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CONTACT: Rainer Kattel, kattel@staff.ttu.ee; Wolfgand Drechsler, drechsler@staff.ttu.ee; Erik S. Reinert, reinert@staff.ttu.ee

The Latin American Contribution to Center-Periphery Perspectives: History and Prospect

Joseph L. Love, Department of History U. of Illinois, Urbana
email: j-love2@uiuc.edu

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The analytic framework of Center (or Core) and Periphery, interacting in complementary but unequal ways, has played an important role in the work of Ivan Berend.[1] This perspective on the world economy and its component parts has taken on a heightened relevance with the intensification of globalization in the 1990s, following the collapse of the Soviet empire and the formulation of the Washington Consensus. The Center-Periphery approach is not only useful in understanding the contemporary international economy, but is increasingly employed in economic historiography as well.

The Center-Periphery scheme, implying an enormous asymmetry in the global economy (and often within regional economies), is identified in the 19th and 20th centuries with the division of the world into a group of industrialized countries around which is arrayed a Periphery of agriculture- and mineral-exporting countries. Moreover, the notion of economically-differentiated space, with its nodes and fields, is at the heart of the discipline of economic geography (with its related traditions of central place theory and its American cousin, regional science).[2] In this essay I will trace the formulation of the Latin American contribution to Center-Periphery analysis, its diffusion, crisis, reformulation, and decline. I further consider how Center-Periphery perspectives may be reincorporated into (standard) neoclassical economics.

This is a story of multiple, often independent, discoveries. The focus on the world economy as a site of imperialist expansion for the industrialized countries of the European Core was developed by Marxists and others, but in the well-known literature by Hobson, Lenin, Burkharin, Hilferding, and Luxemburg, the emphasis was almost exclusively on processes occurring within the industrial and financial metropolis, rather than its imperial or informal domains. However, one could find writers from peripheral regions who had more complex interpretations, using a Core-Periphery focus. I have

[1] E.g., Central and Eastern Europe 1944-1993: Detour from the Periphery to the Periphery (Cambridge University Press, 1996); The European Periphery and Industrialization 1780-1914 (Cambridge University Press, 1982).

[2] The Core-Periphery scheme has its distant roots in The Isolated State (part I, 1826) by the German economist J. H. von Thunen. I make no claims about direct descent, but von Thunen's work and later that of Alfred Weber were the antecedents of central place theory, developed by Walter Christaller and others in the 1930s.

in mind two in Romania, Constantin Dobrogeanu-Gherea[3] and Mihail Manoilescu[4], but surely there were others elsewhere.

I. Prebisch and Center-Periphery

Latin American Structuralism, as it came to be known in the 1960s, and its Center-Periphery framework found a major platform in a United Nations agency, the Economic Commission for Latin America.This agency, best known by its Spanish acronym, CEPAL[5], was dominated in its early years by the ideas, personality, and programs of Raul Prebisch (1901-1986). Since the agency was so much the creation of Prebisch, we must consider his early career and formative experiences during the Depression and War years to learn how the CEPAL theses of 1949 crystallized. Born in the city of Tucuman in 1901, Prebisch studied at the University of Buenos Aires, whose Department (Facultad) of Economics at the time was probably the best school of economic theory in Latin America.[6] Prebisch gave early promise of a distinguished career within Argentina's economic establishment. In 1923, upon completing a master's degree in that discipline, he was asked to join the faculty at the University. Meanwhile, he was developing an intimate association with the elite Sociedad Rural (Stockbreeders' Association). In 1927 he published a Rural-sponsored study that became the basis for government action on behalf of stockbreeders in the foreign meat market.[7] Prebisch also played a key role in the creation of Argentina's

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[3] The Marxist Constantin Dobrogeanu-Gherea, writing before World War I, foreshadowed post-1945 Center-Periphery thought, Dependency Theory, and modes of production debates in Third World forums and academies. Gherea presented a Core-Periphery framework for understanding industrial capitalism and its agrarian dependencies on a world scale; a system-wide historical approach; and the assertion of the nonviability of a capitalist development in Romania led by local Romanian elites, at least in the longer run. See Love, Crafting the Third World: Theorizing Underdevelopment in Rumania and Brazil (Stanford, Calif.: Stanford U. Press, 1996), ch. 3.

[4] Manoilescu made a frontal attack on the existing international division of labor, and argued that labor productivity in "agricultural" countries was intrinsically and measurably inferior to that in "industrial" countries—so categorized by the composition of their exports. The Romanian did not hesitate to call agricultural countries "backward," contending that surplus labor in agriculture in such nations should be transferred to industrial activities. Unlike Gherea, Manoilescu did not use Center-Periphery terminology, but he was probably influenced by Ghereaa's view of international capitalism ("global" vs. "local" economies). Manoilescu denounced the international division of labor and the classical theories of trade that recommended to agricultural nations that they continue to channel their labor force into areas of what he considered inherently inferior productivity. New industries should be introduced as long as their labor productivity was higher than the national average. See Love, Crafting, ch. 5.

[5] Comision Economica para Anerica Latina.

[6] In 1918, Luis Gondra introduced South America's first course in mathematical economics at the University of Buenos Aires. Gondra et al., El pensamiento economico latinoamericano (Mexico, 1945), 32.

[7] Prebisch's study offered statistical proof that the meat pool's interference in the market had been beneficial for the British packinghouses, but not for the Argentine cattlemen. See Prebisch, "El regimen de pool en el comercio de carnes," Revista de Ciencias Economicas 15 (Dec., 1927), 1302-21.

Central Bank—with powers to control interest rates and the money supply—in 1935. From its inception until 1943, Prebisch served as its Director-General.

Before the Depression it was considered axiomatic that Argentina had prospered according to the theory of comparative advantage. The benefits of export-led growth, based on an international division of labor, made comparative advantage a near-sacrosant doctrine.[8] The twenties had been a period of disequilibrium as well as expansion in world trade, and though Argentina prospered, the country experienced the same problems as other primary-producing nations in the final years before the October 1929 crash—namely, falling export prices, rising stocks, and debt-payment difficulties. Following Britain's departure from the gold standard, in October 1931 Argentine authorities introduced exchange controls to try to stem the outflow of capital and facilitate the repayment of loans negotiated in hard currencies. The Depression thus brought the abandonment of many hallowed economic doctrines and practices.

In the crisis, Great Britain exploited her single buyer's position against her many suppliers. For Argentina, Britain's trading power was magnified by the South American nation's loss of dollar investments. The United States had become a major supplier of industrial goods to Argentina in the mid-1920s, but the latter had chronic difficulties in paying directly for U.S. imports with her own noncomplementary exports. Therefore Argentina had depended on U.S. capital exports, but during the Depression, North American lenders disinvested in Argentina. Excluded from the U.S. market by high tariffs and other regulations, and cut off from continental markets as well in the early thirties, Argentina feared above all the loss of British market. Consequently in 1933 Argentine statesmen and government economists—among them Raul Prebischh—agreed to accept Britain's guarantee of a certain level of meat purchases in exchange for Argentina's continued debt servicing and tariff reductions for British manufacturers. After war broke out in 1939, the British government played its monopsonistic position to yet greater advantage, in negotiations between the Bank of England and Argentina's Central Bank, led by Prebisch. One can easily surmise that Argentina's protracted and notorious dependence on her major trading partner left a lasting impression on Prebisch. Furthermore, the Argentine government made great sacrifices to retain its credit rating by paying its debts, unlike other Latin American countries.[9]

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[8] In the words of Carlos Diaz-Alejandro, "From 1860 to 1930 Argentina grew at a rate that has few parallels in economic history, perhaps comparable only to the performance during the same period of other countries of recent settlement." Diaz Alejandro, Essays, 2.

[9] Only petroleum-rich Venezuela had retired its foreign debt completely.

The Depression not only brought about bilateral negotiations, but a series of international economic meetings as well. In 1933 Prebisch attended a gathering of the Preparatory Committee of the Second International Monetary Conference in Geneva. From Switzerland Prebisch reported to the government-sponsored Revista Economica that the assembled monetary experts believed that one basic blockage in the international economic system derived from the facts that the United States had replaced Great Britain as the world's chief creditor country, and that high American tariff schedules (especially Smoot-Hawley, 1930) did not permit other countries to repay U.S. loan with exports. Consequently the rest of the world tended to send gold to the United States, and the bullion was not recirculated in the international monetary system.[10]

Returning to Argentina after the failure of the World Monetary Conference, also held in London in 1933, Prebisch sought to understand another vexing problem wrought by Depression—declining terms of trade. In 1934 he published an article pointing out that "agricultural prices have fallen more profoudly than those of manufactured goods," and that in 1933 Argentina had to sell 73% more than before the Depression to obtain the same quantity of (manufactured) imports.[11]

Despite the Depression, manufacturing in Argentina grew impressively in the 1930s and early 1940s, a fact which was recognized by contemporaries at home and abroad. In particular, the Central Bank's Revista Economica noted an increase in output of 85% (by value) between the industrial census of 1913 and that of 1934-1935.[12] In its annual report for 1942, the Bank followed through on its changing economic emphases by championing industrialization. The report, reflecting Prebisch's views, argued that exports and industrial development were by no means incompatible; rather, the issue was to change the composition of imports from consumer to capital goods.[13]

Prebisch the policymaker interests us less than Prebisch the emerging economic theorist. In the latter capacity he was beginning to formulate a theory of unequal exchange. In 1937 the Revista Economica noted that agri-

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10 Prebisch, "La conferencia economica y la crisis mundial, in [Banco de la Nacion Argentina], Revista Economica 61, 1 (Jan., 1933), 1, 3. Another reason for U.S. absorption of the world's gold supply was the overvaluation of the pound sterling, when Britain returned to the gold standard in 1925.

11 Prebisch, "La inflacion escolastica y la moneda argentina," Revista de Economia Argentina, ano 17, 193 (July 1934), 11-12; 194 (Aug., 1934), 60.

12 D. M. Phelps, "Industrial Expansion in Temperate South America," American Economic Review, 25 (1935), 274; Economic Review [Eng. tr. of Revista Economica], series 2, 1, no. 1 (1937), 69.

13 Banco Central de la Republica Argentina, Memoria...1942 (Bs.As., 1943), 30-31.

cultural production was inelastic compared to industrial output, and that its products prices tended to rise and fall faster than industrial prices in the business cycle. The Revista also noted the related problem of the lack of organization of agricultural producers, and concluded:

> In the last depression these differences manifested themselves in a sharp fall in agricultural prices and in a much smaller decline in the prices of manufactured articles. The agrarian countries lost part of their purchasing power, with the resultant effect on the balance of payments and on the volume of their imports.[14]

Prebisch emphasized the high elasticity of supply of industrial production, and implicitly monopoly, and not on wage contracts in the industrial countries, which were later to be a focal point of his analysis.

Prebisch was also intensely interested in the business cycle in Argentina. The Central Bank began its effort to conduct countercyclical monetary policy in 1937, by decreasing the public's purchasing power through the sale of bonds in that boom year; in the following period of contraction, it would attempt to expand purchasing power by lowering the rediscount rate.[15] In 1939, in its annual report for the previous year, Prebisch's Central Bank argued that the nation's business cycles were primarily a reflection of those of its principal (industrialized) trading partners. It held that Argentina's internal credit expansion began with an export surplus, which led to additional demand for foreign goods, because of exporters' high propensity to import luxury goods; when combined with heavy import requirements, the process repeatedly produced a balance-of-payments crisis in the Argentine business cycle.[16]

In 1943, following the "colonels' coup" that would soon bring Juan Peron to power, miliitary leaders dismissed Prebisch from the Bank, apparently because they associated him with the ranching "oligarchy." Prebisch now began to read widely in the recent economic literature.[17] Returning for the moment to teaching, he prepared a series of lectures in 1944 in which he referred, for the first time, to "Center" and "Periphery," terms he would later make famous.

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14 Economic Review, series 2, 1, 1 (1937), 26-27.

15 Rafael Olarra Jimenez, Evolucion monetaria argentina (Bs.As., 1968), 13.

16 Banco Central, Memoria...1938 (Bs.As., 1939), 5-8; Prebisch to author, Washington, D.C., 9 Nov. 1977.

17 Interview of Prebisch by author, Washington, D.C., 10 July 1978.

Prebisch developed a historical argument, with Britain as the nineteenth-century Center of the trading and monetary system based on the gold standard. Under Britain's leadership as the cycle-generating Center, Prebisch argued, the world's economic system had equilibrated gold flows and the balance of payments over the course of the cycle for both Center and Periphery. "Gold tended to leave Great Britain, the Center of the system, and to enter countries of the Periphery in the upswing of the cycle." Then it returned in the downswing. A problem for peripheral countries was that when gold departed in the downswing, "...there was no way to diminish the gold flow expected by contracting credit... No one could conceive of... the possibility of raising the rediscount rate in competition with the monetary Center in London." Thus overall monetary stability was only maintained at the cost of economic contraction in the Periphery. "The gold standard was therefore an automatic system for the countries of the Periphery, but not for the Center," where the rediscount rate could be adjusted for domestic needs. In the Periphery, the gold standard had the effect of exaggerating rather than offsetting the cycle.[18]

Passing on to the post-World War I years, Prebisch concluded that New York bankers in the 1920s and 1930s did not have the knowledge or experience of the "British financial oligarchy," though of course the world situation was dramatically different after the War. By 1930 the United States had sucked up the world's gold. Consequently, "the rest of the world, including our country, [is] forced to seek a means of inward-directed development (<u>crecer hacia adentro</u>)"[19]—a phrase that CEPAL would later make famous.

The Argentine business cycle, Prebisch continued, had depended on exogenous factors operating through the balance of payments. In the upswing exports and foreign investment produced an influx of gold and exchange credits, creating new money and therefore imports. Such changes also expanded credit to agricultural industries; but because of inelastic supply, during the downswing, credit was immobilized in the rural sector. Additional imports were paid for with reserves, producing a monetary crisis.[20]

Prebisch's interest in industrialization as a solution to Latin America's economic problems originally arose from the desire, shared by many other Argentine contemporaries, to make Argentina less economically "vulnera-

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18 Prebisch, "La moneda y los ciclos economicos en la Argentina," [class notes by assistant, approved by Prebisch], 1944, pp. 61-65, mimeo. Located at the Facultad de Ciencias Economcas, U. of Buenos Aires.

19 <u>Ibid</u>., 65.

20 Summary of "La moneda" in Olarra Jimenez, <u>Evolucion</u>, 76.

ble," a vulnerability painfully evident for the whole period 1930-1945. As noted above, the Argentine Central Bank, under Prebisch's leadership, had begun to advocate industrialization in its 1942 report. By implication Prebisch was recommending similar policies to other Latin American governments in his Colegio de Mexico lecture in Mexico City of 1944.[21] In his "Conversations" at the Banco de Mexico (the country's central bank) in the same year, Prebisch again noted that the period of greatest industrial development in Argentina had been the Great Depression and the times of war, periods in which the nation had to produce for itself what it could not import.[22]

In a 1944 article in Mexico's Trimestre Economico, Prebisch noted that the United States, unlike Argentina, had a low propensity to import (defined as the change in the value of imports generated by a given change in the national product). Since other countries, he implied, had high propensities to import, and the U.S. had replaced Britain as the chief industrial trading partner of the Latin American states, he warned that the postwar international trading system faced the danger of permanent disequilibrium.[23]

Prebisch first used the terminology Center-Periphery in print in 1946, at a meeting of the hemisphere's central bankers in Mexico City. He now identified the United States as the "cyclical Center" and Latin America as the "Periphery of the economic system."[24] The emphasis, as indicated, was on the business cycle, whose rhythms the U.S. economy set for the whole international system. Fiscal and monetary authorities in the United States could pursue a policy of full employment without producing monetary instability, Prebisch argued; furthermore, such authorities did not need to be especially concerned about the impact of full employment policies on the exchange rate of the dollar in other currencies. By contrast, Prebisch asserted, the nations of the Periphery could not apply the same monetary tools as the Center did. Extrapolating from his 1944 argument with reference to Argentina, Prebisch contended that the money supply in peripheral countries not be expanded in pursuit of full employment, because, with a high

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21 Prebisch, "El patron oro y la vulnerabilidad economica de nuestros paises" [a lecture at the Colegio de Mexico], Revista de Ciencias Economicas, ano 32, serie 2, no.272 (March, 1944), 234; Banco Central, Memoria...1942, 30.

22 Prebisch, "Analisis de la experiencia monetaria argentina (1935-1943)," in Banco Central, La creacion 1:407. But by the 1970s scholars determined that the period of the 1920s had been one favorable to industrial growth.

23 Prebisch, "Observaciones sobre los planes monetarios internacionales," Trimestre Economico, 11, 2 (July-Sept., 1944), 188, 192-93.

24 The Periphery, of course, was much larger than Latin America, but the latter region was the only one in 1946 consisting largely of sovereign states, with a newly-created array of central banks. As for the United States as the Center, in the immediate postwar period it accounted for about half of the world's industrial output.

propensity to import, any expansion of income would quickly exhaust foreign exchange, assuming no devaluation.

This 1946 statement and previous writings of Prebisch implied that peripheral countries faced three options, all with undesirable consequences: they could have strong currencies and maintain high levels of imports at the cost of high unemployment; they could fight unemployment with an expansionary monetary policy, but would thereby create inflation and put pressure on the exchange rate, thus raising the cost of repaying foreign debts; or, if they used monetary policy to maintain high levels of employment, but failed to devalue, their reserves would disappear. When prices of the Periphery's products fell during the downswing of the cycle, furthermore, governments of peripheral countries, at least in isolation, could not affect world prices for their goods as the Center could for its goods. Thus equilibrium theories in international trade were not acceptable.[25] This was an assault on the policy prescriptions of neoclassical economics. Prebisch's message at Mexico City was in tune with the pessimism then prevailing in Latin America regarding international trade as a long-term engine of growth. Even the improving terms of trade of the early postwar years was widely viewed as transient.[26]

This Center-Periphery framework implied a single system, hegemonically organized.[27] To appreciate the significance of the concept, we should bear in mind that the idea that there was something fundamentally different about the economies of the underdeveloped areas was still novel in the 1940s. The concept of "underdevelopment" as a syndrome was only elaborated in that decade, chiefly after the creation of specialized United Nations agencies in 1947-48.

The U. N. Economic Commission for Latin America (CEPAL), which was to be the principal platform for Prebisch's theses, resulted from a Chilean initiative in 1947 at U.N. headquarters in Lake Success, New York. The agency was approved by the U.N. Economic and Social Council in February 1948, and CEPAL held its first meeting in Santiago, Chile, in June. Prebisch's ideas were already familiar to the many Latin American leaders, through international seminars and his publications. The chief outcome of

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25 Prebisch, "Panorama general de los problemas de regulacion monetaria y crediticia en el continente americano: A. America Latina," in Banco de Mexico, Memoria: Primera reunion de tecnicos sobre problemas de banca central del continente americano (Mexico, 1946), 25-28; "Observaciones," 199.

26 Carlos Diaz Alejandro, "The 1940s in Latin America," MS, 1982, 39.

27 Though the term "hegemony" did not appear in this early use of Center-Periphery terminology, Prebisch himself, years later, would specifically employ the word to characterize relations between the two elements of the world economy. Prebisch, "A Critique of Peripheral Capitalism," CEPAL Review, 1st half of 1976, 60.

the meeting was a resolution calling for a study of Latin America's terms of trade.[28]

But without Prebisch's leadership, CEPAL was not yet CEPAL. The year of the agency's founding, 1948, seemed propitious for obtaining Prebisch's services: in Peron's Argentina he was excluded from official posts. Meanwhile, his reputation as an economist in Latin America had been enhanced by the publication in Mexico of his Introduccion a Keynes (1947), the first such primer in Spanish.

Prebisch had turned down an invitation in 1948 to be CEPAL's first director, but was invited to go to Santiago to write an introduction to a broad-ranging economic report on Latin America, authorized at the initial CEPAL meeting. In Santiago he elaborated his thesis on the deterioration of the terms of trade in The Economic Development of Latin America and its Principal Problems, published in Spanish in May 1949.[29] Prebisch had already formed his opinions about the direction of Latin America's long-range terms of trade, since he had argued in the classroom in 1948 that the benefits of technological progress were absorbed by the Center.[30] Now, a new study, Relative Prices of Exports and Imports of Underdeveloped Countries, authored by Hans Singer of the U.N. Department of Economic Affairs, provided an empirical foundation for Prebisch's thesis. This work was an examination of long-term trends in relative prices in the goods traded by industrialized and agrarian countries, and concluded that the terms of trade from the late nineteenth century till the eve of World War II had been moving against the exporters of agricultural goods and in favor of the exporters of industrial products: "On the average, a given quantity of primary exports would pay, at the end of this period, for only 60% of the quantity of manufactured goods which it could buy at the beginning of the period."[31]

CEPAL explained this finding in part by arguing that gains in productivity over the period in question were greater in industrial than in primary products, thus challenging basic assumptions of the theory of comparative advantage. If prices of industrial goods had fallen, this development would

28 UN ECOSOC E/CN.12/17 (7 June 1948), 2; E/CN.12/28 (11 June 1948), 6; E/CN.12/71 (24 June 1948).

29 English translation published by United Nations, Lake Success, N.Y., 1950. The original version lists CEPAL rather than Prebisch as author; later, the organization acknowledged Prebisch's personal authorship.

30 Prebisch, "Apuntes de economia politica (Dinamica economica)" [class notes], 1948, pp. 96-97, mimeo. Located at the Facultad de Ciencias Economicas, U. of Buenos Aires.

31 United Nations: Dept. of Economic Affairs, Relative Prices of Exports and Imports of Under-Developed Countries: A Study of Postwar Terms of Trade between Under-Developed and Industrialised Nations (Lake Success, N.Y., 1949), 7.

have spread the effects of technical progress over the entire Center-Periphery system, and one would expect the terms of trade of agricultural goods to have improved. They did not do so; and the significance of this fact had to be understood in terms of business cycles. During the upswing, the prices of primary goods rise more sharply than those of industrial goods, but they fall more steeply during the downswing. In the upswing the working class of the Center absorbs real economic gains, but wages do not fall proportionately during the downswing. Because workers are poorly organized in the Periphery (least of all in agriculture),the Periphery absorbs more of the system's income contraction than does the Center.[32] Thus in current parlance, Prebisch focused on the "double factorial terms of trade"—domestic labor's compensation vs. that of its foreign counterpart.

In the Economic Survey of Latin America: 1949 (Spanish ed., 1950), Prebisch expanded on these arguments in an examination of the Latin American economies from the 1880s onward. He held that there were two distinct sources of the potential deterioration of the terms of trade, viz., those from technological productivity gains in the Center, and those in the Periphery. He assumed the Center's gains would be greater, and if the system worked normally, these would, to some extent, spread to the Periphery. In that case, over the long run the Center's terms of trade would deteriorate, and the Periphery's would improve. If the Periphery's terms deteriorated, such fact would indicate that it was not only failing to share in the Center's presumably larger gains, but was transferring some of its own productivity gains to the Center.[33] Since Relative Prices had established a deterioration in the Periphery's terms, protection for industry was a sine qua non to arrest the concentration of the fruits of technological progress in the Center.

The basic cause of the deterioration was the surplus labor supply and the underlying population pressure in the precapitalist, largely agricultural, sector of the Periphery's economy. As modern agricultural technique penetrates and reduces the size of the precapitalist sector, the Survey stated, a labor surplus develops. It then adduced historical data to show that the export sector in Latin America could not absorb this surplus. Industrialization, in part to absorb the labor surplus, was the centerpiece of a policy of economic development, the Survey contended.[34]

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[32] CEPAL, Economic Development, 8-14.
[33] CEPAL, Economic Survey of Latin America: 1949 (New York, 1951), 47.
[34] Ibid., p. 79.

Another initial CEPAL argument grew out of Prebisch's observations on Argentina's import problems in the 1930s. The United States, the principal cyclical Center, had a much lower import coefficient than export coefficient, and the former was also much lower than those of the Latin American countries. The U.S. tended to sell more to Latin America than it bought from the region, exhausting Latin American reserves, and creating a tendency toward permanent disequilibrium. Such a tendency had not existed, CEPAL averred, during the time in which import-hungry Great Britain had been the principal Center.[35]

But Prebisch and the CEPAL team he organized were also interested in another dimension of the problem—monopolistic pricing at the Center. The original analysis in 1949-50 laid much more emphasis on the rigidity of wages in the downward phase of the cycle than on monopolistic pricing as such, but the latter argument was there.[36] In any event, both wage rigidities and monopoly were assumed to be nonexistent in neoclassical trade theory. Peripheral countries did not have monopolies on the goods they offered in the world market, with rare and temporary exceptions, just as they lacked well-organized rural labor forces that would resist the fall in wages during the downswing of the cycle.

The preceding analysis, taken as a whole, pointed to negative features in the Periphery's economy: structural unemployment, external disequilibrium, and deteriorating terms of trade—all of which a properly implemented policy of industrialization could help eliminate. Industrialization would proceed by means of import substitution, a process already well underway in the most advanced regional economies during the interwar period.

In 1950, the year after the appearance of the "CEPAL manifesto," another United Nations economist independently made a case related to the CEPAL theses. Hans W. Singer, who had directed the U.N. study, Relative Prices—the data base for CEPAL's terms-of-trade argument—alleged that technological progress in manufacturing was shown in a rise in incomes in developed countries, while that in the production of food and raw materials in underdeveloped countries was expressed in a fall in prices. He explained the differential effects of technological progress in terms of different income elasticities of demand for primary and industrial goods and in terms of the "absence of pressure of producers for higher incomes" in underdeveloped countries. Since consumers of manufactured goods in world trade tended to live in underdeveloped countries, and the contrary was true for con-

35 CEPAL, Economic Development, 15-16; CEPAL, Economic Survey 1949, 20, 35-38.
36 CEPAL, Economic Development, 59.

sumers of raw materials, Singer continued, the latter group had the best of both worlds while the former had the worst.t.[37] This idea was linked to Prebisch's, and the two men's ideas were quickly dubbed the Prebisch-Singer thesis.

In fact Prebisch had made two arguments, of which one was better stated by Singer, and Singer in turn had touched on Prebisch's theme of contrasting degrees of labor organization in Center and Periphery. The latter's central argument related to differential productivities in Center and Periphery. His other argument dealing with disparities in import coefficients was roughly analogous to Singer's more elegant argument on differential income elasticities, and CEPAL soon adopted Singer's terms. Yet Singer saw the phenomenon caused by contrasting elasticities of demand for agricultural and industrial goods in the world markets, while Prebisch viewed the root of the problem as that of *factor* markets—labor and capital. In this regard, he was the forerunner of Samir Amin and Arghiri Emmanuel.[38]

II. Sources for Prebisch's doctrine

Such were the main lines of Prebisch's and CEPAL's early development. It seems useful to digress briefly on the theoretical sources on which Prebisch drew. If these were not genetically related, comparing such propositions and theories with CEPAL's will serve to highlight the distinctive features of the CEPAL argument.

One obvious possibility is the work of Alejandro Bunge, Argentina's leading advocate of industrialization in the 1920s, and Prebisch's former teacher at the University of Buenos Aires. Like the classical mercantilists, Bunge defended industrialization not in theoretical but in policy terms, and saw it as a means of reducing imports to relieve pressure on the balance of payments; yet he viewed industrialization as a complement to export-driven growth more than a substitute for it.[39] All the same, Bunge, whose views were influenced by his studies in Wilhelmine Germany, argued that the global economy was led by what he called the astro (star) states, clearly a ref-

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[37] H[ans] W. Singer, "The Distribution of Gains between Investing and Borrowing Countries," American Economic Review: Papers and Proceedings 40, 2 (May 1950), 473-85 (quotation on 479). Income elasticity of demand for a good refers to the relative response of demand to a small percentage change in income, $\Delta q/q/\Delta y/y$, where q is the quantity demanded, and y is disposable income).

[38] Arghiri Emmanuel, Unequal Exchange: A Study in the Imperialism of Trade, tr. by Brian Pearce (New York, Monthly Review, 1972); Samin Amin, Accumulation on a World Scale: A Critique of the Theory of Underdevelopment, tr. by Brian Pearce (New York: Monthly Review, 1974).

[39] Alejandro E. Bunge, La economia argentina (Bs. As.), 2 (1928), 229-31; 4 (1930), 131; Tulio Halperin Donghi, "Argentina: ensayo de interpretacion," in Roberto Cortes Conde and Stanley J. Stein, eds., Latin America: A Guide to Economic History, 1830-1930 (Berkeley, 1977), 67, 115.

erence to an implicit Center-Periphery vision of the world economy, but without a theory of interaction of the two parts.

Another possible source for Prebisch is Werner Sombart, the maverick of the last generation of the German Historical School. Sombart's Der moderne Kapitalismus was probably the first work to distinguish between Center and Periphery in the world economic system. Specifically, Sombart wrote:

> We must...distinguish a capitalist Center—the central capitalist nations—from a mass of peripheral countries viewed from that Center; the former are active and directing, the latter, passive and serving. England constituted the capitalist Center in the first half of the nineteenth century; later, in the longer period of High Capitalism, Western Europe [joined England]....Finally, in the last generation, the eastern part of the United States has moved up [to the Center].[40]

Sombart also wrote of the "dependence" of peripheral countries, and even of the servitude of the peasantry of the Periphery, in part caused by western European capitalism.[41] But, like Bunge, Sombart did not provide any theory of relations between Center and Periphery; in particular, he offered no analysis of the relation between business cycles and the international distribution of income. Years later, Prebisch did not recollect an acquaintance with Sombart's passage at the time of his initial use of the terms Center and Periphery,[42] but even assuming he was inspired by Sombart, Prebisch would owe little more than an arresting notion, since Sombart only used Center and Periphery in a few scattered paragraphs.[43] In any event, the international financial (as opposed to economic) system was already being described in Center-Periphery terms by 1940, and Prebisch extended the terms from gold flows to movements in the whole international economy, in the manner of Sombart.[44]

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40 Werner Sombart, Der moderne Kapitalismus (Munchen, 1928), III [2 vols. bound as 1], vol. 1, pp. xiv-xv. A Spanish version was published in Mexico in 1946.

41 Ibid., p. 64; vol. 2, p. 1019.

42 Prebisch to author, Washington, D.C., 26 June 1979.

43 In 1977 Prebisch did not recall how he came to use the terms Center and Periphery. Prebisch to author, 29 June 1977.

44 William A. Brown, Jr., an American economist, used the terms Center and Periphery in 1940 with respect to the international gold standard: "The Center countries, by the very fact of their domination of the world, can never shift to the Periphery, and the Periphery countries have to consider the sum total of their relations to this central system of [exchange] rates in determining their currency policy." The terms do not figure in a cyclical theory, but Brown's work was in an area in which Prebisch was reading in the early 1940s. See Brown, The International Gold Standard Reinterpreted: 1914-1934 (New York: National Bureau of Economic Research, 1940), vol 2, p. 862.

More plausible as a direct theoretical influence than the writings of Bunge or Sombart is the work of the aforementioned Romanian, Mihail Manoilescu[45] who in turn was well acquainted with the Center-Periphery scheme of his fellow Romanian, Constantin Dobrogeanu-Gherea.[46] The Canadian-American trade theorist Jacob Viner linked the theses of Manoilescu with those of Prebisch as early as 1950.[47] During the thirties and forties, Manoilescu was in fact well known in certain parts of the Iberian world: Several of his economic and political essays had been published in those years in Spain, Portugal, Brazil, and Chile. In Prebisch's own Argentina, Manoilescu seems to have had less influence than in Chile and Brazi1. Clearly, there were broad similarities between the two theories of unequal exchange which converged in the same policy prescription of industrialization, though the Center-Periphery framework was only implicit in the Romanian's work. It is notable that Prebisch's focus on productivities within Center and Periphery paralleled Manoilescu's, and both writers shared a common theoretical perspective: the separation of the critique of imperialism from that of capitalism. Yet there were crucial differences: the Argentinean believed that primary commodities' prices would continually fall relative to those for industrial goods over the long term, while Manoilescu believed the effect was instantaneous.[48] Furthermore, Manoilescu's emphasis on capital-to-worker ratios and his assumption of static costs and prices implied a static technology. By contrast, Prebisch, other Structuralists, and Dependency writers subsequently placed technological change at the heart of their analysis of differential productivities.[49] For Prebisch these differences in productivities of the industrial Center and the agricultural Periphery, combined with product and labor monopolies in the former, were the root causes of the long-term deterioration of commodity terms of trade. Thus, he seems not to have been directly influenced by Manoilescu, and there are no references to the Romanian economist's works in Prebisch's early writings. In 1977 he confirmed the absence of such an influence, though he was probably familiar with Manoilescu from the brief discussions the latter's ideas received in the Argentine Revista de Ciencias Economicas in the late thirties.

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45 See footnote 5, above.

46 See footnote 4, above.

47 Jacob Viner, International Trade and Economic Development (Glencoe, Ill., 1952) [lectures delivered in 1950], 61-64. Over the next twenty years, others in Latin America, the United States, and Romania would concur in Viner's judgment.

48 See Love, Crafting the Third World: Theorizing Underdevelopment in Rumania and Brazil (Stanford, Calif.: Stanford U. Press, 1996), pp. 134-136.

49 See, for example, Jorge Katz, ed., Technology Generation in Latin American Manufacturing Industries: Theory and Case Studies Concerning its Nature, Magnitude, and Consequences (Houndmills, Eng., 1987).

A distinguished neoclassical economist with whose work probably affected Prebisch's thinking was the Swede Gustav Cassel. In a study for the League of Nations in 1927, Cassel pointed to monopolistic tendencies in the labor and manufactures markets of the industrial West. "From 1913, a very serious dislocation of relative prices has taken place in the exchange of goods between Europe and the colonial world..." owing to these monopolies, he wrote.[50] These causes of high and downwardly-rigid industrial prices were to be cited by later writers in the interwar years, including Manoilescu. Prebisch was almost certainly familiar with this literature.

In fact, Prebisch's sources of inspiration were eclectic, as shown by his debt to the American trade theorist Charles Kindleberger. In 1943 Kindleberger had published two articles calling for the industrialization of agricultural and raw material producers on the basis of long-term deterioration of the terms of trade, and Prebisch was familiar with at least one of them.[51] In "International Monetary Stabilization," Kindleberger argued that the terms of trade moved against agricultural products" because of the institutional organization of production" in industry, a reference to internal and external economies and possibly to monopoly elements, and also because of differences in the elasticity of demand for agricultural and industrial products.[52] Kindleberger pointed out that an agricultural country's increased productivity in primary activities under these conditions could only raise real income if the labor freed from agriculture were permitted to emigrate or found employment in industry.[53] Otherwise, the terms of trade would move against the country, and it would have realized no benefit from the increased output of primary goods.

Looking ahead to the postwar era, Kindleberger foresaw disequilibria in the international trading system. A specific instance was the case of two countries with differing marginal propensities to import. For the country heavily dependent on exports and having a high propensity to import, a rise in exports could eventually produce an unfavorable balance of trade. "It may be suggested that the United States has a comparatively low propensity to

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50 Cassel put the larger share of blame on trade union monopolies rather than on "monopolistic combines of enterprises," but argued that the two were mutually reinforcing. Cassel, Tendencies in Industry and Trade: Being an Analysis of the Nature and Causes of the Poverty of Nations (Geneva: League of Nations, 1927), pp. 29, 43-44.

51 Kindleberger, "Planning for Foreign Investment," American Economic Review, 33, 1 (Mar., 1943), Supplement, 347-354; and "International Monetary Stabilization" in Seymour E. Harris, ed., Postwar Economic Problems (London, 1943), 375-395. Prebisch cited the latter article in "Observaciones sobre los planes monetarios internacionales," Trimestre Economico, 11, 2 (July-Sept., 1944), 195-196, though he did so in order to contest the American's references to the behavior of the Argentine economy.

52 Kindleberger, "International Monetary Stabilization," 378.

53 Ibid., p. 377, citing Colin Clark, The Economics of 1960 (1942).

import and a low ratio of exports to national income, whereas the rest of the world has a relatively high elasticity of demand for United States exports of manufactured goods and a relatively high ratio of exports to income."[54] One may infer the external imbalance was, potentially at least, a structural problem. In fact, at Prebisch's seminar on central banking in Mexico in 1944, he cited Kindleberger's thesis that the U. S. would have a persistent trade imbalance with the rest of the world because of disparities in demand elasticities.[55] Kindleberger's contribution to Prebisch's original Structuralism thus seems large, though Kindleberger did not use Center-Periphery language.

Finally, Prebisch was a careful student of John Maynard Keynes's General Theory of Employment, Interest, and Money (1936), and wrote the aforementioned primer on Keynes. Like the British theorist, Prebisch viewed government intervention in the economy as necessary to correct market failures, and he believed that Keynes's fiscal and monetary policies to achieve full employment were appropriate for the Center, but not the Periphery.[56]

In any case, CEPAL's theses, from their initial appearance in 1949, were hotly contested by neoclassical trade theorists, such as Viner. In particular, the terms-of-trade thesis came under severe attack, as the validity of the data was challenged on a variety of grounds.[57]

III. Diffusing the doctrine:

Through CEPAL, its seminars, courses, and publications in Santiago and other cities of Latin America, as well as the activities of CEPAL economists in national finance ministries, Prebisch projected his views on Center-Periphery relations throughout the region in the 1950s and early 1960s. He

54 Ibid., 381. The writer was referring both to income- and price-elasticity (p. 380).

55 Prebisch in Banco Central, La creacion, I, 530-531.

56 The relationship between Prebisch's Center-Periphery model and the structuralist theses of Ernst Wagemann and Francois Perroux is considered and rejected in Love, Crafting, pp. 112, 134..

57 The principal arguments and sources in this long debate have been summarized and evaluated by John Spraos, who concludes that Prebisch was right about long-term deterioration of net barter terms of trade for 1870-1939, but that the trend was weaker than Prebisch thought. Furthermore, for 1900-1975, Spraos concludes the data were trendless. Yet Prebisch would still argue, one assumes, that anything less than a favorable trend for primary products would show that the Center was benefitting more than the Periphery in the trading process (assuming greater technological productivity gains in the Center). See Spraos, "The Statistical Debate on the Net Barter Terms of Trade between Primary Commodities and Manufactures," Economic Journal, 90 (March, 1980), 107-28, esp. 126. More recent studies of long-term data have tended to support Prebisch and Singer. For an extensive review of the literature, generally supporting Spraos's findings, see Dimitris Diakosavvas and Pasquale L. Scandizzo, "Trends in the Terms of Trade of Primary Commodities, 1900-1982: The Controversy and Its Origins," Economic Development and Cultural Change, 39, 2 (Jan., 1991), 237 (on Spraos).

did so on a world stage from 1964 to 1969, as the first Secretary General of UNCTAD, the U. N. Conference on Trade and Development. A permanent structure to deal with trade issues was approved at the first meeting of UNCTAD. Prebisch and Wladyslaw Malinowski, a U. N. official from Poland, were most responsible for establishing UNCTAD as a permanent U.N. organization, rather than a one-off conference.[58] This organization, in Prebisch's view, was to be "activist, not policy-neutral."[59]

Prebisch's reports at the first two Conferences (1964, 1968) reflected CEPAL's analysis of world trade. Prebisch's reports to UNCTAD, if not cepalismo whole cloth, mainly consisted of global adaptations of the regional agency's program as it had evolved by the early 1960s. First of all, the world was divided into "Centers" and "Peripheries."[60] Secondly, the secular deterioration of the terms of trade of agriculture and mineral exporters was affirmed as a fact, presumably to the displeasure of First World representatives, who doubted or denied the existence of secular deterioration.[61]

Following UNCTAD's first conference in 1964, Prebisch was optimistic about the prospects of the new organization, reiterating his view that the underdeveloped countries could close the "trade gap" through future industrial exports. Perhaps the greatest reason for optimism, thought Prebisch, was the constitution of a new force within the Third World contingent in UNCTAD, namely, the "Group of 75," which by the end of the first meeting at Geneva had become the "Group of 77."[62] This political alliance, he believed, could exercise real pressure in pursuit of its members' interests in the years to come. In fact, the G77 soon became a permanent entity, and over time it organized chapters in other international organizations.[63]

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58 Raúl Prebisch, interview by David Pollock, Washington, D.C., 21-23 May 1985, MS (courtesy of David Pollock). Zenon Carnapas credits Prebisch and Malinowski jointly with making UNCTAD a permanent entity of the U.N. See Carnapas, "Wladyslaw R. Malinowski (1909-1975)" in Michael Zammit Cutajar, UNCTAD and the South-North Dialogue: The First Twenty Years (Oxford, UK: Pergamon, 1985), p. xiii.

59 Edgar J. Dosman and David H. Pollock, "Hasta la UNCTAD y de regreso: divulgando el evangelio. 1964-1968" in Estudios Sociologicos del Colegio de Mexico, 14, 48 (September- December 1998), pp. 573- 603.

60 Raúl Prebisch, "Towards a New Trade Policy for Development" (New York: UNCTAD, 1964), pp. 20-26; Prebisch, "Toward a Global Strategy of Development," UNCTAD, Second Conference (1968), pp. 27-28.

61 Prebisch., "Towards a New Trade Policy," pp. 14-17. On the long debate about the validity of the deterioration thesis, see notes 57 and 81.

62 Prebisch, "Towards a New Trade Policy," p. 15.

63 By the late 1960s, the G77 had developed a continuing institutional structure, which in turn developed chapters of the Group of 77 in the Food and Agricultural Organization (FAO) in Rome, the United Nations Industrial Development Organization (UNIDO) in Vienna, UNESCO in Paris, the United Nations Environment Program (UNEP) in Nairobi, and the Group of 24 in the IMF and World Bank.

Encouraged by what seemed to be a strong showing of Third World unity and determination, Prebisch became an itinerant preacher to spread the UNCTAD evangel. He took his message on unequal exchange between Center and Periphery to Africa and Asia, as well as to Latin America. Between 1964 and 1969 he logged 600,000 miles giving speeches and meeting heads of government and their ministers. On the force of his ideas and personality, Prebisch attempted to strengthen and expand the Group of 77 as an effective voice on trade and development. In this he succeeded, in that the considerable majority of the G77 nations supported Prebisch's Generalized System of Preferences; by this protocol, later approved by UNCTAD as a whole, the industrialized nations would suspend the most-favored-nation provisions of GATT in order to lower tariffs on new industrial exports from the countries of the South.

Beyond UNCTAD, Prebisch played the leading role not only in founding the G77, but in initiating the process that would result in the "Declaration on the Establishment of a New International Economic Order" (NIEO) by the U. N. General Assembly in 1974.[64] The statement consisted of twenty broadly-stated demands, mostly derived from previous UNCTAD policy statements, but often radicalized. These included "sustained improvement in the terms of trade for primary products"; favorable terms for obtaining financial transfers for Third World nations; a reform of the international monetary system; increased preferential treatment for less-developed countries in trade agreements; and regulation of multi-national corporations by all states which claimed "sovereign equality."[65]

IV: Structuralism's Crisis and Transformation into Dependency

Yet already by the 1960s the Structuralist analysis was in crisis on its home ground, Latin America. The decline began with CEPAL´s own doubts, in the latter 1950s, when the institution noted that industrialization through import substitution, the centerpiece of CEPAL's development policy, was not working as the agency had anticipated.[66] The import requirements of industrialization in the more advanced regional economies expanded more rapidly than national output, thus making them more, rather than less, dependent on international markets. Furthermore, in the 1960s growth was fitful, and national markets seemed to hit "demand ceilings" for durable

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64 That the NIEO movement began with Prebisch's efforts at UNCTAD is confirmed in standard economics textbooks on development and in a history of development theory—e.g., Michael P. Todaro, Economic Development in the Third World, 3rd ed. (New York, 1985), p. 560; H[einz] W. Arndt, Economic Development: The History of an Idea (Chicago, 1987), p. 141.

65 Arndt, p. 142.

66 CEPAL took first note of the problem in Argentina as early as 1956. See CEPAL, "Preliminary Study of the Effects of Postwar Industrialisation on Import Structures and External Vulnerability in Latin America," in Economic Survey of Latin America 1956 (New York, 1957), 128, 150, 151.

goods, owing in part to the inequality in income distribution, as Structuralists saw it.

Another problem of industrialization was its failure to offer a sufficient numbers of jobs, as both population growth and rates of rural-urban migration in Latin America hit record rates around 1960, a situation that vastly expanded the employment problem. Sluggish and even negative growth in Argentina, Brazil, and Chile in the 1960s contributed to coups d'état coups in Argentina and Brazil in the 1960s, and in Chile in 1973. In the first two countries military dictatorships would extend into the 1980s, and in Chile, into the 1990s[67]. These regimes turned to orthodox, "monetarist" policies, and explicitly or implicitly rejected Structuralism. Related developments, including the United States' greater friendliness toward military regimes under Presidents Johnson and Nixon, helped bring about a reassessment of Structuralism that in turn led to Dependency Theory.

The essential elements of Dependency were 1) a characterization of modern capitalism as a Center-Periphery-relationship between the developed, industrial West and the underdeveloped, technologically backward Third World; 2) the adoption of a system-wide historical approach, and the consequent rejection of Boekean dualism and Parsonian modernization theory; 3) the hypothesis of unequal exchange, as well as asymmetrical power relations between Center and Periphery; and 4) the assertion of the relative or absolute nonviability of a capitalist path to development, based on the leadership of the national bourgeoisies of the Latin American nations.

Of the numerous contributors to Dependency (including Prebisch himself), of special note is the Brazilian Structuralist Celso Furtado, who, though a decade younger than Prebisch, had joined CEPAL shortly before the Argentine economist. Furtado's critical contribution was moving Structuralism from a cyclical analysis to a fully historical perspective,[68] along with *linking* development and underdevelopment as interrelated processes. He introduced these two departures from the original Structuralist analysis in 1959, and developed them in the following decade.[69] Determining where Structuralism ends and Dependency begins is something of an arbitrary process, but Furtado and other CEPAL Structuralist economists who embraced Dependency Theory did not frame their work in a Marxist paradigm.

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67 Although Pinochet quit the presidency of Chile in 1990, he remained commander-in-chief of the armed forces until 1998.

68 See Furtado, Formacao economica do Brasil (Rio, 1959). A structuralist history of Chile was published in the same year by Anibal Pinto.

69 See Love, Crafting, pp. 170-171.

Other Dependency-influenced writers associated with CEPAL, especially the Brazilian sociologist Fernando Henrique Cardoso and the Chilean economist Osvaldo Sunkel, further developed the Dependency perspective. Cardoso, the future president of Brazil, set it in a Marxist framework.[70] But for the Anglophone world in the late 1960s and early 1970s, Dependency was radicalized and popularized most effectively by Andre Gunder Frank. He too was participating in the seminars in Santiago, the crucible of Dependency Theory, just as it had been of Latin American Structuralism. Frank's arresting phrases, "development of underdevelopment," "lumpenbourgeoisie, lumpendevelopment," and "metropolis and. satellite"—his version of Center and Periphery—made for a lively read. Furthermore, his conviction that underdevelopment deepened as time advanced made him an enthusiastic supporter of the Cuban Revolution. Like other Dependency writers, including Johan Galtung, who was in Santiago in the 1960s,[71] Frank saw capitalism developing in historical stages, and in his view each stage was based on period-specific forms of monopoly.

Frank and Furtado were two authors who were frequently cited by Immanuel Wallerstein in his two celebrated studies appearing in 1974, concerning what he called the Modern World System.[72] In Wallerstein's Dependency-suffused scheme,[73] unlike the Latin American variety, the focus was on the Center (for Wallerstein, the Core). In Britain the economist Dudley Seers and others applied a Core-Periphery approach in Underdeveloped Europe in 1979,[74] after his earlier association with CEPAL. Three years later, Ivan Berend and Gyorgy Ranki, his fellow economic his-

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70 Cardoso, based in the mid-1960s at the Latin American Institute for Economic and Social Planning, a dependency of CEPAL, did explicitly employ a Marxist paradigm, as did many other dependency writers of the 1960s and 1970s. Elsewhere I have tried to show that the main source of Cardoso's Dependency and Development, jointly authored with Enzo Faletto, was Latin American structuralism, not Marxism. See Love, Crafting the Third World, p. 195, and Cardoso and Faletto, Dependencia y desarrollo en América Latina (México, D.F.: Siglo Veintiuno, 1969).

71 Galtung was in Santiago in 1962-63, and maintained contact with Santiago-based personnel later. His model of imperialism cites the dependency literature, and Sunkel criticized the essay in manuscript. See Johan Galtung, "A Structural Theory of Imperialism," Journal of Peace Research, no. 2 (1971), 81-117.

72 Wallerstein, "The Rise and Future Demise of the World Capitalist System," Comparative Studies in Society and History, 16, 4 (Sept., 1974), 387-415; Wallerstein, The Modern World System, I (New York: Academic Press, 1974).

73 In turn, Wallerstein was heavily influenced by Dependency Theory. Daniel Chirot and Thomas D. Hall remark, with some exaggeration, that Wallerstein's World System Theory "is in most ways merely a North American adaptation of dependency theory…." Chirot and Hall, "World-System Theory," in Annual Review of Sociology, 8 (1982), p. 90.

74 D. Seers, B. Schafer, and M. L. Kiljunen, Underdeveloped Europe: Studies in Core-Periphery Relations (Atlantic Highlands, N. J.: Humanities Press, 1979). Seers' debt to CEPAL is evident from his article, "Los estudios sobre el desarrollo en Europa occidental," in José Molero, ed., El análisis estructural en economía: Ensayos de América Latina y España (México, D.F.: Fondo de Cultura Económica [Lecturas 40], 1981), pp. 200-207.

torian, took a long-term view of Core-Periphery relations in Europe, having borrowed the terms from Wallerstein.[75]

The impact of Latin American Structuralism and Dependency on development theory in Peripheral Europe is the subject of recent essays of mine, dealing with Spain, Portugal, and Romania.[76] Structuralism's influence in these countries was strongest in the 1950s, and Dependency in the 1970s, as they were elsewhere. Yet in the latter decade it is difficult to separate them, as is indicated in a tribute to Prebisch by the Egyptian economist Samin Amin, in Accumulation on a World Scale (1974):

> There can be no doubt that the first edition [of this work] did not do justice to the debt I owe, along with all concerned with nonapologetic study of underde velopment, to the Latin American writers on the subject. Raul Prebsich took the lead in this field, and I have shown in this book that the theory of unequal of exchange was founded by him, even if the conjunctural context in which he set it, in his first version, has lost its significance. It is also to the United Nations Economic Commission for Latin America, of which he was the moving spirit, that I owe the essence of the critical theory to which I adhere...[77]

V. The Broader Crisis in Development Economics and its Potential Resolution

Although Dependency Theory gained traction in the early 1970s among First World political scientists and sociologists, it had far less impact on neoclassical economists. Structuralism, by contrast, was at least "respectable" enough to be widely discussed, if often vigorously opposed, by Western economists. But Latin American Structuralism was one version of a broader class of early development theories—what Paul Krugman calls High Development Theory—that assumed that rapid economic development could occur in Third World countries by taking advantage of increasing returns, based on expanding markets and internal and external economies of scale. By the late 1960s, however, the economics profession was demanding greater standards of formalization and rigor. Since increasing returns implied imperfect competition, the problem was that no one had

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75 Ivan Berend and Gyorgy Ranki, The European Periphery and Industrialization: 1780-1914 (Cambridge, Eng.: Cambridge U. Press, 1982), p. 8.

76 Love, "Structuralism and Dependency in Peripheral Europe: Latin American Ideas in Spain and Portugal," Latin American Research Review, 39, 2 (June, 2004), pp. 114-139; Love, "Flux and Reflux: Interwar and Postwar Structuralist Theories of Development in Romania and Latin America." in Helga Schultz and Eduard Kubu, eds., History and Culture of Economic Nationalism in East Central Europe (Berlin: Berliner Wissenschafts-Verlag, 2006) pp. 71-86.

77 Amin, Accumulation, pp. 609-610.

succeeded in modeling this form of market organization. In Krugmann's words, "The result was that development economics as a distinctive field was crowded out of the mainstream of economics. Indeed, the ideas of 'high development theory' came to seem not so much wrong as incomprehensible,"[78] because it couldn't be mathematically modeled. The same problem occurred with economic geography, which also assumed increasing returns.

Before 1990, the standard explanation of economic growth was that of Robert Solow, whose independent variables included only labor and capital. Yet in empirical regressions the two together "explained" less than half of measured growth, leaving technology in a black box (the "residual"). In recent years, however, the theoretical problem appears to have been solved, chiefly through the work of Paul Romer. His model of economic growth, published in 1990, incorporated technology (and therefore new knowledge), rather than seeing it as exogenous.[79] Romer showed how bringing in technology could explain the widely-observed phenomenon of increasing returns, contrary to the standard assumption of constant returns, used by Solow. This was the case because technology raises total output through positive externalities without any obvious limits. The Romer explanation potentially offers the necessary theoretical foundation to reincorporate economic geography, with its spatial and structural differentiation, into mainstream economics. Hence, Center-Periphery models might aspire to a legitimate status in standard economic theory. Romer also resolved a problem for which Raul Prebisch could only assume a solution: That technological progress was the chief element in raising productivity in modern capitalism.

Meanwhile, for a number of reasons, as wide-ranging as the perceived failures of import-substitution industrialization in the 1960s to the collapse of the Soviet empire and the USSR itself in 1989-91, Structuralism had lost its appeal in Latin America and elsewhere.[80] On the defensive, CEPAL

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78 Paul Krugman, "Toward a Counter-Counter Revolution in Development Theory," World Bank Annual Conference on Development Economics: 1992 (Washington, DC: World Bank, 1992), abstract. A more widely-available version of this argument is found in his Development, Geography, and Economic Theory (Cambridge, Mass.: MIT Press, 1995), ch. 1.

79 Paul M. Romer, "Endogenous Technological Change," Journal of Political Economy, 98, 5, part 2, pp. S71-102. Also see Kevin M. Murphy, Andrei Shleifer. and Robert Vishny, "Industrialization and the Big Push," J. of Political Economy, 97, 1003-1026. For a discussion of the significance of Romer's article, see David Warsh, Knowledge and the Wealth of Nations: A Story of Economic Discovery (New York: Norton, 2006).

80 For a fuller exploration of the decline of Latin American structuralism, see Love, "The Rise and Decline of Economic Structuralism in Latin America: New Dimensions," Latin American Research Review, 40, 3 (Oct., 2005), pp. 100-125.

retained its decades-old interest in the relationship between growth and equity in Latin American societies, but it quietly abandoned its signature Center-Periphery framework in 1990, the same year that Romer's landmark paper seemed to make such a perspective potentially "respectable."[81] In any event, the Harvard economist and historian Jeffrey Williamson and his numerous collaborators use a Core-Periphery framework in studying the world economy; otherwise, they employ the standard tool kit of neoclassical economics.[82] It seems that geography and history (the timing and intensity of change) matter, even in economics.

VI. Conclusion

In this essay we have considered the Latin American contribution to Center-Periphery analysis by tracing the origins and development of Latin American Structuralism. Prebisch's theorizing began in the orthodoxy of pre-Depression central banking, but was transformed as the Depression persisted. His ideas were eclectic, and he owed something to Keynesianism, neoclassical trade theory, and more remotely to the German Historical School. The Prebisch-Singer thesis on deteriorating terms of trade was both simple and persuasive in Latin American and Third World milieux. Its impact owed not only to its relative simplicity and its apparent empirical verification, but also to Prebisch's platforms in the United Nations—CEPAL and then UNCTAD, as well as to his skills as an international bureaucrat and diplomat.

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[81] See [U.N .] Economic Commission for Latin America and the Caribbean, Changing Production Patterns with Social Equity: The Prime Task of Latin American and Caribbean Development in the 1990s (Santiago, Chile: United Nations: CEPAL, 1990); and the report a decade later by CEPAL´s Executive Secretary, Jose Antonio Ocampo: Equidad, desarrollo y ciudadania (Santiago: CEPAL, 2000).

Nonetheless, the Director of CEPAL continued to defend the thesis of long-term deteriorating terms of trade for agricultural goods and raw materials in the world market. See Jose Antonio Ocampo and Maria Angela Parra, "Returning to an eternal debate: The terms of trade for commodities in the twentieth century," CEPAL, series Informes y Estudios Especiales, no. 5, Feb., 2003, 56 pp. [http://www.eclac.cl/publicaciones/SecretariaEjecutiva/3/LCL1813PI/lcl1813i.pdf].

Christopher Blattman, Jason Hwang and Jeffrey Williamson argue, on the basis of an analysis of 35 countries for 1870-1939, that although terms of trade movements were important in explaining the slower growth of the Periphery than of the Core, volatility in raw materials' prices was more important than the secular terms of trade. See "The Impact of the Terms of Trade on Economic Development in the Periphery, 1870-1939," NBER Working Paper no. 10600 (June, 2005).

Yet as Latin America began exporting industrial goods, the terms-of-trade argument became less and less significant. By 2004, over 80% of the exports by value of Argentina, Brazil, Mexico, and Chile were industrial goods. See World Bank, 2004 World Development Indicators (Washington, D.C.: World Bank, 2004), 200-205.

[82] Of the many studies coauthored by Williamson in this connection, among the most notable are Michael A. Clemens and Jeffrey G. Williamson, "Why did tariff-growth correlation reverse after 1950?," NBER Working Paper 9181 (September 2002); and John H. Coatsworth and Williamson, "Always protectionist? Latin American Tariffs from Independence to Great Depression," Journal of Latin American Studies 36 (2004), pp. 205- 232. The Core-Periphery scheme is used by several other distinguished economists in Michael D. Bordo, Alan M. Taylor, and Williamson, eds., Globalization in Historical Perspective, (Chicago: U. of Chicago Press, 2003).

Structuralism declined when its chief policy recommendation—industrialization— seemed to founder. In the crisis, Structuralism metamorphosed into Dependency, and gained new adherents in Latin America and beyond. Dependency, however, offered no consistent and practical program for development, and at the policy level it was only influential in Allendee's Chile (1970-1973).

Given the transformation of the world economy after the collapse of the Soviet empire, the Center-Periphery framework of Structuralism was increasingly ignored by both political leaders and professional economists in Latin America. Struggling to remain relevant, CEPAL abandoned its Center-Periphery analysis to focus on the relationship between equity and growth. Contemporaneously, Paul Romer and others advanced a theory of growth that included technology as an explanatory variable. This achievement opened the way to incorporate economic geography into "standard" neo-classical economics, and potentially legitimized a Center-Periphery framework within that subdiscipline. The Center-Periphery perspective is increasingly employed in econometric history to study world trade and the process of globalization, past and present.

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The Other Canon Foundation, Norway, and the Technology Governance program at Tallinn University of Technology (TUT), Estonia, have launched a new working papers series, entitled "Working Papers in Technology Governance and Economic Dynamics". In the context denoted by the title series, it will publish original research papers, both practical and theoretical, both narrative and analytical, in the area denoted by such concepts as uneven economic growth, techno-economic paradigms, the history and theory of economic policy, innovation strategies, and the public management of innovation, but also generally in the wider fields of industrial policy, development, technology, institutions, finance, public policy, and economic and financial history and theory.

The idea is to offer a venue for quickly presenting interesting papers – scholarly articles, especially as preprints, lectures, essays in a form that may be developed further later on – in a high-quality, nicely formatted version, free of charge: all working papers are downloadable for free from http://hum.ttu.ee/tg as soon as they appear, and you may also order a free subscription by e-mail attachment directly from the same website.

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9. Antonio Serra, *Breve Trattato / A Short Treatise (1613)* (available only in hardcopy and by request).
10. Joseph L. Love, *The Latin American Contribution to Center-Periphery Perspectives: History and Prospect*

The working paper series is edited by Rainer Kattel (kattel@staff.ttu.ee), Wolfgang Drechsler (drechsler@staff.ttu.ee), and Erik S. Reinert (reinert@staff.ttu.ee), who all of them will be happy to receive submissions, suggestions or referrals.