

THE IMPACT OF REVOLUTION ON SOCIAL WELFARE IN LATIN AMERICA

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Social scientists often analyze conditions that give rise to revolution, but rarely analyze their actual impact. How do postrevolutionary societies differ from societies with no revolutionary history? What variations are there in the outcomes of revolutions associated with different class alliances and different modes of production, and of revolutions occurring in countries with different resource bases? This article examines the specific effects of revolutions on social welfare standards in Latin America: Mexico (1910), Bolivia (1952), Cuba (1959), and Peru (1968). By confining the comparison to twentieth century class transformations in Latin America one can control for certain global political and economic forces, on the one hand, and regionally specific historical experiences, on the other.

These four countries which experienced revolutions were integrated into the world economy under the Spanish Colonial empire. The *conquistadores* reorganized the indigenous agricultural economies into *latifundios* and established mining enclaves. With imported slaves, they made Cuba a major sugar exporter. Despite a common colonial heritage, the political economies of these four countries differed in important respects at the time of their respective upheavals. In comparison to the other countries Mexico had a more diversified and developed economy. It had a network of roads and railroads, industries, an agricultural base that could support an urban population, and an educated "middle class". By contrast Bolivia, at the time of its revolution, had one of the poorest and least developed economies on the continent. It had the second lowest GNP and the third lowest GNP per capita in South America, and only one other South American country had a manufacturing sector contributing a smaller share to GNP than Bolivia's.¹ A small tin- and land-based oligarchy ruled the country. Its mine sector, which employed about 3% of the labor force, operated as an enclave oriented toward the export market. Most Bolivians lived humbly off the land, primarily as tenant-

farmers and sharecroppers; in 1952 they still retained much of their pre-Columbian heritage. Peru, like Bolivia, had a large Indian population in the highlands associated with *latifundios*. But by the 1960s its coastal farms employed wage labor, and its industrial base and export sector were more developed and diversified than Bolivia's. Cuba was the only one of the four countries to have an agricultural economy that was heavily capitalized and dominated by foreign companies. Its agricultural economy was the most integrated into the world economy, and it made use of the most wage labor. By Latin American standards its industrial base was also well developed at the time Castro seized power.

All four countries experienced revolutions in the sense that political groups assumed control of the state apparatus through extralegal means, and, at least in the countryside, destroyed the economic base of the then dominant class so as to restructure class relations somewhat. Peru experienced a "revolution *from above*" in that the extralegal takeover and the initiation of the social transformation were organized and led by high-level state functionaries with negligible mass participation. Peru's revolution was initiated by General Velasco Alvarado, the army's top-ranking officer. After usurping power by a *coup d'état*, he used the powers of the state to obliterate the rural property base of the oligarchy, to expropriate foreign-owned companies in the export sector, and to modify social relations and ownership in part of agriculture and industry.

Mexico, Bolivia, and Cuba, on the other hand, experienced "revolutions *from below*".² The three upheavals began as "middle class" reform movements for free elections and enforcement of electoral results, but the destruction of the *anciens régimes* rested on peasant and worker rebellions. Popular opposition to the old order in Mexico initially came from peasant groups in different regions of the country and later from wage workers. In Bolivia the opposition came first from the tin miners and then from peasants and urban workers. Castro's initial support came from the small fraction of the rural labor force who were peasants and small farmers, in the one area of the country where *latifundia* and land tenure security were still issues; workers in the city and the countryside later joined the rebel movement. As in Peru, in Mexico, Bolivia, and Cuba rural class relations were transformed after the collapse of the old order. In Cuba changes in class relations extended to the cities and the mines; in Bolivia and Mexico they did not, although some groups of workers in both countries gained managerial prerogatives for brief periods. In Cuba the nationalization of most of the economy wiped out the entire capitalist class and most of the independent petty bourgeoisie. In Mexico and Bolivia, as well as in Peru, state ownership expanded after the upheavals, but not to

the same extent as in Cuba; in Mexico, Bolivia, and Peru the political transformations created openings for nationally-oriented bourgeoisie and petty bourgeoisie.³ Thus the cross-national study permits an assessment of how different aspects of revolution may affect subsequent societal developments. The four cases involve: (1) revolutions from “above” and “below”; (2) revolutions instituting capitalist and socialist modes of production based, respectively, on private and state ownership of most of the economy; and (3) revolutions occurring in countries at different levels of economic development and in countries differently integrated into the world economy.⁴ While only tentative empirical generalizations can be drawn from the experiences of four countries, the detailed analysis of the four allows us to gain an in-depth understanding of how, when, and why each factor tends to be consequential.

No study has systematically explored what impact the three sets of forces have on outcomes of revolutions. Yet existing literature suggests that each is likely to be important, for different reasons. The role of the three sets of forces can be formulated as hypotheses, and cross-national patterns that would verify each can be specified. The three sets of forces are not necessarily mutually exclusive. In fact, to the extent they are consequential, they are likely to shape outcomes of revolutions at different stages of the political process. The level of development and integration of countries into the world economy are contextual factors affecting the resource base and range of economic options of regimes at the time the upheavals occur; whatever impact they have is causally before the societal transformations. By contrast, the class base of upheavals is causally linked to the actual revolutionary movement, and the dominant mode of production is associated with the system of economic organization instituted under the new order. After a formulation of the hypotheses will follow a discussion of the specific welfare measures on which the analysis focusses.

Hypothesis I: Postrevolutionary social welfare developments are shaped by the position of countries within the *world economy*

World economy theory suggests that countries’ global historical linkages constrict structural possibilities after revolution. According to Wallerstein,⁵ there exists a single, capitalist world economy, and production within it is oriented toward trade profit maximization. Because Wallerstein claims that the contemporary world is not divided into two distinct economies – one capitalist, the other socialist – he posits that production in so-called socialist countries is largely determined by market and geopolitical forces in the world economy. Wallerstein also claims that countries’ productive and political strength and their capacity to appropriate surplus vary with their core, semi-

peripheral, or peripheral status within the world economy. Core countries are strongest and peripheral states weakest, but semi-peripheral countries have considerable potential, especially during periods of economic downturn (including the current one) to increase their share of the world surplus. He recognizes that revolutions may help countries modify their role in the world economy, but he views prospects for less developed countries as not very great, especially in the periphery.

If Wallerstein is correct, developments after revolution should differ in the *periphery* and *semi-periphery* because the two sets of countries assume different roles within the world economy, and accordingly have different resources available for internal use. Analyses premised on neoclassical economic assumptions also distinguish between countries with different productive resources, but they view development from a national, not a global point of view. To test the world economy thesis I will trace, where possible, the relationship between internal and global processes. Wallerstein's criteria for classifying countries are not well defined, but Bolivia, with one of the poorest and least diversified economies and one of the most unstable governments in Latin America, was without question peripheral in 1952 (see Table I). Mexico had a growing industrial sector (largely foreign owned) and a strong, stable government at the eve of its revolution. While it was one of the economically most developed Latin American countries at the time, it probably still constituted part of the "periphery". By the time of the other revolutions, however, it had developed to the point of inclusion in the "semi-periphery". Peru and Cuba are more difficult to categorize; they had "peripheral" and "semi-peripheral" characteristics when their respective *anciens régimes* collapsed, although neither had so large an economy as Mexico. When Castro came to power Cuba ranked seventh in GNP per capita in Latin America and its manufacturing sector accounted for as large a share of the national product as Mexico's then did.⁶ Yet its economy was exceptionally tied to the export of a single agricultural commodity, and much of its industrial production was sugar-related. Because of its extreme dependence on a single export item, and on one for which international demand varied greatly from year to year, it was limited in its capacity to influence world relations in its favor. Peru's export sector was more diversified than Cuba's and its economy was more productive and developed than Bolivia's. The world economy thesis thus would lead us to expect qualitatively different patterns in Mexico and Bolivia by the time of the upheaval in the latter. It would also lead us to expect postrevolutionary development possibilities in Cuba and Peru to be similar in important respects, despite their contrasting dominant modes of economic organization.

TABLE I

GNP Per Capita, Manufacturing Share of GDP, and Main Export as % of Total Exports in Select Years GNP Per Capita (in constant dollars of 1970)

	Bolivia	Ecuador	Peru	Colombia	Cuba	Dominican Republic	Mexico	Brazil
1950	189	184	278	224	322 ^a	252	362	187
1955	175	205	337	252	329	289	416	224
1960	151	221	364	261	463	324	467	268
1965	173	230	430	279	428	317	536	291
1970	201	256	446	313	492	403	656	364
1976	257	335	500	370	721	529	718	525
Manufacturing Share of GDP (%)								
1950	15	16	15	16	n.a. ^b	17	21	20
1955	18	15	15	15	22	15	21	22
1960	14	14	18	18	45	17	19	18
1965	15	15	20	20	43	14	21	17
1970	13	18	21	18	48	17	23	25
1976	14	19	23	19	41	17	24	26
Main Export as % of Total Exports								
1955	67	55	25	84	80	39	29	59
1960	81	62	17	72	79	49	21	56
1965	85	51	23	64	86	49	19	44
1970	57	57	28	64	77	45	9	34
1975	39	57	23	46	89	65	16	15

^a Cuban data in 1950 are based on the Gross Domestic Product; after 1960 the data are based on the Gross Material Product (GMP). GMP is the total value of goods and productive services (excluding housing, health, education, sports and culture, defense, and public administration). GNP, by contrast, includes the total value of goods and services produced.

^b Cuban data include mining, petroleum and quarrying, which together account for about 1% of the national product.

Sources: James Wilkie, ed., *Statistical Abstract of Latin American 20* (University of California, Latin American Center, 1980), 239, 247, 248, 392. Claes Brundenius, *Measuring Economic Growth & Income Distribution in Revolutionary Cuba* (Research Policy Institute, University of Lund, July 1979), 14.

Hypothesis II: Postrevolutionary social welfare developments are shaped by the class base of insurrections

Another line of argument in the existing literature suggests that outcomes of upheavals depend on which groups partake in the overthrow of the *anciens régimes*, independently of the resource base of countries and global economic ties. Elites involved in "revolutions from above" might use state power to advance interests of classes other than their own, but if the socioeconomic

base of political movements matters, peasants and workers should share more in the fruits of victory when they actively participate in insurrections; that is, peasants and workers should benefit more from “revolutions from below” than from “revolutions from above”. Because elite groups do not readily give up advantages they enjoy, “pressure from below” would counter resistance “from above”. If the class base of upheavals affects subsequent societal developments, peasants and workers in the three countries experiencing “revolutions from below,” Mexico, Bolivia, and Cuba, should enjoy benefits unavailable to their counterparts in Peru; Peru is the only one of the four countries to have had a “revolution from above”.

Hypothesis III: Postrevolutionary social welfare developments are shaped by the *dominant mode of production instituted*, and the *form of property ownership associated with it*

According to this third line of argument, the dominant mode of production should have a decisive effect on societal developments after revolution. Governments in societies based primarily on *capitalist* and *socialist* organizing principles, that is, on *private* and *state* ownership of the economy, may be equally committed to development and distributive goals, but the former may be constrained in ways that the latter are not.⁷ When private ownership is the rule, governments must provide sufficient incentive to induce individuals and corporations to invest locally. They therefore cannot readily implement policies favoring labor at the expense of capital. Because socialist regimes assume direct responsibility for production and accumulation, they are not faced with the same constraint. In principle, they are better able to award workers a bigger share of the product of their labor than are governments in capitalist societies. In practice, however, their allocative policies are likely to depend on trade-offs between consumption and investment. If the main form of ownership has a significant bearing on developments after revolution, then we should find major differences between Cuba on the one hand, and Mexico, Bolivia, and Peru on the other hand. Cuba, as noted above, is the only one of the four countries to have socialized ownership of most of the economy. A problem arises in attempting to assess the relative importance of the three sets of factors in the countries under study: the upheavals occurred in different years. Consequently, contrasts among the countries could reflect different global constraints and options at the time of the outbreak of each, and the different time lapses since each transformation occurred. For this reason, a fourth hypothesis will be considered.

Hypothesis IV: The *historical epoch* in which revolutions occurred and the *time lapse* since the upheavals affect postrevolutionary social welfare options

The timing of the revolution might be important for two reasons. First, at different historical junctures, options for revolutionary regimes might vary. The capacity and desire of powerful global and domestic forces to resist change is likely to depend on the stage of development of world capitalism, on the economic strength of the world economy, and on the international political environment. Powerful nations would be unlikely to intervene when their economies are in recession and when they are engaged in major wars elsewhere in the world. Domestic elite resistance to distributive measures also would be expected to vary with their perceived interests and the power they wield, and these in turn would most likely depend on the economic emphasis of the regimes and the diversity of the elite's economic investments. For example, it might become more difficult for agrarian elites to oppose land reforms once countries succeed in industrial import-substitution, and they may resist the reforms less if they have ventured into urban-industrial activities. Second, social welfare outcomes might vary over time, for the longer the time lapse since upheavals, the more opportunity revolutionary processes have had to be played out. But time also permits nonrevolutionary and counterrevolutionary forces to assert themselves and to redirect the course of revolutions. Were the longevity factor important, the impact of revolution should be most apparent in Mexico, and least apparent in Peru, as the time lapse is *longest* since the Mexican insurrection and *shortest* since the Peruvian. Because longevity might erode revolutionary accomplishments, trends in each country must be watched over time. Developments after revolution do not necessarily evolve in a linear manner.

If the least postrevolutionary change occurs in Peru, though, the reason might be either that the country's transformation had less time to work itself out or that revolutions "from above" accomplish inherently less than revolutions "from below". Peru, it will be remembered, is the only one of the four countries to have undergone an "elite revolution". By comparing changes since 1968 in Peru with changes during comparable time periods in the other post-revolutionary societies, the longevity factor can be controlled for. If other countries changed as little as Peru during identical time intervals, the longevity factor will be assumed to be more important than the class base of the upheaval. Cross-national differences among the postrevolutionary societies which would support the above-mentioned hypotheses can be summarized as follows:

	Mexico	Bolivia	Cuba	Peru
Hypothesis I: Position in World Economy/Level of Development				
semi-peripheral/most developed	X			
peripheral and semi-peripheral characteristics/medium level development			X	X
peripheral/least developed		X		
Hypothesis II: Class Base of Upheavals				
revolution from above				X
revolution from below	X	X	X	
Hypothesis III: Dominant Ownership Pattern				
capitalist	X	X		X
socialist			X	
Hypothesis IV: Longevity				
long time lapse	X			
medium time lapse		X	X	
short time lapse				X

Adequate validation of the hypotheses will obviously require additional analyses of postrevolutionary societies. The longevity factor, in addition, raises a more general problem: how to assess which developments are byproducts of the class transformations, and which might have occurred in the absence of revolution. This problem is addressed by comparing developments in the four countries with developments during the same time period in societies that did not have revolutions. Each of the countries will be compared with the Latin American country it best resembled at the eve of its upheaval. Bolivia will be compared with Ecuador, Peru with Columbia, Cuba with the Dominican Republic (DR), and Mexico with Brazil. As Table 1 reveals, in terms of productive capacities (as measured by GNP per capita and industry's share of the national product), the Cuban-Dominican Republic match is the least satisfactory. No other formally independent former Spanish island economy, however, resembled Cuba more than did the Dominican Republic at the time Castro took power. Because island economies have their own structural peculiarities, Cuba should be compared with another island. Puerto Rico's investment, welfare, and labor force options, as a US possession, have been too distinctive to make a comparison with Cuba fruitful. Because Jamaica only gained independence in the 1960s, and because it was subject to a different political, racial, and cultural heritage than Cuba, Jamaica is also a less satisfactory country than the DR with which to compare Cuba. The rationale for the paired comparisons can also be formulated as an hypothesis, and cross-national patterns that would validate the hypothesis specified. Because

this study is concerned primarily with the impact of revolution, the four “control cases” will be analyzed in much less detail than the four countries that had class transformations.

Hypothesis V: *As a result of changes in the class structure and class relations, social welfare developments differ in societies that have and have not had revolutions*

Postrevolutionary regimes, irrespective of their social origins or their dominant mode of production, are likely to be more concerned with development and distribution than the societies they displace. They would be apt to try to improve the productive capacities of their economies, in part to increase resources available for the groups that made the revolutions. They should succeed if institutions impeding production are destroyed and removed from the control of groups with parochial and conservative economic interests in the course of class upheavals. Therefore, governments after revolutions should also be more committed to production and distribution goals than governments in comparable countries that had no revolution. Accordingly, developments after the revolutions in Mexico, Bolivia, Cuba, and Peru should contrast, respectively, with developments during the same time period in Brazil, Ecuador, the DR, and Colombia. If the two sets of countries are found to develop similarly, either nonrevolutionary and revolutionary forces can have the same effects or forces unrelated to revolution account for the changes in the different countries; the more probable explanation can be empirically determined.

The paired comparisons help address a methodological problem arising from the specific revolutions under examination. The Mexican-Brazilian comparison allows us to assess whether differences between Mexico and the other post-revolutionary societies are attributable to the longer time lapse since the 1910 upheaval or to the country’s semi-peripheral status. Brazil, like Mexico, is now, in Wallerstein’s terminology, part of the semi-periphery.⁸ If developments in the two Latin American giants prove to be similar but different from developments in the other countries, conditions in Mexico might be attributable to forces not specifically linked to the revolution and the subsequent time lapse. The specific aspects of social welfare on which this analysis focusses are land ownership, income, and health care and nutrition. They do not necessarily vary completely independently of each other, but each taps a somewhat different dimension that is important to people’s material and social well-being in the less developed world: control over production in the sector of the economy employing the largest proportion of the labor force, wealth, and health. While they do not exhaust the components of social wel-

fare, they are among the most important. Why each is important, and how each is empirically assessed are discussed below.⁹

Land Distribution

In societies where much of the population is involved in agriculture, land ownership constitutes an important component of social welfare. Land owners can appropriate surplus produced on their properties. The extent to which they can will depend in part on the size of their holdings and how production on their property is organized. All landowners, however, exercise control over production on their holdings and they enjoy a social status the rest of the farm population does not. Consequently, land distribution patterns in the countries under study are analyzed, including how and why distribution patterns changed since the respective upheavals.

If land rights were a concern of the rural labor force, and if, for reasons previously discussed, the class base of political transformations has a decisive bearing on revolutionary outcomes, then the Mexican, Bolivian, and Cuban "revolutions from below" should have resulted in a more widespread redistribution of land than Peru's "revolution from above". Peasants subject to landlord abuse would be expected to want agrarian reform. Rural wage workers might either want land or improved working conditions. If the dominant mode of production shapes land distribution patterns, one would expect most land to be state-owned in Cuba and privately-owned in the other countries. In postrevolutionary Mexico, Bolivia, and Peru capitalist organizing principles should shape land use and land distribution and, accordingly, patterns of surplus appropriation. The historical experience of countries such as Poland demonstrates that farms are not *necessarily* state-owned in countries purporting to be socialist and using socialist principles in organizing their domestic economies. If world economic linkages affect how production is organized and property distributed in agriculture, then land ownership patterns should change in the four postrevolutionary societies provided that profits from trade can thereby be increased. Land patterns and modes of organizing labor on land should vary according to the way the countries were historically integrated into the world economy. Political considerations should be secondary to economic. Finally, the timing of the upheavals might affect land allocations. First, land reforms might take time to implement. If so, the most land should have been distributed in Mexico and the least in Peru. Second, land policies might be shaped by *general* global political and economic trends, not merely by *specific* country ties to the world economy. Modernizing forces to which all countries are subject might permit, at certain historical junctures, land distribution programs that under other historical circumstances would be

difficult to implement. For example, there might be little resistance to reforms implemented when there is a world depression and when industry becomes a leading economic sector (especially if large landowners have diversified into industry). Comparisons between the matched countries will help us ascertain whether general historical trends are shaping land policies independently of forces associated with the societal transformations.

As indicated in Table II, land ownership was highly concentrated before the respective upheavals. Mexico had the highest Gini index value of land concen-

TABLE II
GINI Index Values for Land Ownership Concentration

Mexico (1930)	0.96	Peru (1950)	0.88
Brazil (1950)	0.84	Colombia (1960)	0.86
Bolivia (1950)	0.94	Cuba (1945)	0.79
Ecuador (1950)	0.86	Dominican Republic (1950)	0.79

Source: World Bank, *Land Reform in Latin America: Bolivia, Chile, Mexico, Peru and Venezuela*, Staff Working Paper No. 275, 2.

tration on the continent, even twenty years after the demise of its *ancien régime*. Bolivia had the second highest index of land concentration at the eve of its revolution, and Peru scored only slightly lower. Ownership in Cuba was least concentrated; by regional standards it was moderate. At the eve of the Mexican upheaval less than 3% of Mexican landholders owned more than 90% of the productive land.¹⁰ The proportion held by Mexican peasants had declined in the late nineteenth century, after the Porfirio Díaz administration encouraged large surveying companies and private businessmen to purchase or appropriate land traditionally held by peasant communities. In 1950 in Bolivia, 6% of the landowners held 92% of the land, and in pre-Velasco Peru about 2% of the Peruvian farmowners monopolized 69% of the farmland (see Table III). At the other extreme, 59% of Bolivian landholders, with no more than 5 hectares each, had access to a mere 2% of the land area; and in Peru 83% of the landholders, with 5 hectares or less each, controlled 6% of the land.

The situation in prerevolutionary Cuba differed somewhat. Whereas 8% of the farm population controlled 71% of the land, only 20% of all units were smaller than 5 hectares, and that 20% controlled 1% of the land area. The Depression and the intrusion of foreign-owned agribusinesses into the economy earlier in the century had turned many landholding peasants into seasonal agricultural

TABLE III
Agricultural Holdings

Size (hectares)	Percentage of Farm Units					Percentage of Land Area				
	1923	1950	1960	1967	1970	1923	1950	1960	1967	1970
Bolivia^{a,c,d}										
less than 5		59.3		56.6	(14.0)*		0.2			(0.2)*
5-99.9		25.7		41.4	(6.0)		1.5			(1.0)
100-999.9		7.2		1.6	(1.0)		6.4			(3.0)
1000 ⁺		6.3		0.4	(1.0)		91.9			(65.0)
Ecuador^{a,e}										
less than 5		73.1 ⁺		75.0 ⁺⁺			7.2		10	
5-99.9		24.7		15.8(5-19.9 hecets)			28.4		24(5-19.9 hecets)	
100-999.9		1.9		9.0(20-486 hecets)			27.1		53(20-486 hecets)	
1000 ⁺		0.2		0.2(over 486 hecets)			37.4		13(over 486 hecets)	
Mexico^{a,d}										
less than 5		59.0		65.9	(18.0)*		0.8			(0.7)*
5-99.9		32.0		26.0	(11.0)		5.0			(6.0)
100-999.9		7.0		6.4	(2.0)		12.0			(15.0)
1000 ⁺		2.0		1.6	(0.3)		82.0			(32.0)
Brazil^a										
less than 10		34.4		44.8	51.4		1.3			3.1
10-99.9		51.0		44.7	39.0		15.3			20.1
100-999.9		13.0		9.4	8.5		32.5			37.2
1000 ⁺		1.6		0.9	0.8		50.9			39.2

TABLE III (continued)

	Percentage of Farm Units					Percentage of Land Area				
	1923	1950	1960	1967	1970	1923	1950	1960	1967	1970
Cuba ^b										
less than 5		20.1**		47.4(0-6.7 hecets)			1.0**		14.9(0-6.7 hecets)	
5-99.9		71.9		51.7(6.7-67.0 hecets)			28.7		80.0(6.7-67.0 hecets)	
100-999.9		8.0		0.9(67+ hecets)			71.0		5.1(67+ hecets)	
1000 ⁺										
Dominican Republic ^{f,g,h}										
less than 5		76.4	86.3				13.7		23.4 (less than 6.3 hecets)	
5-100.6		22.9	13.4				42.6		31.2(6.3-62.9 hecets)	
100.6-1,006.2		0.7	0.3				19.5		20.6(62.9-628.9 hecets)	
1006.2 ⁺		0.0	0.0				24.2		24.8(628.9+ hecets)	
Peru ^{a,d}										
less than 5			83.4***		(66.0)*			5.8***		(6.0)*
5-99.9			15.3		(12.0)			10.3		(10.0)
100-999.9			1.1		(0.8)			14.6		(11.0)
1000 ⁺			0.2		(0.1)			69.2		(42.0)

TABLE III (continued)

	Percentage of Farm Units				Percentage of Land Area					
	1923	1950	1960	1967	1970	1923	1950	1960	1967	1970
Colombia ^a										
less than 5			62.5					4.9		
5-99.9			33.9					29.6		
100-999.9			3.2					35.6		
1000 ⁺			0.3					30.4		

* 1970 data refer exclusively to the private sector. Land reform beneficiaries accounted for 78, 69, and 21% of the farm units and 31, 46, and 31% of the land in farms in Bolivia, Mexico, and Peru, respectively. The Peruvian data are for 1973.

** Data for 1945.

*** Data for 1961.

+ Data for 1954.

++ Data for 1968.

Sources: ^a Wilkie, 50-53.

^b Sergio Aranda, *La revolución agraria en Cuba* (Siglo XXI, 1968) 138, 1962; José Illan, *Cuba: Facts and Figures of An Economy in Ruin*, trans.

George Wehby (Editorial ATP, 1964), 151. The 1967 data exclude Havana and Oriente provinces, and refer only to the private sector.

^c Bolivia, Ministerio de Asuntos Campesinos y Agropecuarios, *Diagnostico del Sector Agropecuario* 1974, 459.

^d World Bank, 21, 23, 30.

^e Thomas Weil, et al., *Area Handbook for Ecuador* (Foreign Area Studies of the American University, 1973), 265.

^f Republica Dominicana, *5° Censo Nacional Agropecuario 1960, Datos Preliminares* (Dirección General de Estadística y Censos, 1961), Table 1.

^g Republica Dominicana, *4° Censo Nacional Agropecuario 1950* (Dirección General de Estadística, Oficina Nacional del Censo, 1955), 194.

^h Republica Dominicana, *Quinto Censo Nacional Agropecuario* (Secretariado Tecnico de la Presidencia, Oficina Nacional de Estadística, 1960), X.

workers before 1959. Consequently, *minifundismo* (small land holdings) was not as widespread in Cuba as in the other countries before the upheaval. Recent research has revealed, though, that the island's prerevolutionary agricultural proletariat was not as uniformly landless as had been assumed. A sizeable portion of the rural wageworkers had small land parcels.¹¹ All four countries announced land reforms shortly after the respective political upheavals. The land reforms transformed rural class relations, encouraged efficient land use, and ushered in more equitable land distributions. They reduced the number of large privately owned farm units and the portion of the land area held by large private farmers. Between the latest prerevolutionary and the latest postrevolutionary year for which there are data, the private land area in large farms changed most in Cuba, least in Bolivia (see Table III). As noted below, in Bolivia the large farms of the landed oligarchy were broken up soon after the promulgation of the agrarian reform, but subsequently big tracts were awarded to market-oriented producers. The privately held land in independently owned farms of 1000 or more hectares dropped from 92% to 65% in Bolivia, from 69% to 42% in Peru, and from 82% (in 1923, after the breakdown of the *ancien régime* but before widespread land distribution) to 32% in Mexico.¹² In Cuba most holdings over 67 hectares were outlawed after 1963. Consequently, by 1967 approximately 5% of the land in private farms was in units over 67 hectares, and by 1981 only about 9% of the arable land on the island remained in private hands.¹³

At the same time that large landholders lost some or all of their property, sharecroppers and tenant farmers in each country gained property rights. Because they frequently acquired property rights to land that they had held in usufruct and because the value of land depends on quality as well as quantity, Table III does not reveal the full impact of the agrarian reforms. Most importantly, because peasants generally had access to little land under the old order, the land reforms did not resolve the problem of *minifundismo*; plots of less than 5 hectares are considered "sub-family" in size.¹⁴ Since the respective upheavals the proportion of farm units with 5 hectares or less increased in Mexico and Cuba (though it decreased between 1950 and 1960 in Mexico); in Bolivia the proportion declined by less than 3%. No data are available on Peru. *Minifundismo* becomes especially problematic when successive generations of land reform beneficiaries subdivide already small parcels. But even when the reforms merely gave peasants legal right to land previously held in usufruct, they outlawed seigniorial obligations so that peasants gained full control over the product of their labor. In no country, though, has the entire laboring population in the countryside gained access to land. The main beneficiaries of land reforms have been the permanent workers on expropriated estates. The percentage of farm families without land has varied in each

country over the years, depending on population growth, migration, and the extent to which the government has distributed new land. The percentage of farm families who are either *minifundistas* or landless farm laborers, according to available information, appears first to have decreased and then to have increased in both Mexico and Bolivia.¹⁵

In Mexico extensive redistribution did not occur until over twenty years after the fall of the Porfirio Díaz dictatorship. By 1930 only 6% of the farmland had been redistributed, among 25% of the agricultural families. But 10 years later 22% of the land in farms was redistributed, to over half the farm families (see Table IV). After 1940, however, rural conditions deteriorated. First, the percentage of agricultural families benefiting from the reform dropped to 42% by 1960, as a result both of population growth and a slowdown in government redistribution efforts. Second, land reform beneficiaries began to depend on supplementary wage labor; the parcels proved insufficient to support their families. Meanwhile, employment opportunities and real earnings deteriorated. The average number of days that farm laborers could find work dropped from 190 to 100 between 1950 and 1960, while estimated real earnings decreased 7% to 24% between 1939 and 1959.¹⁶ Because rural-urban migration increased and because the government stepped up its reform

TABLE IV
Percent of Farmland and Farm Families Affected by Land Reform

		Total land redistributed as percentage of total land on farms	Land reform beneficiaries as percentage of agricul- tural families
Mexico ^a	1930	6	25
	1940	22	54
	1960	26	42
	1970	43*	66
Bolivia ^a	1955	—	49
	1970	30	34
Peru	1973 ^a	50	14
	1974 ^b	—	25

* This percentage increased in part because the 1970 census decreased its coverage of lands by excluding wide areas of idle, mainly barren lands on private farms.

Sources: ^a World Bank, *Land Reform in Latin America*, 11, 19.

^b E. V. K. Fitzgerald, *The State & Economic Development: Peru since 1968* (Cambridge University Press, Department of Applied Economics, Occasional Paper 49, 1976), 32.

program in the 1960s, the proportion of farm families with land subsequently improved: it rose to 66% by 1970. Average earnings of farm workers also improved in the 1960s, although not relative to earnings of urban workers.

Land was redistributed much more rapidly in Bolivia than in Mexico. The Bolivian revolutionary government promulgated a land reform law in 1953, and by 1955 49% of the farm families received land. In Mexico not until 30 years after the announcement of the reform did such a percentage of agricultural families receive land. Moreover, in two years Bolivia reduced the share of cropland in large estates (over 1000 hectares) to the level achieved by Mexico in fifty years (Table V). After the initial burst of land allocations to peasants, however, Bolivian governments began to allot large land tracts to market-oriented settlers in the sparsely populated lowlands. Many of the new large landowners had been associated with the prerevolutionary oligarchy; for this reason, in 1970 in the sector unaffected by the reform law 1% of the farm units controlled 65% of the land area. Postrevolutionary governments first created a propertied peasantry, then an agrarian capitalist class: in agriculture the capitalist class had been small and weak in 1952.¹⁷ Both Mexico and Bolivia outlawed *latifundismo*. Both also institutionalized dual economies in agriculture in that their reforms provided the bases for a combination of capitalist and petty commodity production. In the peasant sector of the two countries the accumulation and concentration of land, labor, and the “means

TABLE V
Importance of Estates over 1000 Hectares

	Percent of total cropland in estates over 1000 hectares	Percent of all farm families on estates over 1000 hectares
Prereform		
Mexico (1923)	70	70
Bolivia (1950)	79	79
Peru (1961)	22	26
Postreform		
Mexico (1960)	29	
(1970) ^a	12	
Bolivia (1955)	10	
Peru (1973)	10	

^a Decreases from 1960 to 1970 resulted largely from the shift in census coverage. In 1970 the definition of large estates is 400 hectares or more of cropland.

of production” has been circumscribed, as land allotted to peasants cannot legally be sold, mortgaged, or rented. Although the reform laws at times are violated, especially in Mexico’s wealthiest agricultural zones, the reforms do restrict the spread of capitalist market relations to the peasant sector. In neither of the postrevolutionary societies has the dominant mode of production dictated property relations throughout agriculture.

Prerevolutionary land relations and land struggles shaped the land reforms in the two countries. Mexico reinstated a traditional property form: *ejidos*, land collectively owned by villages but generally farmed individually (by families). The reform was pre- and anti-capitalist in inspiration: it was designed to *restore* land that had been appropriated from *campesinos* when market-oriented production expanded in the nineteenth century. Individual ownership was proscribed at the insistence of the peasant leader Emilio Zapata. Zapata wished to prevent a repeat of the land-grab that ensued after the 1856 agrarian reform, when land was made alienable.¹⁸ Peasants in Mexico influenced not only the formulation but also the implementation of the reform. They received rights to traditional communal land, above all where they were well organized, rebellious, and successful at disrupting market production. But the first major period of land distribution occurred under President Cárdenas in the 1930s. Cárdenas established agricultural collectives where production had been mechanized, such as on large cotton estates; strikes by rural wage workers there had impaired production. Cárdenas subsequently accelerated land redistribution throughout the country, granting more land titles than any other president.¹⁹ He did so both to restore order in the countryside and to broaden his political base of support.²⁰ The Depression and abuse by “revolutionary” leaders who had confiscated large holdings for themselves had generated widespread discontent in the 1930s. In the 1960s the government again stepped up peasant land allocations for political ends: it allotted land to placate disruptive peasants. But post-Cárdenas presidents have rarely encouraged collective *ejidos*.

More so than in Mexico, in Bolivia land distribution has depended on the outcome of localized struggles, initiated “from below” and resisted “from above”.²¹ Bolivian land redistribution almost always originated with peasant land seizures. Peasants drove owners off the land and subdivided the estates. Even court rulings on land claims in Bolivia hinged more on the relative power of peasants and landlords than on specifications of the reform law. After the 1952 upheaval the central government was too weak and divided to impose order in the countryside. During periods of political quiescence, agrarian policies have favored large farmers in both Mexico and Bolivia, especially farmers producing for the export market. In Mexico in the 1940s and in

Bolivia in the early 1970s, for example, the respective governments facilitated large-scale private cotton production.²² But the large farmers gained favor not merely because they maximized profits from trade, as the world economy thesis would lead us to expect; they gained favor also because they had acquired considerable political clout by then. In Bolivia many large farmer ventures proved to be unprofitable, and the government ended up taking over their outstanding foreign debts. The resource-poor state, in the process, was decapitalized.

To summarize, the two capitalist countries which experienced “revolutions from below” both implemented land reforms that distributed land to peasants. Mexico, in the 1930s, also distributed land, on a collective basis to rural wage workers. The two land reforms addressed peasant concerns, but because the governments instituted dual economic policies they simultaneously courted agrarian capitalists. Land redistribution occurred more rapidly in Bolivia than in Mexico because *latifundistas* in the former were weaker and less able to resist pressure “from below”. Bolivian *latifundistas* were less vital for the economy: they produced less for export and less for the domestic market. In the two countries market forces have had their greatest impact on land ownership patterns in the regions where peasants were weakest, but even in these regions political forces have been important.

Cuba, the other country experiencing a “revolution from below,” had two official agrarian reforms: in 1959 and 1963. As in Mexico and Bolivia, in Cuba the first reform addressed peasant concerns. It extended property rights to sharecroppers, tenant farmers, squatters, and some rural wage workers, although it allowed farmers to maintain up to 402 hectares. Unlike in Mexico and Bolivia, however, in Cuba the reform also transformed large capital-intensive holdings into state farms. The sugar plantations had initially been converted into cooperatives, but within a few years the government transformed them into state farms. The second reform nationalized most holdings over 67 hectares, leaving about 30% of the farm population in the private sector; many of the remaining private farmers had received their land in conjunction with the first reform law. Since the second reform the vast majority of the rural labor force has been absorbed into the state sector. Workers on state farms enjoy job security and a guaranteed income that they did not on private farms before the revolution; and until the late 1960s they also enjoyed small private plots. Thus, the island land reform has also institutionalized a dual economy in agriculture, but one combining a variant of petty commodity with a socialist mode of production. Government efforts to convince small farmers to turn their properties over to the state or to organize their production on a cooperative basis have thus far failed. In this respect, the dominant

mode of production has not determined land ownership patterns throughout agriculture in Cuba, just as it has not in Mexico or Bolivia.

The different land policies implemented in Cuba, on the one hand, and Mexico and Bolivia, on the other, reflect the different class biases of the postrevolutionary regimes and the different ways that the countries were historically integrated into the world economy. As already noted, before the respective revolutions, agriculture was more capitalized and export-oriented in Cuba than in Mexico or Bolivia. Cuba was the “sugar factory of the world,” and a large portion of the sugar estates were foreign-owned. Although land ownership had been less concentrated on the island than in the two other countries, Cuban agriculture tended to be the most profit-oriented. In expropriating the big farm operations the government was able to gain control over the use of the domestically generated surplus and prevent foreign profit remittances. Yet market dynamics alone do not account for the different land distribution policies in the three countries experiencing “revolutions from below”. First, there is no evidence that Mexico abandoned collective farming in the export sector because it was unprofitable; it was abandoned because of the agrarian capitalist biases of post-Cárdenas governments. Second, had the Castro regime been primarily concerned with output maximization, including for trade, it would not have implemented the second reform. Productivity on the farms converted in conjunction with the first reform proved to be lower than on private holdings.²³ The second reform reflects the Castro regime’s *anti-capitalist* bias. Only in Cuba has the postrevolutionary leadership opposed large-scale market-oriented private producers. Castro and his *guerrillero* collaborators used state power differently than their counterparts in the other two countries.

When the Castro regime attempted to maximize production for export (for sale in capitalist as well as socialist bloc countries), however, it regulated production on small farmer holdings. In so doing it changed the significance of private property in ways not revealed by land ownership statistics. For example, when the government tried to maximize sugar exports in the late 1960s, it denied private producers control over production and labor on their land. It regulated what the farmers produced, pressured them both to work part time on state farms and to collaborate with state plans, and discouraged them from hiring labor. Although small farmers often produced more and better quality goods than workers on state farms,²⁴ they grew crops that maximized their own earnings. Many of them did not produce sugar, which maximized state revenues and export earnings. In the 1970s the government once again permitted private sales, decontrolled prices of certain commodities, relaxed pressures on farmers to join state plans, and made it easier for farmers

to hire labor. The government granted private producers more autonomy when demand for labor in the state sector receded. State farms needed less labor as sugar harvesting was progressively mechanized. Thus the Cuban as well as the Mexican and Bolivian governments responded to peasant and small farmer interests mainly when political considerations outweighed or did not conflict with market-oriented profit concerns.

In Peru the Velasco regime transformed agrarian property relations in part of the rural economy shortly after assuming power in 1968. In 1969 it turned the largest and economically most important estates into agrarian cooperatives, and it expropriated all farms not managed directly by their owners. Estate workers were allowed to retain rights to plots they had tilled before the reform, but former landowners could not maintain any portion of their property (in Mexico former landowners were entitled to a portion of their holdings). The experience of Peru demonstrates that a land reform can, in certain respects, be more sweeping in a capitalist country with a "revolution from above" than in one with a "revolution from below". More farmland was redistributed in Peru in four years than in Mexico or Bolivia in the entire period since their respective upheavals (Table IV). Moreover, Peru demonstrates that an "elite revolution" may leave fewer large private holdings intact than "revolutions from below". As of 1970–72, the percentage of private farms in holdings over 100 hectares was more than twice as great in Mexico and Bolivia as in Peru (Table III).

Whereas a larger percentage of the farmland was redistributed in conjunction with Peru's "elite revolution" than with Mexico's and Bolivia's social revolution, Peru had the smallest percentage of agricultural families benefiting from the land reform (see Table IV). But the smaller number of beneficiaries in Peru reflects cross-national differences in the organization of production before the respective upheavals, not limits of a "revolution from above". Before the revolutions a much larger percentage of all farm families were associated with large estates (over 1000 hectares) in Mexico and Bolivia than in Peru (see Table V), and workers on such estates were the main beneficiaries of the respective land reform programs. In Peru, about 60% of the rural labor force worked their own small plots, and so were not affected by the reform law, and about another 15% were seasonal workers on the large estates and therefore excluded from membership in the newly formed cooperatives; membership in the cooperatives has been restricted to the permanent work force.²⁵ The postrevolutionary Peruvian situation further demonstrates that the dominant mode of production does not in itself dictate agrarian property relations. In transforming large estates, including the sugar estates, into cooperatives the Peruvian land reform resembles Cuba's more than Mexico's

or Bolivia's. Unlike in Cuba, however, in Peru to date there are no state farms and a much larger proportion of the farm population has individual holdings.²⁶ The somewhat different land policies currently in effect in the Peruvian and Cuban sugar sectors prove that technical and market considerations alone do not determine property relations; postrevolutionary governments have certain discretionary power.

As in the other countries, in Peru the revolutionary government designed its land reform to respond both to political concerns and to economic exigencies. Although an agrarian reform had actually been issued in 1964 by the Fernando Belaúnde Terry government, it had barely been implemented. Nonetheless, the traditional *hacienda* system had been breaking down, as estate owners' ability to enforce work obligations eroded and peasants agitated for land in the Sierras. There had also been some guerrilla activity in the countryside. Concomitantly, urban investment opportunities became more attractive and large-scale farmers then started to decapitalize their properties. They began to sell off livestock and agricultural equipment, to liquidate portions of their properties, and to cut back investments on their farms.²⁷ It was against this background that Velasco issued his agrarian reform. Even though peasants and rural wage laborers were quiescent in 1968 and even though they did not back the coup, the Velasco regime addressed the rural crisis with policies favoring them rather than the oligarchy. The Velasco government responded to concerns of "popular" groups in the countryside to the point that it even modified its own plans. A study of seven crop and cattle enterprises, for example, reveals that the military had intended to collectivize ownership and to organize labor cooperatively on all the land involved.²⁸ But when peasants made it known that they did not want to give up their pre-reform usufruct rights, the government acceded to their demands. The same study also reports that the government permitted private livestock on the cooperatives, even though it had intended not to. It modified its plan because farm laborers expressed interest in retaining their own cattle. There are signs though that the agrarian revolution may be redirected. Apparently, Belaúnde, who recaptured the presidency when the military relinquished power in 1980 (12 years after deposing him), intends to parcel out the cooperatives to individual farmers.²⁹ Whereas the oligarchy would not thereby be restored, capitalist production relations would be reinstated on the farms and the bases for land concentration would be reestablished. As in Mexico after Cárdenas, in Peru the current rural cooperative base may not be sufficiently strong to resist parcelization.

Thus the experiences of these four countries suggest that revolutions, irrespective of their class origins or the political economy to which they give rise, are

associated with land reforms. Yet the four paired countries also promulgated agrarian reforms in the 1960s. Whereas it might therefore appear that land redistribution programs do not distinguish countries which have and have not had revolutions, the different impact of the reforms in the two sets of countries is striking. According to available data, the proportion of the farm population receiving land and the proportion of the farmland redistributed as a result of the reforms has been greatest in the four countries that had revolutions (see Table VI). Although the land reforms were implemented in Mexico, Bolivia, and Cuba before they were in their paired countries, the different time lapses do not account for the cross-national differences. The Velasco reform was the last to be implemented, yet it has had a greater impact than Colombia's, the DR's, Brazil's, and Ecuador's. Nor do differentials in land concentration before the respective upheavals account for the cross-national variances. The data in Table I show that the Gini index of land concentration was greater in Mexico in 1930 than in Brazil in 1950, and greater in Bolivia at the time of its upheaval than in Ecuador, but Peru's Gini index was only slightly higher than Colombia's and Cuba's was identical to the DR's. Rather, in the four countries which have not had revolutions the landed oligarchies have thus far been successful in resisting pressure for land redistribution.

TABLE VI

Proportion of the Male Farm Population Benefiting from Agrarian Reforms and the Proportion of Farmland Distributed or Confirmed by 1969*

	year reform initiated	% males benefiting	% land distributed or confirmed
Mexico ^a	1916	46.5	35.1
Brazil ^a	1964	0.4	0.4
Bolivia ^a	1955	39.0	29.7
Ecuador ^a	1964	3.7	2.5
Cuba ^{a,d}	1959	63.7**	—
Dominican Republic	1963	2.0	2.0
Peru ^a 1961–69	1961	2.4	4.8
Peru ^b 1973	1969	21.0	30.0
Colombia ^a	1961	4.0	10.4

* For Peru 1973 data are included, showing the impact of the Velasco reform.

** Approximate percent of farm units eligible for *individual* land rights in conjunction with the 1959 Agrarian Reform.

Sources: ^a Wilkie, ed., *Measuring Land Reform, Supplement to Statistical Abstract of Latin America* (University of California, Latin American Center, 1974), 3.

^b World Bank, 30.

^c Calculated from Aranda, 143.

In sum, no single factor accounts for land distribution policies after revolution, but postrevolutionary societies contrast with societies that have not had revolutions in the extent to which they implement agrarian reforms. The cross-national comparison demonstrates that the class base of upheavals shapes land allocation patterns, but that it is not the only factor that does. Peasants and rural wage workers do not necessarily gain more, not even in the short-run, when they partake in the destruction of the *ancien régime*. They gained individual and collective land rights within 1–2 years after the collapse of the old order in Peru: in Mexico little land distribution occurred for two decades. When land finally was redistributed in Mexico, however, rebel peasants and rural wage workers gained.

The greater readiness of Peru's than Mexico's revolutionary leadership to respond to peasant and rural wage worker concerns is partly attributable to the different timing of the two upheavals. Extensive land redistribution occurred in Mexico in the 1930s not merely because of "pressure from below". The followers of Zapata and Pancho Villa had fought for land for two decades before any significant land allocations took place. It was only under specific circumstances that widespread land redistribution occurred in Mexico: when the World Depression weakened the landed elite's ability to resist expropriation. By 1968, though, the international political climate had changed, as had global and national economic dynamics. In the aftermath of the Castro revolution many Latin American countries, with the backing of the Alliance for Progress, implemented land reforms to *avert* revolution,³⁰ the reforms in the countries under study which had no revolution reflect this concern. Before 1959 Latin American governments implemented land reforms only when pressured by agrarian rebellions. Also, as Latin American countries successfully promoted import-substitution industrialization after World War II the power of landed oligarchies diminished. Many large landowners began to diversify their economic interests, so they had less to lose by an agrarian reform. This was true in Peru at the time of the Velasco coup.³¹

But whereas different historical contexts may make certain outcomes more likely, land policies are not so mechanically determined. The political biases of the ruling élite are also important. For example, the national leadership in Colombia never redistributed land on the scale that Velasco did in Peru even though the Colombian countryside had been plagued by violence since the 1940s and the country was industrializing. The cross-national comparison also reveals that land distribution patterns after revolution depend in part on the dominant mode of production instituted. Mexico, Bolivia, and Peru reduced the number of big farms and the proportion of land area such farms control, but not nearly so much as did Cuba. Yet all four countries implemented poli-

cies that prevent any one form of property ownership and mode of organizing production from dominating all of agriculture. Prerevolutionary sharecroppers and tenant farmers gained land rights in all four countries, whether or not they participated in the overthrow of the *ancien régime* and whether or not they helped maximize trade-oriented production for profit. Whereas all four postrevolutionary regimes restructured agrarian property relations to improve profit from trade, as the world economy perspective would lead us to expect, none of the allocative patterns can be understood merely in terms of global economic dynamics. In order to respond to constraints imposed by the world economy on the one hand, and to internal class pressures on the other, all four countries instituted different land policies in different sectors of agriculture and at different times. The revolutionary regimes gave primacy to peasant concerns mainly when they were in crisis and in the process of consolidating power.

Income Distribution

As societies urbanize and agriculture is capitalized, land ownership becomes a less important determinant of overall welfare. Concomitantly, financial wealth assumes greater importance. It affects people's capacity both to invest and to consume. And the more equitable the distribution of wealth, the more an entire populace can share the benefits of a society's riches. Income is the best available measure of wealth, although it underestimates the economic worth of people with assets. Because revolutions, by definition, involve class transformations and because wealth tends to be class-determined, revolutions should alter the distribution of economic resources among socioeconomic groups. When property relations, the organization of production, and the power of groups change, so too should group earning capacities. Accordingly, income distribution patterns should differ in the countries that have and have not had revolutions. But which aspects of revolutions affect income allocations? If groups benefit in income producing ways from participation in revolutionary movements, then peasants and workers in Mexico, Bolivia, and Cuba, since the respective upheavals, should have improved their earning power more than their counterparts in Peru and their paired countries. But if the dominant mode of production that is instituted after revolution has a decisive bearing on people's income opportunities, then income distribution patterns should be similar in all the capitalist countries and different in Cuba. A major structural constraint of governments in capitalist societies is absent in societies where ownership of production is socialized: for reasons discussed in the introductory section, in capitalist societies businesses must expect sufficient profits or they will not invest. Partly to ensure investment, governments in such societies support inequitable income distributions. By contrast,

in socialized economies individual investments need not be governed by profit considerations, especially by returns to owners and managers; consequently, to induce investment socialist governments need not skew income distribution. Accordingly, there is reason to expect that popular groups would be less able to increase their income share after capitalist than after socialist revolutions. Governments in capitalist societies, regardless of whether they had revolutions, would be expected to repress distributive pressures “from below” that threaten capital accumulation.

But capital accumulation exigencies could depend on the way in which economies are integrated into the world economy. Wallerstein would not argue that distributive patterns are necessarily identical in semi-peripheral countries with different ownership patterns, but that the options in all semi-peripheral countries should differ qualitatively from those in peripheral countries. According to him, the capacity to accumulate and allocate surplus depends above all on the role of countries within the international economy. The success of semi-peripheral countries at import-substitution and export-oriented industrialization, for example, rests partly on low wages allowing high returns to capital. Finally, income distribution might depend on the time lapse since upheavals. There is no a priori basis, however, for predicting the effect of longevity. The income equalizing effects of revolutions might well vary over time with shifting political and economic priorities of regimes, somewhat independently of the class base of regimes, the dominant mode of production, or global economic dynamics. Unfortunately, available data do not permit a systematic comparison of income distribution before the respective upheavals. It therefore is impossible to assess the full impact that each revolution has had on the apportionment of income. The data on the postrevolutionary periods, however, reveal that the dominant pattern of ownership most affects income allocations. In Table VII we see that since the social transformation in Cuba the share of the national income of the poorest 40% increased from 6% to 20% while that of the richest 5% dropped from 28% to 9.5%.³² The poor have come to earn a larger share and the wealthy a smaller share in Cuba than in any of the other countries surveyed, whereas before 1959 Cuba's lowest income earners received the smallest share of the national income. Yet the data also reveal that the dominant mode of production is not the only factor shaping income allocations after revolution, for distributive patterns have changed *within* each country since the upheavals. They have changed as the economies have diversified and international and internal class pressures have shifted.

Mexican income estimates differ somewhat, but they concur that the share of the national wealth accruing both to the poorest 20% and to the wealthiest

TABLE VII
Estimates of Share of National Income Held by Percentile Groups

	Percentile Groups						
	Poorest 0-20	21-40	41-60	61-80	Richest 81-100	91-100	96-100
Bolivia							
1968 ¹ [H]	4	13.7	8.9	14.3	59.1	—	35.7
1975 ⁸ [E]	13*		26		61.0	44.5	—
1975 ⁸ [H]	14**		29		58.0	41.7	—
Ecuador							
1960 [E]	4 ²	—	—	—	—	—	42 ²
1970 [?]	2.5 ¹¹	3.9 ¹¹	5.6 ¹¹	14.5 ¹¹	73.5 ¹¹	—	42 ²
Mexico⁷ [H]							
1950	5.6	7.5	10.9	16.7	59.4	45.5	35.1
1958	5.5	9.0	13.5	19.0	52.9	35.7	25.5
1963	3.7	6.8	11.2	20.2	58.1	41.6	28.6
1968	3.4	7.3	11.5	19.7	58.1	42.0	27.1
1970	3.8	8.0	13.7	18.7	55.8	39.2	27.7
1975	1.7	6.0	11.5	20.0	60.2	43.4	—
1977	3.3	7.7	12.9	21.1	55.1	38.0	25.5
Brazil⁵ [E]							
1960	3.9	7.4	13.6	20.3	54.8	39.6	28.3
1970	3.4	6.6	10.9	17.2	61.9	46.7	34.1
1972	3.2	5.9	9.5	16.5	64.9	50.4	37.9
Cuba [E]							
1953 ⁶	2.1	4.1	11.0	22.8	60.0	38.5	28.0
1960 ⁶	8.0	12.5	14.5	17.0	48.0	31.0	17.0
1962 ¹⁰	6.2	11.0	16.3	25.1	41.4	23.0	12.7
1973 ⁶	7.8	12.5	19.2	25.5	35.0	19.9	9.5
Dominican Republic							
1960 ² [E]	—	—	—	—	—	—	—
1970 ² [E]	5	—	—	—	—	—	26
Peru							
1961 ⁴ [E]	2.5	5.5	10.2	17.4	64.4	49.2	39.0
	2	—	—	—	—	—	34.0
1972 ³ [H]	1.9	5.1	11.0	21.0	61.0	42.9	—

TABLE VII (continued)

	Percentile Groups						
	Poorest 0-20	21-40	41-60	61-80	Richest 81-100	91-100	96-100
Colombia							
1960 ² [E]	3	—	—	—	—	—	—
1964 ¹ [H]	2.2	4.7	9.0	16.1	68.1	—	40.4
1970 [?]	3.5 ¹¹	5.9 ¹¹	12.1 ¹¹	19.1 ¹¹	59.4 ¹¹	—	33 ²
1974 ⁹ [H]	3.6	7.2	11.0	18.1	60.2	45.1	32.8

* Poorest 10% received 3% of the national income.

** Poorest 10% received 3.1% of the national income.

*** Since the nationalization of small businesses in 1968 about 7-8% of the labor force remains outside the state sector.

[E] Economically active population.

[H] Households.

Sources: ¹ Irma Adelman and Cynthia Morris, "An Anatomy of Patterns of Income Distribution in Developing Countries," manuscript (Agency for International Development, 1971), Appendix.

² World Bank, *World Tables*, 1976, 515, 517.

³ World Bank, *World Development Report*, 1979, 172-3.

⁴ Richard Webb, *Government Policy and the Distribution of Income in Peru, 1963-1973* (Harvard University Press, 1977), 91.

⁵ Sylvia Hewlett, *The Cruel Dilemmas of Development: Twentieth Century Brazil* (Basic Books, 1980), Table 13.

⁶ Brundenius, "Measuring Income Distribution in Pre- and Post-Revolutionary Cuba," *Cuban Studies/Estudios Cubanos* (July 1979), 43: 1960. Figures are rough estimates.

⁷ Enrique Hernández Laos and Jorge Córdova Chávez, "Estructura de la distribución del ingreso en México," *Comercio Exterior* 29 (May 1979), 507.

⁸ Bolivia, Ministerio de Finanzas, *Informe Musgrave, Reforma Fiscal en Bolivia I: El Marco Económico General*, 1977, 170-71.

⁹ R. Albert Berry and Ronald Soligo, "The Distribution of Income in Colombia: an Overview," in Berry and Soligo, eds., *Economic Policy and Income Distribution in Colombia* (Westview Press, 1980), 5.

¹⁰ Brundenius, "Development Strategies and Basic Needs in Revolutionary Cuba," in Brundenius and Mats Lundahl, eds., *Development Strategies and Basic Needs in Latin America: Some Challenges for the 1980s* (Westview Press, forthcoming), Table 6.

¹¹ Montek Ahluwalia, "Inequality, Poverty and Development," *Journal of Development Economics* (1976), 341.

5% declined between 1950 and the mid-1970s.³³ The redistribution favored professionals, salaried employees, and organized workers, in a manner permitting an expansion of the internal market for goods and services while containing most labor demands.³⁴ Mexican income allocations shifted after World War II because postrevolutionary governments became increasingly committed to capital-intensive industrialization (to a “deepening of capital”) and to business interests. Although there is no information on income distribution by percentile groups before 1950, it appears that the Mexican revolution initially redistributed wealth to low income groups. As peasants and workers organized in the 1920s, at times with arms, their socioeconomic situation improved.³⁵ It improved in the 1930s as well, because the Depression weakened the then dominant economic elite’s power to oppose income redistributing measures implemented by Cárdenas to ameliorate the country’s political and economic crisis. Beneficiaries of Cárdenas’ land redistribution program improved their earning power. When sharecroppers and tenant farmers gained land rights they no longer had to pay rent, and when landless laborers acquired property they no longer had to depend on low wage work. Moreover, the collective *ejidos*, which Cárdenas established, turned some of the poorest farm laborers into a fairly prosperous middle class.³⁶ And as low income groups improved their lot in the countryside before World War II, so too did industrial workers in the cities. Wages improved as workers staged strikes, and as labor tribunals ruled in their favor.³⁷ Meanwhile, businessmen, who under the circumstances were uncertain of their future, withheld investments; in turn, their earning capacity declined.

After World War II, though, the rural and urban poor began to bear the costs of the country’s development. Once the Depression subsided and the war opened up new economic opportunities, Mexican governments started to intervene increasingly in the interests of upper income groups. The size of the domestic market and government policies permitting large returns on investments appealed to local and foreign capital. The state began to provide business with infrastructure, capital assistance, and protection from certain import competition at the same time that it both cut back support to *ejidatarios* and coopted and repressed labor. Consequently, as Mexico joined the vanguard of Latin America, its income distribution deteriorated. One study estimates that the richest 10% earned 15 times more than the poorest 10% in 1958, and 35 times more two decades later.³⁸ There is also some evidence that suggests the absolute as well as relative income of the poorest fraction of the population deteriorated in the post-World War II period.³⁹

The postwar capital-intensive mode of development deprived many rural poor of their traditional means of satisfying basic needs. Because capital-intensive

industries and farms displaced labor at the same time that the population growth rate continued to be unusually high (by world standards), a large portion of the labor force was marginalized and excluded from modern sector income opportunities.⁴⁰ The increase in agricultural production and wealth, for example, was concentrated among about 4% of the farm units.⁴¹ The income gains have been confined mainly to owners in the sector of agriculture where capitalist organizing principles prevail. As a consequence, much of the farm population has had either to seek full or part-time employment as farm laborers within Mexico or the US, or to move to the city and do low-paid work. By 1970 about one-third of the economically active urban and rural population was estimated to be underemployed.⁴² The step-up in land distribution in the 1960s did not reverse the income trend, mainly because the quality of the parcels allotted was poor and the amount of land that was allocated was minimal relative to demand. The dual economy of the countryside has had an urban parallel. Within cities income possibilities differ in the large-scale capital-intensive firms and the administrative sectors on the one hand, and in the unorganized, labor-intensive sector on the other. Workers in oligopolistic industries and public bureaucracies are covered by minimum wage legislation, and they enjoy unemployment insurance and pensions. By contrast, workers in the competitive sector receive no institutional protection, and the abundance of labor there keeps wages down. Poor rural migrants tend to be confined to the competitive sector.⁴³ Interestingly, the populist policies of the Luis Echeverría (1970–1976) administration, which caused capital flight and investment cutbacks,⁴⁴ did not redistribute wealth downward.

As in Mexico, in Bolivia the revolution ushered in a more egalitarian society than the one it displaced, but in the absence of income data for the pre-1952 period it is impossible to document the extent to which it did. The agrarian reform that was implemented in response to pressure “from below” enabled peasants to appropriate the full product of their labor. The earnings of the newly propertied peasants who marketed their output accordingly improved, at the expense of former *latifundistas*. And in industry, and especially in the mines, labor received wage and fringe benefit increases, as a result of their militancy and collaboration with the petty bourgeois-led 1952 insurrection. In 1968 the poorest 40% received a larger portion of the national income in Bolivia than in the other capitalist countries here studied that experienced revolutions. The cross-national variance proves there is a range of income dispersion possible under capitalism, and it suggests the range may in part depend on the degree of industrialization. Not only in Mexico, but also in Brazil and Peru, industrialization has had an adverse effect on the share of income accruing to the lowest income groups. Were there income data by

quintile for Mexico before its post-World War II industrial boom, we probably would find an income dispersion more comparable to Bolivia's than in recent decades. But the share of the national income accruing to the poorest 40% has deteriorated over the years in Bolivia, even in the absence of significant industrialization. It deteriorated because the classes in whose interests the state rules has shifted, and international policies toward Bolivia have changed. Nonetheless, the poorest 40% still enjoy a larger share of the national pie in Bolivia than in the more industrial capitalist countries under examination.

The biggest change in postrevolutionary Bolivian income policy occurred in 1956, when an International Monetary Fund (IMF) Stabilization program, enforced with US military assistance, reduced labor's political power. The IMF and the US made loans conditional on a wage freeze and a reduction of the fringe benefits that labor won in the revolution. The Stabilization program also hurt the national industrial bourgeoisie, because the IMF insisted that the Bolivian government retract industrial tariff protection and end industrial subsidies.⁴⁵ Stabilization modified Bolivian class dynamics, although peasants and labor formally remained part of the ruling coalition until the 1964 *coup d'état*. Since then Bolivia has been governed for the most part by conservative military regimes. The drop in the income share to the poorest 40% of the population during the 1968–1975 period reflects the “purification” (a term used by the leader of the 1964 coup) of Bolivia's capitalist revolution. Reflecting the pro-capital bias of post-1964 governments, market-oriented producers in the lowlands received extensive state-backed foreign loans in addition to large land tracts. The land allocations and financing contributed to income concentration.⁴⁶ The earning capacity of peasants deteriorated also because governments in the 1960s and 1970s continued to regulate prices of peasant-produced basic foods, while allowing most other prices to rise.

The information on Peru suggests that the 1968 “revolution from above” contributed to a “downward” redistribution of wealth, but not to the poorest 40% of the economically active population. While the data on income shares to percentile groups between 1961 and 1972 does not allow us to discern what change occurred before and after the Velasco takeover, there is evidence that income distribution deteriorated before 1968 and improved afterwards. Between 1950 and 1966 families in the top half of the income distribution, by and large, enjoyed a faster rate of income growth than the bottom half.⁴⁷ It might appear that low income groups fare better when they partake in the destruction of the old order than when they do not. The lowest income earners captured a smaller share of the national income in Peru after its “elite revolution” than in Mexico, Bolivia, and Cuba after their respective social

revolutions. But the changes reflect how the Velasco administration responded to the organization of the economy in the prerevolutionary epoch and to constraints imposed by national and foreign capital; benefits have been limited mainly to workers in the modern sector of the economy. The "youth" of the Peruvian social transformation cannot account for the limited redistribution to low income groups, for Cuban poor increased their income share significantly in the first year of Castro's rule.

The income distribution that occurred in Peru may be attributable to the expropriation of large agricultural holdings and to the initial impact of industrial reform legislation. In the coastal area rich estate owners were displaced by a group of reform beneficiaries who fell within the nation's upper middle income bracket.⁴⁸ Workers on the newly formed cooperatives received wage increases and, on the well-run cooperatives, a share of enterprise profits. They received larger salary increases than the technicians and the office and skilled workers on the farms. Therefore, income equalization occurred not only in the society at large but also within certain units of production. Most of the agrarian labor force has not benefited, however, in income from the agrarian reform. Non-resident workers on the cooperatives have benefited little, in part because resident workers have manipulated opportunities to their own advantage. And government pricing and investment policies have restricted income possibilities for the peasant majority. In fact, at the same time as the cooperative members' share of the national income increased, peasants' share (since 1970) deteriorated somewhat.⁴⁹ Velasco's industrial reform explicitly called for a redistribution of profits and control within Peruvian firms. Whereas the reform covered only about 38% of the industrial labor force,⁵⁰ it required all firms with more than 5 employees to allocate immediately 25% of pre-tax profits (10% in cash, 15% in shares) to its employees and, over time, up to 50%. Because in response to the reform established companies resisted hiring new employees and companies that were not already established (including foreign firms) tended to withhold from investing domestically, the government has modified the reform law to allow capital to buy back shares from workers and it has permitted capital to circumvent the law.⁵¹ The stance of the business community further supports the thesis that capitalist industrialization tends to be associated with income concentration. There are no data on income distribution in Peru after 1972, but world economic pressures since then appear to have limited governmental efforts to reduce inequality. For one, the changes that the government had to make in the industrial reform program to compete for scarce international investment capital undoubtedly have had a negative effect on income distribution. International banking institutions made loans to Peru contingent on wage restrictions since the mid-1970s.

The cross-national comparison reveals, above all, that the dominant form of property ownership most affects income distribution after revolution. Income distribution has improved most in postrevolutionary Cuba. The share of national wealth captured by the poorest 40% increased and that captured by the wealthiest 20% dropped markedly during the first year of Castro's rule, for several reasons. First, the 1959 agrarian reform had a great effect on income distribution in the rural areas, both because large *latifundistas* lost land and because small farmers could acquire land cheaply. Second, a 1959 law reduced rents, thereby lowering the earnings of the rentier class. Third, Castro raised the minimum wage. The wage increases probably contributed to the socialization of the economy. Capital cut back its activities as concessions to labor reduced profits, and the new regime expropriated businesses as capital withdrew investments. Unable to curb the radicalization of the revolution, businessmen and professionals emigrated;⁵² the exodus of upper income earners in turn served to equalize income among the remaining population. According to available information, income distribution has continued since 1960 to be more equitable in Cuba than in the other countries. The pace of redistribution, however, has slowed down and the main beneficiaries of income redistribution from top income earners after 1960 have been middle income groups, including the 61–80 percentile group that was initially negatively affected by the revolution. This segment of the population may have benefited even more from policies after 1973, the last year for which we have data on income allocations. Since 1973 the government has increased material rewards for highly skilled and productive workers in its drive to improve production.

Because post-1962 Cuban income data exclude the private sector and because the earnings of some independent farmers are known to be high, in 1973 island income was less equitably distributed than the figures convey and income statistics for Cuba and the other countries are not entirely comparable. In the mid-1960s it was not uncommon for independent farmers to earn 10–20,000 pesos a year; by contrast, cabinet ministers earned 8400 pesos and top technicians and specialists 10,000 pesos. Private farmers were the richest Cubans, with the exception of a few remaining physicians still in private practice.⁵³ The earning possibilities of small farmers undoubtedly diminished in the late 1960s, when the government imposed restrictions on production in the private sector. But the earnings of farmers should have improved once again in the 1970s when the government removed many of the controls. Nonetheless, income opportunities for private farmers in the 1970s remained much more circumscribed than in the capitalist countries, for only in Cuba could landowners own no more than 67 hectares (unless they were exceptionally productive, in which case the ceiling was set higher). The

significance of income statistics, as well as the data base, is distinctive in Cuba. Under Castro nonwage policies have eroded much of the historical importance of earnings, to the extent that income is a much less adequate indicator of overall material consumption on the island than in the other countries. The Castro government, for example, is the only government in this study that provides its poor with social security, free health care, and unemployment insurance. It has also not allowed the price of basic goods and the cost of rent to rise since the early 1960s. Available information, however, indicates that per capita material consumption of a wide variety of goods has improved little if at all since the mid-1960s: it declined during the 1960s and then increased, recovering by 1974 to more or less the level of the mid-1960s.⁵⁴ But because access to most goods was rationed in the 1960s, the material level of living of low income groups may have risen even though per capita consumption declined.⁵⁵ Thus, while Cuba's nonwage as well as wage policies are more egalitarian than those of the other countries surveyed, island material consumption has been depressed.

The strategy of the late 1960s had such a negative effect on productivity that after 1970 the government shifted both its wage and its nonwage policies in favor of skilled and productive workers. It for example deregulated the prices of certain non-essentials,⁵⁶ granted exceptionally productive workers the prerogative to buy luxury electrical appliances, and reserved such valued items as new automobiles for persons in key economic and political posts. In Cuba material lifestyles vary with access to goods, and not merely with earnings, and by the early and mid-1970s both wage and consumer policies favored middle income groups.⁵⁷ The available data for the paired countries further suggests that the dominant mode of production most affects income distribution patterns, that low income earners' share of the national product tends to decrease with capital-intensive industrialization in capitalist countries (except in Colombia), and that the biases of foreign capital contribute to the income concentration with industrialization. The data for the paired countries also suggest that income is not necessarily more equitably distributed after revolution, at least in the long-run, if the dominant mode of production remains capitalist.

In support of the industrialization thesis, as Brazil rapidly industrialized in the 1960s, income distribution deteriorated: the share of the national income accruing to the poorest 40% of the economically active population decreased while the share to the wealthiest 20% increased. The industrial expansion resulted largely from an influx of foreign capital, after the military took power in 1964. Yet the Brazilian-Mexican comparison reveals that political forces may indeed modify the impact of capitalist economic dynamics. Although

the share of the national income accruing to the poorest 40% deteriorated both in Mexico and Brazil in the 1960s, it deteriorated less during the decade in Mexico. Moreover, whereas the income share going to the top 5% declined during the 1960s in Mexico, it increased in Brazil. The Mexican social transformation, and the civilian regime to which it gave rise, appear to have helped the petty bourgeoisie and organized labor (who fall within the top 2–3 decile groups) appropriate a larger portion of the national income than their counterparts under Brazil's military rule. The more egalitarian trend in Mexico, compared to Brazil, suggests that internal class dynamics and not merely semi-peripheral status affect income distribution patterns.

Estimates of Brazilian, Peruvian, and Cuban real and relative per capita income of percentile groups, however, suggest not only that development may have a more egalitarian effect in a socialized economy than in predominantly privately-owned economies, but also that most income groups may benefit more from a repressive semi-peripheral regime than from a more populist but economically weaker regime. As shown in Table VIII, before Castro assumed power the real and the relative per capita income of the poorest 3 quintiles was less, and the ratio between the earnings of the top and bottom 20% was greater in Cuba than in the other two countries; by the 1970s, however, the real and the relative per capita income of the three poorest quintiles was greater and the per capita income gap between the top and bottom 20% was much less in Cuba than in either Brazil or Peru. And the estimates also suggest that low income groups have benefited more from Brazil's repressive high growth-oriented regime than from Peru's "revolution from above". For one, between 1960–61 and 1972–76 the real income per capita of all income groups improved in Brazil; in Peru, the real per capita income of the poorest 20% deteriorated, although that of all other income groups improved. Second, while the real per capita of all income groups was higher in Peru than in Brazil in 1960–61, by 1972–76 the poorest, as well as the two wealthiest quintiles, earned less in Peru than in Brazil. Third, during the 16 year period the relative income per capita of all but the richest 20% deteriorated both in Brazil and in Peru, but for the poorest 20% more in Peru than in Brazil. Fourth, during the period under consideration the gap between the per capita income of the top and bottom 20% widened more in Peru than in Brazil. Thus the Brazilian so-called economic miracle (1967–74) has had some trickle down effect on the poor, which Peru's more nationalist and less dynamic economy has not. The development strategy of neither country, however, has improved the relative per capita income standing of the very poor.

In sum, the experiences of the countries under study here suggest that revo-

TABLE VIII

Per Capita Income by Income Strata in Brazil, Cuba, and Peru

A. Estimates of Real Income Per Capita by Income Strata (1970 US \$)						
	Brazil		Cuba		Peru	
Quintiles	1960	1976	1953	1973	1961	1972
0- 20	59	95	33	236	68	40
20- 40	135	183	66	374	159	189
40- 60	234	309	176	574	296	344
60- 80	342	607	365	763	489	548
80-100	916	2317	961	1044	1261	1746
(Top 5%)	(1869)	(5475)	(1792)	(1136)	(2365)	(3234)
GDP/Capita	337	702	320	598	455	572
B. Relative Income Levels Per Capita by Income Strata (GDP/Capita = 100)						
	Brazil		Cuba		Peru	
Quintiles	1960	1976	1953	1973	1961	1972
0- 20	18	14	10	39	15	7
20- 40	40	26	21	63	35	33
40- 60	69	44	55	96	65	60
60- 80	101	86	114	128	107	96
80-100	272	330	300	175	277	305
(Top 5%)	(555)	(780)	(560)	(190)	(520)	(565)
GDP/Capita	100	100	100	100	100	100
Top 20%						
Bottom 20%	15.1	23.6	30.0	4.5	18.5	43.6
Top 5%						
Bottom 20%	30.8	55.7	56.0	4.9	34.7	80.7

Source: Brundenius, "Development Strategies and Basic Needs in Revolutionary Cuba," Tables 7 and 8.

lutions in capitalist societies do not necessarily give rise to more egalitarian income distributions than societies experiencing no class transformation, that socialist revolutions improve income distribution more than capitalist revolutions and that low income groups benefit most from class upheavals, even under socialism, when the new regimes are in the process of consolidation. In all countries here surveyed, except Colombia, the share of income accruing to the poor diminished with the expansion of the economies. The Mexican-Brazilian comparison, however, shows that in the semi-periphery middle and low income groups benefit somewhat more and the elite somewhat less from

industrialization when a postrevolutionary society institutionalizes a corporately organized civilian regime than when a regime excludes popular groups from power, formally as well as informally.

Health Care and Nutrition

Well-being depends not only on material comforts but also on good health. Good health requires a well-balanced and adequate diet. It also requires access to a medical delivery system that provides quality care. The quality of people's health and health care is of course difficult to assess at the macro level. The empirically grounded indicators on which the analysis focusses do, however, tap some of the most important components of health welfare. To highlight aspects of health welfare not reflected in aggregate statistics, conditions in two of the countries will be described in greater detail; the two countries, Mexico and Cuba, have been singled out for empirically noted differences. Three indicators are used to measure the scope of the delivery system: the per capita supply of physicians, nurses, and hospital beds. In principle, doctors can, because of their training, provide better quality care than nurses and paraprofessionals, but nurses can provide an array of services for which doctors are unnecessary. In resource-poor countries with low health standards there may be a positive trade-off between large staffs of less expensive paraprofessionals and a small cadre of costly physicians. Therefore, I will look at the supply of both doctors and nurses. Whereas much health care does not require hospitalization, the supply of hospital beds reflects the capability of a delivery system to provide whatever intensive in-patient care might be necessary.

A health care delivery system must be measured not only in terms of the range of its facilities but also in terms of its effectiveness in addressing the health needs of the population. The health needs would be expected to be well met if a populace's life expectancy rate is high and free of illness. This analysis focusses specifically on infant mortality, i.e., on the number of deaths of infants of less than one year per 1000 live births. Two measures of diet are also examined: per capita caloric and per capita protein intake. Protein intake is a better indicator of nutrition, but it accounts for only one source of nutrients. Because poverty is widespread in the Third World, and because poor people often consume insufficient calories, total caloric consumption is also assessed.

How might revolutions affect the health welfare of a population? Popular groups who partake in class upheavals might pressure for health related improvements, or, more probably, other benefits they gain might affect health

standards indirectly. Beneficiaries of land reforms, for example, can in principle consume as much of the product of their labor as they need; they do not have to share the product with landlords. Their diet therefore could be affected by land distribution. For such reasons, if the class base of upheavals has a decisive bearing on social welfare developments after revolution, then the health care of worker and peasant majorities should have improved more in Mexico, Bolivia, and Cuba than in Peru since the respective upheavals, and more in the three countries which have had social revolutions than in their respective pairs. Unfortunately, we do not have adequate data to verify this hypothesis. The aggregate statistics that will be used to compare the countries do not permit an analysis of differences among specific socioeconomic groups. We will instead have to assume that the more per capita health welfare standards change, the more popular groups are likely to be affected. The in-depth discussion of health care developments in Mexico and Cuba, however, will permit us to look at class differences in at least two of the countries.

But there are reasons why the dominant mode of production might affect health welfare patterns, irrespective of which groups made the revolutions. First, different organizing principles are likely to guide health care policies in countries that do and do not socialize economic ownership. In the latter, profit dominates private sector investments. Capital-intensive medical programs relying on in-patient hospital care and trained physicians would be likely to be more profitable than labor-intensive programs relying on paramedics and out-patient care. There is therefore reason to believe that such a health care delivery system would develop in capitalist countries. By contrast, in countries where private profit is of little concern, investment based on societal needs is more probable. Low cost labor-intensive care can address a broader range of poor people's health needs than can capital-intensive care per dollar invested. Second, from the consumer vantage point, one would expect health welfare patterns to vary by class more in capitalist than in socialist societies. In market economies, the wealthier people are, the more they can afford to invest in their own health welfare. Market power should be less consequential in socialized economies, especially when income differentials are limited. Accordingly, were the dominant form of economic ownership a principal factor shaping health care after revolution, then developments should be, on the one hand, similar in Mexico, Bolivia, and Peru and their paired countries, and, on the other hand, different in Cuba.

Yet the way countries are integrated into the world economy might also be expected to shape health welfare patterns after revolution. Countries in the semi-periphery should have a larger surplus available for health related needs than countries in the periphery. If health welfare patterns depend largely on

the scale of societal resources, then conditions in the paired countries should be similar, and conditions should vary among the postrevolutionary societies with the level of development of the overall economy, not with the dominant mode of production. Because the data do not permit an assessment of the specific effects of world economic linkages on health, any cross-national differences among the semi-peripheral and peripheral countries should be viewed as necessary but not sufficient proof of the world economy thesis. They minimally would constitute evidence in support of development theory viewed from the perspective of *domestic* economies. Research by Harold Wilensky on industrial countries,⁵⁸ for example, suggests that the richer the country, the broader the health and welfare coverage, irrespective of political system. While Wilensky's comparative study focusses merely on government outlays, and not on the array of indicators considered here, it could be that health and nutritional standards along with medical facilities depend more on the overall level of societal development than on revolution-related experiences or world system linkages. Finally, health welfare developments might be expected to depend on when the revolutions occurred. Internationally, there has been an increase in concern with universal health care in the post-World War II era. Therefore, revolutionary regimes that came to power since the war might be more apt to address aspects of health welfare. If so, health developments in Bolivia, Cuba, and Peru should contrast with Mexico. If revolutionary regimes are more likely to promote health welfare measures when they are in the process of consolidating power, however, we would expect to find little difference among the postrevolutionary societies; but developments in the postrevolutionary societies should contrast with developments in the paired countries. Should developments in the paired countries prove to be similar, though, we can conclude that revolutions per se have little impact on health welfare. Because there are different ways in which the timing of revolutions might shape health welfare developments, the significance of timing cannot be predetermined.

The Health Care Delivery System: The Supply of Doctors, Nurses, Hospital Beds

According to information on the countries here surveyed, as long as the dominant mode of production remains capitalist revolutions appear not to have any predictable effect on the health care delivery system (see Table IX). Whereas per capita medical personnel and hospital facilities have tended to improve in each country that has experienced a social transformation, the per capita supply of each has not come to be uniformly higher and it has not consistently improved more in the postrevolutionary societies than in the paired countries. The factor most affecting the availability of health care, and how

TABLE IX
Health Care

	Bolivia	Ecuador	Mexico	Brazil	Cuba	Dominican Republic	Peru	Colombia
Population per physician								
1958	—	—	—	—	2839 ³	—	—	—
1960	3700 ¹	2800 ¹	1800 ¹	2170 ¹	1200 ²	—	2200 ¹	2400 ¹
1966	—	—	—	—	1146 ³	—	—	—
1970	2300 ¹	2500 ¹	1440 ¹	1950 ¹	1400 ³	2100 ¹	1920 ¹	2160 ¹
1975	—	—	—	—	952 ³	—	—	—
1976	2120 ²	1570 ²	—	1650 ²	1100 ²	1870 ²	1580 ²	1820 ²
Population per nursing population								
1958	—	—	—	—	8262.0 ³	—	—	—
1960	—	2280 ²	2650 ¹	—	—	—	3640 ¹	3520 ¹
1966	—	—	—	—	786.5 ³	—	—	—
1970	2730 ¹	8630 ¹	1570 ¹	3300 ¹	581.9 ³	3930 ¹	3200 ¹	1040 ¹
1975	—	—	—	—	443.8 ³	—	—	—
1976	3520 ²	—	—	—	—	1330 ²	—	—
Population per hospital bed								
1958	—	—	—	—	239 ³	—	—	—
1960	580 ¹	520 ¹	590 ¹	275 ¹	—	440 ¹	490 ¹	580 ¹
1970	490 ¹	430 ¹	930 ¹	260 ¹	215 ³	350 ¹	470 ¹	450 ¹
1975	—	—	—	—	204 ³	—	—	—

TABLE IX (continued)

	Bolivia	Ecuador	Mexico	Brazil	Cuba	Dominican Republic	Peru	Colombia
Infant Mortality (per 1000 live births)								
1940-44 ^s	101.0	114.3	119.3	164.7	-	69.6	116.5	152.0
1945-49 ^s	123.1	101.8	104.5	117.5	38.9	87.6	108.6	141.8
1950-54 ^s	98.8	81.8	91.8	107.3	-	79.7	99.9	113.3
1955-59 ^s	81.8	80.4	77.9	107.6	32.4	83.5	98.8	100.9
1965 ^s	76.5	70.6	60.7	-	38.4	72.7	74.0	82.4
1970 ^s	-	66.6	68.5	110.0	38.4	50.1	65.1	91.3*
1973 ^s	-	59.1	52.0	-	28.9	38.6	-	-
1976/1977 ^{2,4}	158.0	-	65.0	62.0	23.0	-	-	98.0

* 1969

Sources: ¹ World Bank, *World Tables*, 1976, 506, 518, 520.² World Bank, *World Development Report*, 1979, 166-169.³ Calculated from Direccion Central de Estadística, *Anuario estadístico de Cuba, 1975* (Junta Central de Planificación, 1975), 26, 231-32.⁴ Dominguez, *Cuba*, 185.⁵ Wilkie, ed., *Statistical Abstract of Latin America* 19, 95.

the delivery system is organized, is the dominant mode of production. Cuba has the largest supply of doctors, nurses, and hospital beds per population. Because its supply of medical personnel is much greater than Mexico's and Brazil's, and because Mexico has the worst per capita supply of hospital beds of any of the countries under study, the level of development of societal productive resources does not account for cross-national differences in health care facilities.

Whereas the Mexican health care delivery system has expanded since the revolution, official commitment to health care has been low throughout the century, and it has been class-biased. Social welfare programs, which include medical care, have never received more than 6.5% of the national budget.⁵⁹ Allocations to "public health, welfare, and assistance" did not consistently surpass prerevolutionary levels as a percentage of the total budget until 1926. They peaked under Cárdenas in the 1930s, and during the first two years of his successor's administration. The relatively high outlays under Cárdenas suggest that public outlays to social concerns are greatest when the national leadership is populist in orientation and minimally constrained by a powerful profit-oriented capitalist class. In weakening the power of the propertied class, the Depression made it easier for the government to implement social welfare measures. Postrevolutionary Mexican medical outlays are not only limited, but also vary greatly by socioeconomic group. In the post-World War II period medical assistance has been concentrated almost exclusively in urban areas, especially in the largest cities. In 1970, for example, 54% of all doctors — private practitioners and state employees — worked in the four largest cities, which contained 18% of the population.⁶⁰ Yet even in cities, institutional coverage is restricted for the most part to workers in the oligopolistic and state sectors of the economy; these workers qualify for subsidized programs. Businesses and the government help finance a health care system for the small percentage of the work force they employ.⁶¹ The Ministry of Health and Public Assistance operates clinics and hospitals, but the facilities are poor in quality and confined almost exclusively to cities; they attend to only about 4% of the rural population. Thus, the most well-to-do urban population has access to medical services and facilities through nonmarket and market (private) channels, while the poor, especially in the countryside, have access to neither. Officially financed programs are also class biased in the kind of health care they offer. The government gives priority to the health concerns of upper income groups. In the 1965–69 period, for example, only 4% of the public health budget went to preventive medicine, while over 60% went to hospitals. Yet low income groups suffer most from illnesses that preventive care could ameliorate. A small influential fraction of the population molds government programs to their interests, rather than to the interests of the largest number of people.⁶²

Postwar Mexican government medical outlays exemplify the class biases of health care delivery systems in capitalist countries, in the developed and underdeveloped world.⁶³ In the early postrevolutionary period, though, the orientation of the health care system differed. Cárdenas not only allocated more monies, proportionally, to health welfare than did other post-1910 presidents (except his successor, during the first two years in office), but he also restructured the health care system more to the interests of the peasant majority. First, he initiated a program of obligatory medical student social service, to encourage trainees to move to rural communities. Second, he supported public health programs on the *ejidos* established under his administration. In the 1930s millions of pesos of *ejido* savings were used to construct public baths and other works of collective social benefit.⁶⁴ With government support, the land reform sector then generated an unprecedented surplus. Thus medical policies in Mexico have varied over the years, as state-class relations have.

The expansion and reorganization of the health care delivery system in Castro's Cuba have been so great and so different from the other countries' as to suggest that socialization of the economy provides options private ownership of the economy does not. Given that half the country's doctors emigrated in the first five years of Castro's rule,⁶⁵ Cuba's current supply of doctors is especially impressive. The Castro regime sponsored a massive campaign to attract students to medicine. With all graduates guaranteed jobs and with nearly all doctors government-employed, the expansion of the medical profession is a direct reflection of the state's commitment to upgrading health care. Cuba has expanded its per capita supply of doctors to the point that it can export them, with less cost to the domestic economy, than can most Latin American countries.⁶⁶ Just as Mexican governments modified their medical care priorities over the years, so too has the Castro regime. But the two countries have promoted increasingly different health care coverage. Whereas the Castro government initially invested in a costly and elitist doctor-based medical system, once it replenished its supply of doctors it began to invest in paramedical care. It promoted new types of personnel, such as medical and dental assistants (against some initial opposition of the medical and dental professions), and it upgraded established low prestige professions such as nursing.⁶⁷ As a result, the population-health care personnel ratio dropped from 2838:1 in 1958 to 171:1 17 years later.⁶⁸ And the nurse-population ratio, which had been between 2 and 3 times lower in Cuba around the time of the revolution than in the capitalist countries for which we have information, by 1970 was between approximately 2 and 15 times higher. Moreover, nurses, nurse assistants, and auxiliary personnel seem to have more clinical responsibility in Cuba than do their counterparts in capitalist countries.⁶⁹

Cuba has reoriented its health care system from the hospital to the community, and in so doing reached more people. In both the cities and the countryside the Castro regime has built health centers that provide ambulatory care. The rate of ambulatory visits to physicians has consequently increased.⁷⁰ The Castro regime has also mobilized citizens for public health campaigns; for example, for street cleaning, immunization, and disease control. These campaigns are believed to have contributed to a rapid reduction in infectious diseases.⁷¹ Furthermore, access to health care facilities differs in Cuba and the capitalist countries, reflecting the different class biases of the regimes. Under Castro medical care is free to all. Unlike in Mexico, for example, in Cuba the government has not concentrated medical care in the cities, for employees in modern firms and public bureaucracies. Whereas the Castro regime has not expanded medical services and facilities to the point that the needs of all Cubans are met, during its first decade in power it invested disproportionately in rural areas, to compensate for prerevolutionary rural-urban medical facility inequities.⁷² Whereas there is no publicly available data on actual use of the health care delivery system by socioeconomic groups, the medical delivery system probably has been reoriented more toward low income groups in Cuba than in the capitalist countries. Moreover, the emphasis of Cuba's health care delivery system has come to be less capital-intensive than the capitalist countries' in the study. By 1976 the Castro regime had begun to cut back its physician training program while it continued to expand its paramedical program. And investment in hospital bed facilities under Castro has barely kept up with population growth. In 1970 (the most recent year for which there is data for all the countries), Cuba had more hospital beds per population than any of the other countries, but its supply was already larger before the revolution. Between 1960–70 several of the other countries under study expanded their hospital bed facilities more than did Cuba. Whereas the Cuban strategy may meet the needs of the largest number of people per dollar investment, ideally the regime should also improve health facilities for people with costly specialized needs.

In sum, the qualitative and quantitative changes that the Castro regime alone initiated suggest that governments in socialized economies are apt to invest more in health welfare, and to allocate funds differently, than governments in capitalist societies. Whereas state ownership of the means of production in itself provides no *guarantee* that medical outlays and health standards will improve, it creates possibilities that private ownership does not. The inferior health care delivery system in postrevolutionary Bolivia is undoubtedly attributable in part to market dynamics and the limited public revenues governments there have had. But the different developments in Castro's Cuba on the one hand, and Mexico and Brazil on the other hand, demonstrate that capital resources are not the only issue.

Infant Mortality

Infant mortality is the one aspect of social welfare that appears not to be affected by any of the revolutionary-linked variables under study. Whereas Table IX suggests that the revolutions had an impact in that infant death rates per 1000 live births tend to be lower in the postrevolutionary societies (except Bolivia) than in their paired countries, the rates were, however, lower in Cuba and Peru already before upheavals and we have no data for prerevolutionary Mexico. Because Cuba has a much lower infant mortality rate than any of the other countries, it would appear that societies with socialized economies have more effective health care systems than capitalist countries. But because island rates were significantly lower already before the 1959 upheaval and because, according to the data, the infant death rate during the first decade of Castro's rule was higher than when Batista fell, socialism alone cannot be the cause. Possibly, health care deteriorated under Castro until a new generation of doctors replaced the physicians who emigrated. The increase, however, may reflect an improvement in data collection, not a deterioration in health care: in 1969, for example, 98% of all deaths were reported, whereas in 1956 only 53% were.⁷³ The level of overall economic development and position of countries within the world economy has no linear relation to cross-national rates. Through 1970, Brazil had the highest infant mortality rate of any of the countries under study, despite its large resource base.

Nutrition

Whereas, in the countries under study, infant mortality rates appear to be unaffected by revolution or the overall wealth of societies, according to our indicators nutrition standards tend to vary with the level of development of economies (Table X). Between 1960–74 caloric and protein intake was generally lowest in Bolivia and Ecuador and highest in Mexico and Brazil. Whereas nutritional standards may seem at least in the long-run to depend more on societal aggregate economic resources than on class transformations, it may well be that the social revolutions did help improve protein and caloric intake in the short-run. Without information on the four pretransformation periods and on the early postrevolutionary period in Mexico, though, it is impossible to assess the full impact that the respective upheavals have had on per capita food consumption. As detailed below, the available information on Mexico and Cuba suggests, however, that the land reforms and other distributive and redistributive policies initiated when the new regimes consolidated power helped raise nutritional standards of low income groups. Peru is the only country where protein and caloric consumption, according to available information, declined after the revolution. It declined probably because only a

TABLE X
Nutrition

	Bolivia	Ecuador	Mexico	Brazil	Cuba	Dominican Republic	Peru	Colombia
Per capita caloric supply (percentage of requirements)								
1960 ¹	69	81	107	102	—	92	97	94
1970 ¹	77	89	110	109	—	91	98	97
1974 ²	83	91	121	118	107	109	92	96
Per capita protein supply (total grams per day)								
1960 ¹	43	46	65	61	—	50	61	46
1970	46 ¹	49 ¹	65 ¹	64 ¹	64 ³	51 ¹	62 ¹	50 ¹
1974 ²	47	47	66	61	—	50	53	50

Sources: ¹ World Bank, *World Tables*, 1976, 519.

² Wilkie, ed., *Statistical Abstract*, 23.

³ Vicente Navarro, "Health, Health Services, and Health Planning in Cuba," *International Journal of Health Services* (1972), 404.

limited portion of the rural population benefited from the land reform, because other agrarian policies (e.g., credit and pricing) did not favor the peasant sector,⁷⁴ and because the earning power of the country's poor has deteriorated.

In Mexico, nutritional patterns appear to have changed over the years. Food consumption of low income groups, especially in the countryside, improved most under Cárdenas. Under Cárdenas peasant consumption depended as much on subsistence agriculture and informal exchanges among neighbors as on goods purchased in the market. But as rural communities were progressively integrated into the money economy after World War II, peasant food consumption came to depend on market purchasing power. With the impingement of market forces, informal networks for food distribution eroded and peasants became economically weaker and agrarian capital stronger. Consequently, even though farm output significantly improved after 1940, most *ejidatarios* have not benefited from the gains. In the 1960s, Mexican upper and middle income group consumption of fruits, vegetables, and protein improved, while low income consumption deteriorated.⁷⁵ The earning power of many Mexicans deteriorated to the point that by the end of the 1960s 40% of all farm families and 26% of all nonagricultural families were believed to earn below the minimum needed to assure an adequate diet.⁷⁶ Although the government in the early 1970s implemented several programs to improve low income nutritional standards, the programs have thus far had little impact.

The other "revolution from below," in Cuba, also modified food consumption patterns. According to available data, however, the changes have not on the whole thus far been uniformly positive. Data on island consumption of 35 food items reveals that per capita acquisitions of 24 items dropped between 1966 and 1970.⁷⁷ During the following four years consumption of approximately two-thirds of the products did improve, but consumption of only half the items was higher in 1974 than in 1966. Moreover, the data in Table X indicate that while island per capita caloric intake was adequate, per capita protein intake was not. Nonetheless, with basic goods rationed, low income groups may have improved their intake, even during the period when per capita food consumption declined. By contrast in the capitalist countries, where most food is allocated through market channels, consumption of low income groups may not have improved even when per capita consumption rose;⁷⁸ post-World War II Mexican data confirm this hypothesis. Thus, policies of governments after revolution *may* shape societal dietary patterns. But as new regimes become institutionalized in capitalist societies, nutritional standards tend to vary with the overall level of development of the economy and socioeconomic status. The situation in Castro's Cuba reveals that islanders, as

a whole, fare no better under socialism than people in the more economically developed capitalist countries. Low income groups, however, may consume more calories and protein on the island than in the other countries, because the Castro government guarantees all Cubans a basic low-cost diet. The state in Cuba is freer than in the other countries to counter market tendencies, and it has used its power accordingly.

In conclusion, this analysis suggests that only in socialized economies is the health care system likely to change in ways that would otherwise be unlikely. Since the respective revolutions Cuba's health care delivery system has been more extensive, it has expanded more, and it has been organized differently than have the delivery systems in the other countries. Furthermore, both the delivery system and policies affecting nutrition are least class-biased in Cuba. By the second decade of Castro's rule the changes appear also to have had a positive effect on infant mortality, but possibly not before then. Whereas health trends in the other postrevolutionary societies have tended to be positive as well, because the same is true in the paired countries, either capitalist revolutions have no distinctive impact on the aspects of health welfare under investigation or revolutions are not the only force that may positively affect health welfare. In view of the general trend in all societies, not only in the countries surveyed here, the former interpretation is the more probable.

Conclusion

The foregoing analysis assessed ways that revolutions affected the social welfare of Latin Americans. It compared differences between societies of roughly similar levels of economic development that did and did not have revolutions, revolutions ushered in by different class alliances, revolutions instituting different modes of production, and revolutions occurring in countries differently situated within the world economy. The class transformations in Mexico, Bolivia, Cuba, and Peru gave rise to more egalitarian societies than they displaced, but low income groups in each country gained most during the new regimes' consolidation of power. Subsequently, the interests of the popular sectors were sacrificed to those of middle and upper income groups. The rural masses benefited from revolution mainly in conjunction with agrarian reforms. Agrarian reforms have been promulgated in all the countries under study, but a much larger proportion of the agrarian population and a much larger proportion of the farmland has been redistributed in the four countries that had political upheavals than in the paired countries that did not. Whereas all the land reforms perpetuate *minifundismo*, recipients of land titles enjoy a modicum of security and the opportunity to appropriate the full product of their labor, which rural wage workers and peasants dependent on usufruct arrangements do not.

Examining the countries that *have* had revolutions shows that peasants and workers do not necessarily benefit most when they participate in the destruction of the old order. Peasants and rural farm laborers gained land where they were disruptive, but in Mexico only after a global Depression weakened the ability of large landowners to resist expropriation. The Peruvian experience demonstrates that rural laborers may benefit even if they are politically quiescent at the time of the extralegal takeover of power, and that they may, under certain conditions, gain benefits sooner after revolutions “from above” than after revolutions “from below”. The level of development of the economy and the way the societies have been integrated into the world economy historically limit what Third World revolutions can accomplish, quite independently of how the upheavals originated. The four revolutionary governments adapted land policies to property relations under the *anciens régimes*, and they reorganized agriculture to profit from trade. Global constraints have also been one factor restricting labor’s ability to improve its earning power and influence over the organization of production. Labor did benefit from the upheavals, but as the postrevolutionary governments became concerned with attracting foreign investment and foreign financial assistance, and with improving profits from trade, labor was marginalized. The Mexican-Brazilian comparison, however, suggests that the “middle class” and the small proportion of workers employed in the oligopolistic sector benefit more and the richest 5% less in societies where civilian groups have been incorporated into the political apparatus as a result of revolution than in equally industrialized societies where they have been excluded, in the absence of revolution. Revolutionary-linked forces may modify the income generating effect of capitalist industrial dynamics, though not to the advantage of the lowest income earners.

The dominant mode of production instituted under the new order is the aspect of revolution most affecting patterns of land and income distribution and health care. To the extent that ownership of the economy is socialized the state has direct access to the surplus generated. Although the Cuban state has not consistently allocated the resources it controls to low income groups, because the Castro regime need not provide a favorable investment climate, it can more readily redistribute wealth “downward” than can the capitalist regimes. It accordingly has also been freer to redesign the health care delivery system in accordance with societal needs rather than business interests and market power. But the Cuban experience suggests that the distributive effects even of socialist revolutions can be limited. Although socialism allows certain allocative options that capitalism does not, the capacity to improve the welfare of Third World people by any revolutionary means is constricted by the weak position of less developed nations within the global economy, by investment-consumption tradeoffs, and by internal political and economic pressures.

NOTES

1. James Wilkie, *Statistical Abstract of Latin America* 19 (University of California at Los Angeles, Latin American Center, 1978), 238, 239, 248.
2. "Revolutions from below" are abrupt transformations of basic socioeconomic and political institutions that are accompanied and partly effectuated by the involvement of lower and working class groups in the destruction of the old regime. "Revolutions from above" or "elite revolutions" are abrupt transformations that occur without the participation of popular groups. On the distinction between the two types of revolutions, see Barrington Moore, *Social Origins of Dictatorship and Democracy* (Beacon, 1966); Ellen Kay Trimberger, *Revolution from Above: Military Bureaucrats and Development in Japan, Turkey, Egypt, and Peru* (Transaction Books, 1978); Theda Skocpol, *States and Social Revolutions in France, Russia and China* (Cambridge University Press, 1979); and Susan Eckstein and Peter Evans, "Revolutions as Cataclysm and Coup: Political Transformation and Economic Development in Mexico and Brazil," *Comparative Studies in Sociology* (1978), 253–74.
3. As will be discussed below, in agriculture the Mexican, Bolivian, and Peruvian revolutions actually introduced new obstacles to capitalist expansion at the same time that they displaced dominant classes obstructing capitalist expansion.
4. While considered to be among the most important, other factors, such as the nature of the leadership and state autonomy, are also likely to shape revolutionary outcomes.
5. Immanuel Wallerstein, *The Capitalist World Economy* (Cambridge University Press, 1980), especially "The Rise and Future Demise of the World Capitalist System: Concepts for Comparative Analysis," "Dependence in an Interdependent World: The Limited Possibilities of Transformation within the Capitalist World-Economy," and "Semiperipheral Countries and the Contemporary World Crisis."
6. Wilkie, 239, 248.
7. It should be kept in mind that the revolutionary governments that remained committed to private ownership nationalized key industries, and that Cuba continues to be shaped by conditions in and policies of Western bloc countries, despite socialization of its economy and integration into the Soviet trade bloc. Capitalism and socialism in their ideal-typical forms exist in none of the countries under study. Within the *context of nation-states*, however, the two principal forms of ownership are associated with different modes of organizing economies, and it is this difference that interests us here; in the text the terms "capitalism" and "socialism" will refer to these differences. On Cuba's global capitalist relations, see Eckstein, "Capitalist Constraints on Cuban Socialist Development," *Comparative Politics* (April 1980), 253–74; on the limitations of market and human capital based models for understanding postrevolutionary inequality, see Eckstein, "Comment on 'Revolution and the Rebirth of Inequality' by Kelley and Klein," *American Journal of Sociology* (November 1978), 724–27, a critique of Jonathan Kelley and Herbert Klein, "Revolution and the Rebirth of Inequality: A Theory of Stratification in Post-revolutionary Society," *American Journal of Sociology* (July 1977).
8. Some of the regimes rooted in *coup d'états* in the four countries that will be used as "control cases" – such as Brazil's Getulio Vargas government in the 1930s and the military regime which took power in 1964 – have implemented major structural reforms, but they did not destroy the economic base of the dominant class and they did not restructure social relations of production in any part of the economy. Therefore, according to the definition of revolution employed in this study, they have not experienced "revolutions from above".
9. Figures presented below should be viewed as approximations. They undoubtedly contain a margin of error.
10. Edmundo Flores, *Vieja Revolución, Nuevos Problemas* (Editorial Joaquín Mortiz, 1970), 155.
11. Brian Pollitt, "Agrarian Reform and the 'Agricultural Proletariat' in Cuba, 1958–66: Some Notes" (University of Glasgow, Institute of Latin American Studies, 1979), 4.
12. Some landholdings exceed the legal maximum because governments have not strictly enforced the law and because family members at times officially each claim property even though they farm the land as a single unit.
13. *New York Times*, January 25, 1981, E 9.
14. World Bank, *Land Reform in Latin America: Bolivia, Chile, Mexico, Peru, and Venezuela*, Staff Working Paper No. 275 (1978), 15.
15. *Ibid.*, 17.
16. Cynthia Hewitt de Alcántara, *Ensayo Sobre la Satisfacción de Necesidades Básicas del Pueblo Mexicano entre 1940 y 1970* (El Colegio de México, Centro de Estudios Sociológicos, 1977), 20, 27.

17. Not all Bolivian governments have been equally pro-agrarian capital, anti-peasant. The populist governments of General Alfredo Ovando Candia and General Juan José Torres (1969–71) allotted, on the average, smaller parcels than the more conservative governments that preceded and succeeded them. Javier Albó, "Desarrollo rural," *Presencia*, edición de homenaje al sesquicentenario de Bolivia, August 6, 1975; 748. And in 1980 President General Luís García Meza seized power to forestall reforms promised by the elected President Harnan Siles Suazo. *New York Times*, January 25, 1981, E9.
18. John Womack, *Zapata and the Mexican Revolution* (Vintage, 1969).
19. Pablo González Casanova, *Democracy in Mexico* (Oxford University Press, 1970), 223.
20. Wayne Cornelius, "Nation Building, Participation, and Distribution: The Politics of Social Reform under Cárdenas," in Gabriel Almond, et al., eds., *Crisis, Choice and Change: Historical Studies of Political Development* (Little, Brown 1973), 392–498.
21. World Bank, 22, 124. While the *de facto* land distribution occurred within two or three years after the New Regime took power, the certification of land titles has taken over two decades and it is still far from complete. By 1970 less than one-third of the eligible farm population received titles.
22. Raymond Vernon, *The Dilemma of Mexico's Development* (Harvard University Press, 1963); Clark Reynolds, *The Mexican Economy: Twentieth Century Structure and Growth* (Yale University Press, 1970); Eckstein, "The Remaking of the Bolivian Agrarian Revolution," unpublished paper, 1981.
23. Andres Bianchi, "Agriculture," in Dudley Seers, *Cuba: The Economic and Social Revolution* (University of North Carolina Press, 1964); Donald Bray and Timothy Harding, "Cuba," in Ronald Chilcote and Joel Edelstein, eds., *Latin America: The Struggle with Dependency and Beyond* (John Wiley, 1974), 635.
24. Lee Lockwood, *Castro's Cuba, Cuba's Fidel* (Vintage, 1969), 100.
25. E. V. K. Fitzgerald, *The State & Economic Development: Peru since 1968* (Cambridge University Press, Department of Applied Economics, Occasional Paper 49, 1976), 31.
26. Peruvian peasant cooperatives, however, have been subject to considerable government control. *New York Times*, January 25, 1981, E9.
27. World Bank, 50–55. 28. *Ibid.*, 50–51. 29. *New York Times*, January 25, 1981, E9.
30. Wilkie, *Measuring Land Reform, Supplement to the Statistical Abstract of Latin America* (University of California at Los Angeles, Latin American Center, 1974), 3.
31. Fitzgerald, 20.
32. Much of the income redistribution noted in Table IV in the 1953–60 period occurred after the revolution. See Claes Brundenius, "Measuring Income Distribution in Pre- and Post-Revolutionary Cuba," *Cuban Studies/Estudios Cubanos* (July 1979), 30–32.
33. Ifegenia de Navarrete, "La Distribución del ingreso en México: tendencias y perspectivas," in David Ibarra, et al., *El Perfil de México en 1980* (Siglo XXI, 1970), 37; Reynolds, 84; Roger Hansen, *The Politics of Mexican Development* (The Johns Hopkins Press, 1971), 8, 72, 74.
34. Hewitt de Alcántara, 25. 35. *Ibid.*, 7. 36. *Ibid.*, 12. 37. *Ibid.*, 13.
38. Enrique Hernández Laos and Jorge Córdova Chávez, "Estructura de la distribución del ingreso en México," *Comercio Exterior* (May 1979), 505–20.
39. Hansen, 8, 72, 74.
40. Saul Trejos Reyes, *Industrialización y Empleo en México* (Fondo de Cultura Económica, 1973).
41. Hewitt de Alcántara, 17. 42. *Ibid.*, 19, 20.
43. Eckstein, *The Poverty of Revolution: The State and the Urban Poor in Mexico* (Princeton University Press, 1977), 24.
44. Hernández Laos and Córdova Chávez, 507.
45. Eckstein, *The Impact of Revolution: A Comparative Analysis of Mexico and Bolivia* (SAGE Publications, Contemporary Political Sociology Series, 1976), 22.
46. Eckstein, "The Remaking of the Bolivian Agrarian Revolution."
47. Richard Webb, "Government Policy and the Distribution of Income in Peru, 1963–73," in Abraham Lowenthal, ed., *The Peruvian Experiment: Continuity and Change Under Military Rule* (Princeton University Press, 1975), 89.
48. World Bank, 70, 92–93. 49. Fitzgerald, 73. 50. *Ibid.*, 34.
51. For example, business can set up sales agencies that are not covered by the reform, and have profits accrue to the sales agencies through transfer pricing.
52. Richard Fagen, Richard Brody, and Thomas O'Leary, *Cuban in Exile* (Stanford University Press, 1968).
53. Leo Huberman and Paul Sweezy, *Socialism in Cuba* (Monthly Review Press, 1969), 118.

54. Rents may have increased, but not proportionate to income.
55. While a black market has operated as long as rationing has been in effect, material consumption depends much less on market power in Castro's Cuba than in the other countries under study.
56. Jorge Domínguez, *Cuba: Order and Revolution* (The Belknap Press of Harvard University Press, 1978), 185.
57. The deterioration of the economy, resulting from the world recession and the decline in island sugar export earnings, contributed to the emigration of over 100,000 Cubans to the US in 1980; they chose to emigrate than seek change internally. Complete information is not yet available on the social background of the emigrés.
58. Harold Wilensky, *The Welfare State and Equality* (University of California Press, 1975), 18–27.
59. Wilkie, *The Mexican Revolution: Federal Expenditure and Social Change Since 1910* (University of California Press, 1967), 166.
60. Hewitt de Alcántara, 59.
61. The government also contributes funds to the health coverage system available to workers in the oligopolistic sector.
62. Hewitt de Alcántara, 59.
63. Navarro, *Medicine Under Capitalism* (Prodist, 1976). 64. Hewitt de Alcántara, 12–13.
65. Navarro, "Health, Health Services, and Health Planning in Cuba," 413.
66. On Castro's success at training doctors, and exporting them for foreign exchange, see Eckstein, "Socialist Internationalism, the Capitalist World Economy, and the Cuban Revolution," paper delivered at the International Studies Association Meeting, Philadelphia, 1981.
67. Navarro, "Health, Health Services, and Health Planning in Cuba," 414.
68. Calculated from Direccion Central de Estadística, *Anuario estadístico de Cuba, 1975* (Junta Central de Planificación, 1975), 26, 231.
69. Navarro, "Health, Health Services, and Health Planning in Cuba," 410.
70. *Ibid.*, 412. 71. *Ibid.*, 424, 430.
72. Eckstein, "The Debourgeoisement of Cuban Cities (revised)," in Irving L. Horowitz, *Cuban Communism*, 4th ed. (Transaction Books, 1981).
73. Vicente Navarro, "Health, Health Services, and Health Planning in Cuba," *International Journal of Health Services* (1972), 424, 430.
74. Fitzgerald, 32. 75. Hewitt de Alcántara, 40. 76. *Ibid.*, 43.
77. Eckstein, "Income Distribution and Consumption in Postrevolutionary Cuba: An Addendum to Brundenius," *Cuban Studies/Estudios Cubanos* (January 1980), 96.
78. The governments in the capitalist countries regulate prices of a few staples, benefiting citydwellers at the expense of peasant producers. Whereas scarcity, therefore, does not drive up the price of all basic foods beyond the economic reach of urban poor, all socioeconomic groups do not have equal access to the price controlled items, as they do in Cuba.

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