

1. The Methuen Treaty between Britain and Portugal was discussed in detail by List (1885, ch. 5), who diverged from Adam Smith’s interpretation and pointed out its advantages for the British economy. List (p. 51) asked: “Did not all the Portuguese colonies, especially the rich one of Brazil, by this means become practically English colonies?”

2. One of the reasons why Britain refused to reduce tariffs on Brazilian staples was the prevalence of slavery, which made production costs lower than in the West Indies (List [1844b] 1931, p. 239; Manchester 1933, p. 294). Indeed, British opposition to slavery in Brazil was always in the background (sometimes in the foreground) of trade negotiations.

3. Viscount (later Marquis) de Abrantes’s real name was Manuel Calmon du Pin e Almeida (b. 1796; d. 1865), but he was known by his nobility title. Abrantes acted as Minister of Finance between 1837 and 1840, and between 1848 and 1865 presided over the Sociedade Auxiliadora da Industria Nacional [Association for the Support of National Industry], which had been created in 1831 with a goal to develop Brazilian industry and agriculture by means of scientific and policy support. In that capacity, he organized in 1861 the First Exhibition of the National Industry, one of the main scientific-economic events of the Brazilian Empire.

4. Elsewhere in the book, Abrantes (1853, p. 259) pointed out that, as part of the negotiations, one should avoid any damage to the Brazilian “infant industry”. Abrantes’s reference to List indicates the possibility that the protectionist tariff law introduced in 1844 by Alves Branco was not innocent about List’s ideas. Indeed, Helio Jaguaribe (1968, p. 132) has suggested that the Brazilian 1844 protectionist and industrialist policy was “in accordance with the theories of List”, without any textual evidence of influence though. In any event, the 1844 tariff legislation did not reflect List’s own advice to tropical countries, as discussed above.

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