Globalization and Deindustrialization: Direct Investment and the Decline of Manufacturing Employment in 17 OECD Nations*

by

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Abstract

Recent years have witnessed a fairly dramatic upswing in the level of foreign direct investment, a phenomenon which has played an integral part in a larger process of globalization. While sociologists have devoted a good deal of attention to the consequences of direct investment for the developing hosts of foreign direct investment, much less attention has been paid to the implications of direct investment for the advanced industrial societies. In this paper, I focus on one of the more interesting links that has been drawn between direct investment and its effects: that between the outflow of direct investment - often cast as "capital flight" - and deindustrialization. To examine this link I employ a pooled time-series of cross-sections dataset which combines observations on 17 OECD nations across the 1967-1990 period (N=408). Random effects regression models, which control for unmeasured country-specific effects, reveal strong support for arguments which link direct investment to the relative decline of the labor force in manufacturing in core societies. In addition, results show that deindustrialization across this period is largely explained by a model that combines classic generalizations of the process of economic development with an attention to a range of more immediate factors identified by contemporary students of deindustrialization.

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INTRODUCTION

Recent years have witnessed a fairly substantial upswing in the level of direct investment. Following the global recession of the early 1980s (and a consequent downturn in direct investment), total outflows from seventeen OECD nations grew from 27 billion US dollars in 1982 to over 219 billion by 1990. The average annual rate of growth between 1982 and 1990 was roughly 31 percent. This contrasts with an earlier period of slower, yet still impressive, growth in the outflow of direct investment from the OECD nations. Following the global recession of the early 1970s, for instance, outflows of direct investment from these same seventeen nations grew from 21 billion US dollars in 1974 to 53 billion by 1980, at an average annual rate of about 17 percent.

The growth of direct investment has played an integral part in a larger process of globalization or internationalization, a process which has captured the attention of analysts of diverse perspective and discipline (e.g. Ketlo-Gillies, 1992; Robertson, 1992; King, 1991; Featherstone, 1990; Giddens, 1990; Albrow and King, 1990; Chase-Dunn, 1989; Harvey, 1989; Lash and Urry, 1987). This interest has been fueled by the sense that the most recent round of globalization, which finds its origins - according to a variety of authors - in the late 1960s, has exhibited a number of unique features and raised a number of profound questions, questions concerning everything from the representation of identity to the sovereignty of the nation-state. Although "globalization" (as noun) only emerged as a significant concept in academic circles a decade or so ago, it has become in that short period of time a subject of intense scholarly and public interest (Robertson, 1992: 8).

While sociologists have devoted a great deal of attention to the consequences of foreign direct investment for the periphery (e.g. Bornschier and Chase-Dunn, 1985; London, 1988; Boswell and Dixon, 1990; Wimberly, 1990), they have devoted much less empirical attention to often voiced concerns over the impact of the growth of direct investment on core societies. One such concern surrounds the impact of the heightened geographic mobility of capital on traditionally high-wage manufacturing employment. Across the 1970s and 1980s, all of the major industrial nations experienced a decline in the relative size of their manufacturing labor forces. At one extreme stand nations such as the UK, which moving into the 1970s had over 33 percent of its labor force in manufacturing and saw this decline to under 20 percent by 1990. At the other stands Japan, which saw its manufacturing labor force decline by only 3 percent since the early 1970s. On average, the share of manufacturing employment in the seventeen OECD nations noted above declined from 27 percent in 1967 to 19 percent by 1990 (Figure 1). "Deindustrialization" has thus been general, if not uniform, across the core in the last twenty-five years.²

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Figure 1. Employment share of manufacturing, 1967-1990. Percent labor force in manufacturing in the UK and Japan and the average size of the manufacturing labor force in 17 OECD nations.


While the authors of what Gordon (1988) has termed the "New International Division of Labor" (NIDL) and "Globalization of Production" (GOP) accounts of the contemporary world-economy have offered a variety of arguments for the existence of a link between globalization and core deindustrialization, such arguments have by and large not been followed up by systematic empirical research. This is unfortunate, for while interest in the topic of deindustrialization has perhaps waned to some degree of late, the trend toward deindustrialization, while slowing, has nonetheless continued down to the present. In this paper I present results from a larger-scale exploration of this issue. Specifically, I examine the link between the growth of outflows of direct investment (often framed in this context as "capital flight") and deindustrialization. The question that I ask at this point is rather concrete; namely, is there indeed evidence for the claim that the growth of direct investment has played a significant role in deindustrialization?
Before turning to the issue of deindustrialization directly, I discuss the growth of direct investment and its changing spatial patterning. I introduce the "direct investment-deindustrialization thesis" (hereafter DIDT) and touch on a couple of the more problematic issues raised by the popular statements of it. A simple "baseline" model of deindustrialization is developed to provide a background against which to test the DIDT and a range of alternative accounts of the link between direct investment and deindustrialization are also introduced. Finally, results of a pooled time-series of cross-sections analysis of the percent labor force in manufacturing in 17 OECD nations from 1967-1990 are presented. In anticipation of the results, I find strong support for arguments which link deindustrialization to the growth of direct investment.

DIRECT INVESTMENT: TRENDS AND PATTERNS

Data on total inflows and outflows of direct investment (hereafter DI) for the 17 OECD nations noted above are presented in Figure 2. In addition to noting the steep growth in outflows of DI following the recession of the early eighties, one can also note the parallel growth in inflows across the same period. The share of inflows going to the developing world decreased from an annual average of approximately 24 percent in 1975-1979 to about 14 percent in the 1985-1989 period, making the developed world even more important as both home and host to direct investment (Oxelheim, 1993). The rising share of direct investment flowing into the industrial nations relative to the developing nations (on average over 95% of this flowing from other industrial societies across the 1967-1990 period) may on the surface seem a bit paradoxical, and for a variety of reasons. ²

![](chart.png)

**Figure 2.** Total outflow (DIOUT) and inflow (DIIN) of direct investment from 17 OECD nations, 1967-1990.

*Source: IMF Balance of Payments Statistics Yearbook (various years)*
For the sociologist of international development, whose papers are usually heavily weighted down with citations to a literature stressing the central, and often negative, role of the multinational enterprise (hereafter MNE) in everything from economic growth to the demographic transition in the developing world, it may come as something of a surprise that the relative importance of the developing world for core MNEs has been declining over time. It is important to note, however, that this shift in the global distribution of DI that occurred across the 1970s and 1980s is part of a longer-term process (Dunning, 1988; Magdoff, 1992). While estimates of the stock of accumulated foreign direct investment in earlier periods must be approached with a degree of caution, Table 1 indicates that the developing world's share of DI has been generally declining across the twentieth century.

Table 1. Estimated stock of accumulated direct investment by area of origin and recipient area, 1914-1983

<table>
<thead>
<tr>
<th>Year</th>
<th>Developed countries (% originating in)</th>
<th>Developed countries (% hosted by)</th>
<th>Developing countries (% originating in)</th>
<th>Developing countries (% hosted by)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>100.0</td>
<td>37.2</td>
<td>0.0</td>
<td>62.8</td>
</tr>
<tr>
<td>1938</td>
<td>100.0</td>
<td>34.3</td>
<td>0.0</td>
<td>65.7</td>
</tr>
<tr>
<td>1960</td>
<td>99.0</td>
<td>67.3</td>
<td>1.1</td>
<td>32.3</td>
</tr>
<tr>
<td>1973</td>
<td>97.1</td>
<td>72.9</td>
<td>2.9</td>
<td>27.1</td>
</tr>
<tr>
<td>1983</td>
<td>97.4</td>
<td>75.5</td>
<td>2.6</td>
<td>24.5</td>
</tr>
</tbody>
</table>


Lying behind this shift away from the developing world has been a shift in the sectoral composition of direct investment across the twentieth century. The bulk of DI before the Second World War was devoted primarily to agriculture and raw materials. Following the Second World War there was a shift toward manufacturing DI, a form of DI which has always been disproportionately sited in the developed world (Dunning, 1988). Since the 1960s, manufacturing has become the dominant sector for DI. It is important to note, however, that the 1980s have witnessed a significant increase in DI in services, particularly finance and trade related services (UNCTC, 1988). Rather than representing a displacement of manufacturing DI, though, the increased transnationalization of services "has led to increased [DI] in both manufacturing and services" (Letto-Gillies, 1992: 26); that is, it has further facilitated the servicing of foreign markets by manufacturing MNEs. Service sector DI, as with manufacturing DI, has tended to be disproportionately sited in developed societies.
In addition to these changes in the global distribution and sectoral composition of direct investment across the twentieth century, there have been major changes in the lineup of actors on the international investment scene. Before the Second World War, Britain was by far the largest direct investor. It is estimated, for instance, that it held roughly 46% of the world’s accumulated stock of DI in 1914 (Dunning, 1988: 46). Following WWII, the US quickly rose to a position of dominance and had by 1960 attained the sort of hegemonic position which Britain had enjoyed in the decades surrounding the turn of the twentieth century, holding 48% of the world’s stock of DI. In the last two decades or so, the situation has become much more diverse. Britain remains an important home and host to DI. Most of the other industrial societies have experienced an increase in their relative share of total world outflows of DI, notably Japan, France, Germany, and Sweden (OECD, 1987; UNCTC, 1988). Most of this increase came at the "expense" of the US’s position as it experienced a simultaneous increase in inflows and decrease in outflows, becoming a net DI importer in 1981 and remaining one thereafter. Table 2 gives one a sense of the situation that currently prevails in the industrialized world relative to an earlier period of American hegemony. As one can note, the US’s share of the total DI flowing out of the 17 nations compared in Table 2 decreased rather substantially over the period from 1967-1990 while its share of the total DI inflows to these same nations increased markedly. Thus outflows of DI from the major investing nations become more evenly distributed while inflows have become skewed toward the US.

Table 2. Share of total inflow and outflow of direct investment in 17 OECD nations, 1967-1972 and 1985-1990

<table>
<thead>
<tr>
<th></th>
<th>Inflow (%)</th>
<th>Outflow (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>12.88</td>
<td>5.10</td>
</tr>
<tr>
<td>Austria</td>
<td>0.96</td>
<td>0.55</td>
</tr>
<tr>
<td>Belgium</td>
<td>4.99</td>
<td>4.01</td>
</tr>
<tr>
<td>Canada</td>
<td>10.85</td>
<td>2.85</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.58</td>
<td>0.52</td>
</tr>
<tr>
<td>Finland</td>
<td>0.32</td>
<td>0.45</td>
</tr>
<tr>
<td>France</td>
<td>6.98</td>
<td>7.06</td>
</tr>
<tr>
<td>Germany</td>
<td>14.54</td>
<td>4.07</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.34</td>
<td>0.08</td>
</tr>
<tr>
<td>Italy</td>
<td>7.22</td>
<td>3.37</td>
</tr>
<tr>
<td>Japan</td>
<td>1.73</td>
<td>0.36</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.10</td>
<td>5.33</td>
</tr>
<tr>
<td>Norway</td>
<td>1.23</td>
<td>0.57</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.43</td>
<td>0.73</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.62</td>
<td>1.14</td>
</tr>
<tr>
<td>Country</td>
<td>DI 1967-72 (%)</td>
<td>DI 1985-90 (%)</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Great Britain</td>
<td>12.68</td>
<td>17.26</td>
</tr>
<tr>
<td>United States</td>
<td>14.54</td>
<td>46.56</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Values are averages for the period.

Source: IMF Balance of Payments Statistics Yearbook (various years).

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Weighting the flows to and from the individual nations in Table 2 by gross domestic fixed capital formation (GDFCF) gives one a sense of the relative importance of direct investment for their economies. Once normalized, a somewhat different picture emerges. Column five in Table 3 combines inflows and outflows as a percentage of GDFCF and averages these over the 1967-1972 period. The point of combining inflows and outflows is to get a general picture of the importance of international production for any given society. As one can note, although the US was host to 15% and home to 60% of the DI flowing into or out of the 17 nations under consideration in 1967-1972 (Table 2), this amounted to a comparatively modest proportion of US domestic fixed investment activity, roughly 5%. Indeed, relative to the size of their economies, DI was more important for Australia, Belgium, Canada, Holland, and the UK than it was for the US. Column 5 is disaggregated in columns 1 and 3. Here we see that only the Dutch and the British were proportionally larger exporters or homes to DI than the US; the Australians, Belgians, and Canadians being net importers of DI. Column 6 combines inflows and outflows over the 1985-1990 period. When compared with column 5, the most striking fact that emerges here is the substantial and often dramatic increase in the importance of international production for all of the nations under consideration save one (Ireland). DI inflow and outflow is now equivalent to over 5% of GDFCF in 13 of the 17 nations considered in this period, and equivalent to 10% or more in 7 of these 13. Britain, Holland, and Belgium again appear to be particularly heavily involved in international production, DI now being equivalent to nearly a third of GDFCF. Column 6 is disaggregated in columns 2 and 4. Comparing columns 2 and 4 to columns 1 and 3, one can note that while only Finland, Japan, the Netherlands, Sweden, Britain, and the US were net exporters of DI in the earlier period, the majority are in the later period. In addition to the US, whose somewhat peculiar behavior was noted above, only Australia, Austria, Belgium, Ireland, and New Zealand remain net importers. But even these nations, with the exception of Ireland, have seen substantial growth in their outflow of DI.

Table 3. Inflow and outflow of direct investment in 17 OECD nations as a percentage of gross domestic fixed capital formation, 1967-1972 and 1985-1990
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>8.31</td>
<td>0.95</td>
<td>8.83</td>
<td>5.92</td>
<td>9.26</td>
<td>14.75</td>
</tr>
<tr>
<td>Austria</td>
<td>1.54</td>
<td>0.42</td>
<td>1.97</td>
<td>1.94</td>
<td>1.96</td>
<td>3.91</td>
</tr>
<tr>
<td>Belgium</td>
<td>5.73</td>
<td>1.77</td>
<td>14.52</td>
<td>12.98</td>
<td>7.50</td>
<td>27.50</td>
</tr>
<tr>
<td>Canada</td>
<td>3.81</td>
<td>1.40</td>
<td>2.58</td>
<td>5.23</td>
<td>5.21</td>
<td>7.81</td>
</tr>
<tr>
<td>Denmark</td>
<td>2.52</td>
<td>0.91</td>
<td>2.66</td>
<td>5.11</td>
<td>3.43</td>
<td>7.77</td>
</tr>
<tr>
<td>Finland</td>
<td>0.69</td>
<td>1.18</td>
<td>1.75</td>
<td>7.13</td>
<td>1.87</td>
<td>8.88</td>
</tr>
<tr>
<td>France</td>
<td>1.25</td>
<td>1.08</td>
<td>3.71</td>
<td>6.95</td>
<td>2.33</td>
<td>10.66</td>
</tr>
<tr>
<td>Germany</td>
<td>2.07</td>
<td>1.83</td>
<td>1.81</td>
<td>6.24</td>
<td>3.90</td>
<td>8.05</td>
</tr>
<tr>
<td>Ireland</td>
<td>2.71</td>
<td>0.0</td>
<td>1.63</td>
<td>0.0</td>
<td>2.71</td>
<td>1.63</td>
</tr>
<tr>
<td>Italy</td>
<td>2.11</td>
<td>1.22</td>
<td>2.01</td>
<td>2.32</td>
<td>3.33</td>
<td>4.33</td>
</tr>
<tr>
<td>Japan</td>
<td>0.16</td>
<td>0.45</td>
<td>0.07</td>
<td>3.54</td>
<td>0.61</td>
<td>3.61</td>
</tr>
<tr>
<td>Netherlands</td>
<td>5.33</td>
<td>5.61</td>
<td>11.29</td>
<td>18.49</td>
<td>10.94</td>
<td>29.78</td>
</tr>
<tr>
<td>Norway</td>
<td>2.49</td>
<td>0.38</td>
<td>2.39</td>
<td>6.41</td>
<td>2.87</td>
<td>8.80</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1.51</td>
<td>0.13</td>
<td>9.16</td>
<td>8.14</td>
<td>1.64</td>
<td>17.30</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.45</td>
<td>2.29</td>
<td>3.24</td>
<td>18.32</td>
<td>3.74</td>
<td>21.56</td>
</tr>
<tr>
<td>Great Britain</td>
<td>3.37</td>
<td>5.46</td>
<td>11.69</td>
<td>18.48</td>
<td>8.83</td>
<td>30.17</td>
</tr>
<tr>
<td>United States</td>
<td>0.59</td>
<td>3.97</td>
<td>5.44</td>
<td>2.74</td>
<td>4.56</td>
<td>8.18</td>
</tr>
</tbody>
</table>

Values are averages for the period.

**Sources:** IMF *Balance of Payments Statistics Yearbook* (various years); IMF *International Financial Statistics* (1979, 1989); World Bank *World Tables* (1994).

There are, then, a number of longer and shorter-term patterns and trends which come together to make the contemporary period both interesting and unique. Direct investment is of growing importance for almost all of the developed societies. Most DI originates in the developed world and an increasingly large proportion of it is sited there as well. In terms of its sectoral composition, most DI in the contemporary period is directed toward the manufacturing sector, but in recent years a growing proportion has been directed toward services. Most of the industrial societies have moved over the past two decades to become net exporters of DI, while the US has moved to become a net importer, receiving nearly half of the DI flowing into the 17 nations in Table 2 over the 1985-1990 period. All of these factors point, as the NIDL and GOP accounts of the contemporary world-economy have stressed, to the increasing importance of the MNE and its activities for core societies.

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THE DIRECT INVESTMENT-DEINDUSTRIALIZATION THESIS

The idea that direct investment has contributed in an important way to the phenomenon of deindustrialization is, at least in the English-speaking world, a fairly general one. In two widely cited pieces, for instance, Bluestone and Harrison have set out one of the more popular versions of this argument (Bluestone and Harrison, 1982; Harrison and Bluestone, 1988). They argue that DI in the contemporary era is being undertaken as part of a "globalization gambit." This move constitutes an integral part of a new set of corporate strategies designed to abrogate the old post-war social contract between capital, labor, and the state and, in doing so, to restore acceptable levels of profitability in response to the "profit squeeze" of the 1970s. The result of this strategy, they argue is a kind of hollowing of the economy. By hollowing, they mean in part that DI is no longer being undertaken by firms in an effort to complement domestic investment and production, but to replace it. As firm after firm in the manufacturing sector has gone abroad in search of lower labor costs, the end result of the growth of DI in the last two decades has been deindustrialization. While careful to note that DI is not the sole cause of deindustrialization, they nonetheless maintain that it is "certainly a major reason that the United States lost a significant fraction of its manufacturing base" (1988: 29).

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While Bluestone and Harrison focus most intently on the US, other studies paint a similar picture of the role of MNEs and DI in deindustrialization in other core societies. Stopford and Turner (1985), for instance, show that roughly a third of all manufacturing jobs lost in the UK between 1972 and 1983 were the result of the actions of 58 UK multinationals (who added 200,000 such jobs outside Britain across the same period). This echoes the data presented by Bluestone and Harrison for the US and the earlier research of Frank and Freeman (1978) which links substantial domestic manufacturing job losses to DI by US multinationals. More broadly, Beenstock (1984) and UNIDO (1983) have, among others, attributed a significant portion of the general North to South reallocation of manufacturing production and trade to the direct investment activity of core MNEs.

While the above treatment of Bluestone and Harrison's argument represents a bare bones statement of the popular version of the DIDT, it is an accurate one. The preceding discussion raises a number of questions regarding such arguments. For one, the image of "globalization" that Bluestone and Harrison have in mind is first and foremost one of North to South capital flight in which direct investment decisions are guided in largest part by simple labor cost differentials. As I have already indicated, this is an inaccurate picture of the contemporary pattern of DI. Most DI flows between nations with roughly
comparable labor market conditions in which labor cost differentials are relatively minor (e.g. the US and Germany). While the spatial reorganization of manufacturing along a north-south axis is a real phenomenon - witness, famously, the malquiladoras along the U.S. border with Mexico - this simply does not represent the general pattern of DID in the last two decades or so. Moreover, there may be other avenues through which DID might prompt deindustrialization (discussed below). However, the North to South capital flight image is so strong in popular statements of the DIDT that these more subtle mechanisms are sometimes overlooked.

Moving away from the issue of direct investment, the DIDT, as usually stated, also largely neglects to account for the fact, as Singh (1977) has noted, that "deindustrialization" (or, at least, the relative decline of industrial employment) had long been anticipated by social scientists. Much as the Industrial Revolution initiated a movement of labor out of the primary sector and into the secondary sector, social scientists had, well before Daniel Bell (1973), predicted developments which would yield the future "coming of post-industrial society." For instance, Colin Clark in his The Conditions of Economic Progress (originally published in 1940) laid out an early version of the shift from manufacturing to services argument that roots this phenomenon in two processes (1960: 493-494, emphasis in original): first, with economic development, "as real income per head increases, it is quite clear that the relative demand for agricultural products falls all the time, and that the relative demand for manufacture first rises, and then falls in favor of services;" second, given higher relative productivity in the industrial sector, "a stationary relative demand for manufactures would lead to a decreasing proportion of the labor force employed therein." And, as Clark goes on to add (1960: 494), "even when the relative demand for manufactures is increasing, we still generally expect, in the long run, a decreasing proportion of the labor force to be employed therein." Thus as productivity grows and as the industrial economies mature, one should expect that in the "normal" course of economic development secondary sector employment will contract while the tertiary sector will expand in the face of rising demand for services.10

For an empirical analysis of the direct investment-deindustrialization thesis, these criticisms raise two major issues. First, the mechanism through which DID is often held to produce deindustrialization (i.e. North to South capital flight) is more problematic than it might appear at first glance. As the data on DID indicate, the vast majority of all DID flows occur between core societies. While this does not invalidate the DIDT, it does suggest

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that a reasoned interpretation of any observed effect of DI on deindustrialization will require some (careful) post hoc theorizing and analysis. Second, when testing for an effect of DI on deindustrialization, one should also be attentive to the important long-run generalizations offered by earlier analysts.

A MODEL OF DEINDUSTRIALIZATION

As background against which to test the DIDT, I employ the framework developed by Rowthom and Wells (1987). For Rowthom and Wells deindustrialization (as the relative decline of manufacturing employment) can occur in at least three ways. First there is the "positive deindustrialization" that was noted by earlier analysts such as Clark (1960) and which represents much of conventional economic thinking on deindustrialization (see, for instance, Singh, 1989). Here deindustrialization is viewed as a structural feature of all economies during the course of economic development. With development, as per capita income increases, the share of employment in agriculture falls and the share of employment in manufacturing rises until a high level of development is attained. However, beyond some threshold of per capita income the share of services in employment begins to expand at the expense of manufacturing. This will occur as a consequence of the typically higher rate of productivity growth in the manufacturing sector relative to the service sector and of the systematic changes in consumption patterns that occur over the course of development (specifically, differences in the income elasticity of demand across sectors). Such deindustrialization is "positive" because it is viewed, not as a pathological phenomenon, but as a symptom of economic success. And labor shed in the course of positive deindustrialization is viewed as being more or less quickly absorbed by the growing service sector.

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"Negative deindustrialization" is the second form of deindustrialization that is posited by Rowthom and Wells (1987). Here deindustrialization is the result of a pathological phenomenon, a structural disequilibrium in the economy, which prevents a nation from reaching its growth potential or a full employment of its resources. It manifests itself in poor performance in the manufacturing sector and is accompanied by a slow-down in manufacturing output and productivity. This leads to poor performance for the economy generally and a decline in competitiveness (in a cumulative vicious circle). The labor shed by negative deindustrialization is, given the general state of the economy, not absorbed by the service sector. Thus where positive deindustrialization is associated with rising real incomes and full employment, negative deindustrialization is associated with stagnating real incomes and rising unemployment. The appreciation of currencies (as in the UK in the late 1970s and the US in the early 1980s), high labor costs, poor product quality, and the failure or inability of firms to respond to changing market conditions have all been identified as factors in the "decline of competitiveness" experienced by a number of core societies in the past two decades or so (Ferguson and Ferguson, 1994).
Finally, shifting focus from the domestic to the international economy, Rowthorn and Wells (1987) argue for the existence of "trade-related deindustrialization." Trade is seen as affecting manufacturing employment through macroeconomic channels and through its influence on specialization. First, in contrast to many discussions in the NIDL and GOP literatures of the effect of international trade on manufacturing employment in the core, Rowthorn and Wells stress that in a mature economy deindustrialization may be associated with either strong or weak trade performance. Where manufacturing trade balances are positive and large, and the strength of the manufacturing sector contributes to sustained economic growth in the economy at large, the manufacturing sector may begin to shed labor (via positive deindustrialization) at a higher rate than it would in the absence of trade. Where manufacturing trade positions are deteriorating, and investment in manufacturing falls as a result, the manufacturing sector may begin to shed labor (via negative deindustrialization) into a stagnating economy in which it is not absorbed by the service sector. Underlying these potential macroeconomic effects of trade on the relative size of the manufacturing labor force are the structural effects. Quite simply, nations that run manufacturing trade surpluses will, all else being equal, devote more resources and labor to this sector than will nations that run deficits. Trade may thus lead to further specialization in manufacturing among successful nations, and accelerate the move away from specialization in manufacturing among unsuccessful nations.

These differing forms of deindustrialization can be understood to operate concurrently; that is, the deindustrialization experienced by any given nation need not be the exclusive result of any one "form" of deindustrialization. Indeed, it is probably most likely that the deindustrialization experienced in core societies has been in part the result of a mix of "positive" and "negative" factors - continued (slow) growth in real per capita incomes coupled with weak manufacturing performance - that has varied across time and place. In testing for a link between DI and deindustrialization, I will thus simultaneously control for these alternative sources of deindustrialization and employ as a baseline the simple model suggested by Rowthorn and Wells (1987: 31):

\[
PCTMAN = f (LRGDP, LUNEMP, NMX)\]

where PCTMAN is the percent labor force in manufacturing, LRGDP is the logarithm (base 10) of real gross domestic product per capita, LUNEMP is the logarithm (base 10) of the unemployment rate, and NMX is net manufacturing exports as a percentage of GDP. LRGDP is employed to capture positive deindustrialization. A curvilinear, inverted U-shaped relationship is expected, as the share of employment in manufacturing should
first rise and then, after a certain point, start to fall. This relationship will be approximated as a second-degree polynomial of gross domestic product per capita. LUNEMP is employed to capture negative deindustrialization and a negative relationship with PCTMAN is expected. Finally, NMX is employed as an indicator of trade-related deindustrialization. As both positive and negative deindustrialization are already controlled for, a positive relationship is expected. NMX in this instance is viewed as primarily tapping into the structural or specialization effects of trade.

The direct investment-deindustrialization thesis revisited

In the empirical analysis that follows, I examine the effects of the total outflow of DI on the employment share of manufacturing. The criticism voiced above regarding the tendency of proponents of the DIDT to overstate the magnitude of North to South capital flight in their characterization of DI suggests that, in this context, reasoning such as Harrison and Bluestone's must necessarily be supplemented with some more general account of the relationship between direct investment and deindustrialization. \[1\] A range of alternatives have been developed (e.g. Hymer, 1979; Cowling, 1986; Tanaka, 1991; Ietto-Gillies, 1992). These suggest that, beyond the direct labor-displacing effects of foreign investment stressed in the NIDL and GOP literatures, direct investment may have a range of (dynamically evolving) indirect effects on the relative size of the manufacturing labor force.

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First, outflows of DI may over time move a nation's economy into what Rowthorn and Wells term, by analogy to the more familiar "debt trap" from development economics, the "wealth trap." By this they mean "the automatic process by which a country which is intrinsically a capital exporter may become a rentier nation." (1987: 353, emphasis in original). In short, what starts out on the national accounting ledger as an outflow (i.e. the direct investment) may effectively turn into a real inflow as profits from abroad outrun outflows of foreign investment. Ietto-Gillies has built on this insight and argues that the end result of this process is that (1992: 185):

[nations] with a long tradition of outward foreign investment are likely to experience overall net 'positive' effects on the balance of payments. These may cause a rise in the exchange rate; in a situation in which the economy cannot - or is not allowed to by monetary and fiscal policies - expand to meet the extra demand generated by the inflow of incomes, the overall long-term effect will be a weakening of the manufacturing sector with loss of jobs and 'negative' deindustrialization.

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Thus for nations such as the UK and US - nations with a long experience with outward direct investment - DI may not only lead directly to the displacement of manufacturing labor, but lead also to their "living on their past" in such a fashion as to prompt a deterioration of their manufacturing sectors. If profits from abroad grow at a faster rate than the domestic economy - an entirely conceivable phenomenon - the investing economy may, given that such profits will eventually translate into incomes, begin to import more manufactured goods and experience a rise in the exchange rate of its currency leading to a deterioration of its manufacturing trade position and, ultimately, its manufacturing sector. As has been argued in regards to other aspects of British and American hegemony (e.g. Chirot, 1986), there may be long-term "costs of dominance" in this realm as well.

In addition to the "wealth trap" posited by Rowthom and Wells, Letto-Gillies (1992) argues that DI may also contribute to deindustrialization by lowering the rate of domestic capital formation. MNEs typically enjoy higher rates of return on investment than do comparable domestic firms. Where the activities of such firms are substantial, this should tend to increase the required marginal rate of return on domestic investment and influence investment decisions accordingly. This will place a nation in a disadvantaged position relative to nations which are less dominated by the activities of MNEs. All of this may contribute to a cumulative vicious circle resulting in deindustrialization. Furthermore, Letto-Gillies adds that (1992: 188):

Global scanning combined with electronic technology in communications and ease of movements of funds across frontiers by [MNEs] may have contributed to raising the rate of return on purely financial investment. This will have raised the marginal rate of return required on real capital formation. Similarly, high rates of return on the services sector (particularly the financial services) may have raised the marginal rate of return on [manufacturing sector investments].

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Direct investment, then, may in this vein contribute to deindustrialization through a number of intimately intertwined mechanisms. DI may raise the required marginal rate of return on domestic investment, shift investment from manufacturing to services, and reorient investment away from real investments toward financial investments.

While these arguments regarding the "wealth trap" and the effects of DI on capital formation remain speculative, when combined with an attention to the direct labor-displacing effects of DI stressed in the NIDL and GOP literatures, they do provide a rough framework for the interpretation of any observed effect of the total outflow of DI
on the employment share of manufacturing. All argue for a negative relationship and each highlights a distinct moment in a nation's history of direct investment. In the short term there is the hollowing effect posited by analysts such as Harrison and Bluestone. Over a longer term there are the effects of DI on the rate and character of capital formation traced out by Letto-Gillies. Finally, given a sufficient history of DI, there is the possibility of Rowthorn and Well's "wealth trap." While it is not my aim in this paper to develop a synthetic theory of the relationship between DI and deindustrialization, I would maintain that any observed effect of DI can reasonably be interpreted in light of these mechanisms.

DATA AND METHODS


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Net manufactured exports as a percentage of GDP (NMX) is measured as exports minus imports measured in current US dollars. Data are drawn from the World Bank's World Tables (various years). Current GDP in US dollars is drawn from the OECD's National Accounts (various years).

Data on outflow and inflow of direct investment as a percentage of GDP (LDIO, LDII) are drawn from the IMF's Balance of Payments Statistics Yearbook (IMF, various years). Current GDP in US dollars is drawn from the OECD's National Accounts (various years). As direct investment is the variable of greatest interest in the analysis, there are a few features of these data that are worth noting. "Direct investment" is defined by the IMF (1977: 136) as "investment that is made to acquire a lasting interest in an enterprise in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise." The key element of this definition - that which distinguishes direct investment from portfolio investment - is its requirement of "management interest" or control. Control is operationalized in terms of a certain level of
ownership. So a foreign investment which resulted, for instance, in one per cent
ownership of the voting stock of a domestic firm would typically be classified as
portfolio investment, while a foreign investment which resulted in forty per cent
ownership would be classified as direct investment. In practice, the ownership threshold
is set much lower than forty per cent. As the IMF (1977: 138) notes, this is done in the
"recognition of the fact that - especially for large corporations of the type that are likely
to engage in multinational operations - a small, organized group of stockholders may well
have an influence in management that is much more than proportionate to its share in the
equity capital."

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Nations differ, however, in the ownership thresholds (beyond which portfolio investment
becomes direct investment) that they apply to international flows of investment. This, of
course, raises the issue of comparability - an issue, surprisingly enough, which has tended
to receive less attention than it deserves in prior research on foreign direct investment. On
this subject, however, the IMF's advice is instructive. The IMF suggests that, while the
problem of differing definitions should not be ignored, "borderline" cases of foreign
investment - cases in which the minimum thresholds become important - constitute a
relatively small proportion of the total universe of direct investment since most direct
investment enterprises are either wholly or majority owned. Nations also differ in their
reporting of DI data in a number of more idiosyncratic ways. While, for instance, the
benchmark IMF and OECD definitions argue for the inclusion of reinvested earnings in
DI flow data, nations such as Belgium and France exclude them. As the pooled time-
series of cross-sections methodology that I employ (see below) enables one to control for
unspecified time-invariant country-specific factors, these features of national data
collection and reporting systems will be implicitly controlled.

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Finally, in all of the models that I will estimate, I include two period indicators (1974-81
and 1982-90, with the 1967-1973 period as the baseline) to capture time-specific effects.
These indicators trace, respectively, the period from the trough of the 1973-74 global
recession to the peak of late 1970s expansion and the period from the trough of the 1981-
82 global recession to the end date of 1990.

Pooled time-series of cross-sections methods

The dataset contains 408 observations; 24 observations (1967-1990) on each of 17
nations. In analyzing this dataset, I employ an estimation procedure that is designed
specifically to address the heterogeneity bias - the confounding effect of unmeasured time-invariant country-specific variables - that is likely to plague the more familiar ordinary least squares (OLS) procedure in the context of the pooled time-series of cross-sections dataset that I employ (see Hsiao, 1986; Greene, 1990). Heterogeneity bias can seriously affect OLS coefficient estimates, making OLS an inappropriate estimation technique. The fixed effects (FEM) and random effects (REM) models are two commonly used estimation strategies designed to correct for unmeasured time-invariant factors.

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These techniques basically differ from each other in the fashion in which they treat the intercept and the disturbance term. FEM, like OLS, assumes the classical disturbance term but differs in its treatment of the intercept. Where, under OLS, all countries are constrained to the same intercept, under FEM, indicator variables are introduced for each country and act as country specific intercepts. By doing so one "simulates" unmeasured time-invariant country-specific effects and thus resolves the problem of heterogeneity bias. The FEM takes the following general form:
\[ y_{it} = \alpha_o + \alpha_i + \beta' x_{it} + \epsilon_{it} \]
where the subscript \( i \) denotes the country and \( t \) the time point of observation. In this equation, \( \alpha_o \) represents the general intercept, \( \alpha_i \) the country specific intercept, and \( \epsilon_{it} \) is the classical disturbance term (with \( \epsilon_{it} = 0 \) and \( \text{Var}(\epsilon_{it}) = \sigma_e^2 \)). REM differs from OLS mainly in the fashion in which it treats the disturbance term. The REM takes the following general form:
\[ y_{it} = \alpha + \beta' x_{it} + u_t + \epsilon_{it} \]
Thus rather than treat country specific intercepts as fixed effects to be estimated, as under FEM, the REM treats them as a random component of the error term. Compared to OLS, the REM involves the estimation of an additional component of the error variance: \( u_t \) (country specific).

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It can be shown that FEM is equivalent to applying OLS to data transformed by subtracting the country-specific means from the data, while the equivalent REM transformation involves subtracting only a portion of the country-specific means (Rosenfeld and Nielsen, 1984; Hsiao 1986). For methodological reasons, I present the REM estimates of the regression models. While I estimated both REM and FEM models, Hausman's (1978; see also Green, 1990) chi-square test of REM versus FEM uniformly favored REM.
Analysis of outliers and influential cases was performed using the various diagnostics available in the SYSTAT and SYGRAPH statistical programs (Belsley, Kuh, and Welsch, 1980; Bollen and Jackman, 1985; Wilkinson 1990a, 1990b). These revealed the presence of a number of outliers. Their exclusion, however, had no dramatic effect. Standard errors were lowered and the significance levels of the various coefficients (and R²’s) were consequently raised, but the exclusion of outliers had no substantive impact. For this reason, I include all 408 observations. I estimated the REM models with the LIMDEP statistical program (Greene, 1992).

RESULTS

Correlations and basic statistics are presented in Table 4. The regression results are presented in Table 5. In all models in Table 5, period indicators (1974-1982, 1982-1990) are employed as explicit controls for unmeasured time-specific effects. Models 1, 2 and 3 in Table 5 present results for the three variables that form the "baseline" model discussed above. Model 4 presents results for the measure of direct investment outflow. Model 5 combines all of these variables and Model 6 introduces direct investment inflow as an additional check on the stability of the results.

Table 4. Correlations and basic statistics for variables in the analysis (N=408)

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCTMAN</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRGDP</td>
<td>-0.311</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUNEMP</td>
<td>-0.604</td>
<td>0.218</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NMX</td>
<td>0.441</td>
<td>0.118</td>
<td>0.091</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDIO</td>
<td>-0.250</td>
<td>0.456</td>
<td>0.211</td>
<td>0.089</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDII</td>
<td>-0.208</td>
<td>0.009</td>
<td>0.132</td>
<td>-0.307</td>
<td>0.364</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974-1981</td>
<td>0.098</td>
<td>-0.002</td>
<td>-0.035</td>
<td>0.000</td>
<td>-0.164</td>
<td>-0.054</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>1982-1990</td>
<td>-0.520</td>
<td>0.484</td>
<td>0.507</td>
<td>0.060</td>
<td>0.422</td>
<td>0.109</td>
<td>-0.548</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Minimum 14.039 3.499 0.041 -18.454 0.252 0.025 0.000 0.000
Maximum 38.442 4.138 1.270 11.231 0.934 0.819 1.000 1.000
Mean 23.162 3.911 0.722 -1.154 0.427 0.420 0.333 0.375
SD 4.822 0.116 0.256 6.739 0.120 0.190 0.472 0.485

Variables:
PCTMAN  Percent labor force in manufacturing
LRGDP   Real gross domestic product per capita (log base 10)
LUNEMP  Unemployment rate (log base 10)
NMX     Net manufactured exports as percentage of GDP
LDIO    Outflow of direct investment as percentage of GDP (log base 10)
LDII    Inflow of direct investment as percentage of GDP (log base 10)

Table 5. Unstandardized coefficients for the regression of percent labor force in manufacturing on selected independent variables: random effect model estimates for 17 OECD nations, 1967-1990 (N=408)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRGDP</td>
<td>314.740</td>
<td></td>
<td></td>
<td></td>
<td>218.910</td>
<td>224.540</td>
</tr>
<tr>
<td>LRGDP2</td>
<td>41.238</td>
<td></td>
<td></td>
<td></td>
<td>29.080</td>
<td>29.823</td>
</tr>
<tr>
<td>LUNEMP</td>
<td>-6.604</td>
<td></td>
<td></td>
<td></td>
<td>-7.876</td>
<td>-7.910</td>
</tr>
<tr>
<td>NMX</td>
<td>0.202</td>
<td></td>
<td></td>
<td>0.167</td>
<td>0.159</td>
<td></td>
</tr>
<tr>
<td>LD1O</td>
<td>-6.486</td>
<td></td>
<td></td>
<td>-3.567</td>
<td>-3.278</td>
<td></td>
</tr>
<tr>
<td>LDII</td>
<td></td>
<td>-0.825</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974-1981</td>
<td>-2.439</td>
<td>-1.480</td>
<td>-2.859</td>
<td>-2.564</td>
<td>-0.785</td>
<td>-0.770</td>
</tr>
<tr>
<td>1982-1990</td>
<td>-5.559</td>
<td>-4.188</td>
<td>-6.861</td>
<td>-5.856</td>
<td>-2.249</td>
<td>-2.214</td>
</tr>
<tr>
<td>Constant</td>
<td>573.57</td>
<td></td>
<td></td>
<td></td>
<td>379.30</td>
<td>389.72</td>
</tr>
</tbody>
</table>

R2       0.397  0.432  0.512  0.303  0.650  0.646

* p<.05   **p<.01   ***p<.001

Variables:
- LRGDP  Real gross domestic product per capita (log base 10)
- LRGDP2 Real gross domestic product per capita squared
- LUNEMP Unemployment rate (log base 10)
- NMX    Net manufactured exports as percentage of GDP
- LD1O   Outflow of direct investment as percentage of GDP (log base 10)
- LDII   Inflow of direct investment as percentage of GDP (log base 10)

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Model 1 introduces LRGDP and its square to capture the hypothesized curvilinear relationship between development and the employment share of manufacturing in mature industrial societies (positive deindustrialization). Both terms are highly significant and correctly signed, indicating that manufacturing employment first rises and then turns to decline with development. The R² of .397 is only moderately strong. As some of the fit in Model 1 is contributed by the significant negative effect of the two period indicators, this suggests that the deindustrialization experienced by these seventeen nations has been the result of more than simple positive deindustrialization.

The role of negative deindustrialization is assessed in Model 2. The above discussion suggests that, in addition to indicating a nation's stage in the business cycle, unemployment may also proxy for the sort of structural imbalance that is stressed in more critical accounts of deindustrialization. Under this view, the deindustrialization experienced by core societies over the past two decades should not be viewed as the result of a "natural" and "self-correcting" phenomenon, but as evidence of profound economic distress. The strong negative effect of LUNEMP, net of period indicators which crudely trace the business cycle, lends support to this argument.

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Model 3 introduces NMX as an indicator of the nation's manufacturing trade position. The highly significant positive relationship observed (and its stability across Models 5 and 6) suggests that specialization effects outweigh the "accelerating" effects of trade; that is, rather than suggesting that trade surpluses have contributed to positive deindustrialization, the results indicate that they have, to date, led to the employment of additional resources (labor) in manufacturing. In largest part, then, the patterns of trade specialization that these nations exhibited moving into the 1970s have been replicated down to the present. There are, however, three important exceptions to this rule. The early eighties saw the formerly large manufacturing trade surpluses of the UK, US, and France turn negative. While there may be a variety of reasons why this occurred (Rowthorn and Wells, 1987; Wood, 1994), this indicates that the results are also partially consistent with the NIDL and GOP interpretations of the effects of trade in the contemporary period: in an environment of heightened international competition, particularly from semiperipheral and peripheral nations, traditionally high-wage manufacturing operations in core nations have become vulnerable. This vulnerability has expressed itself in at least some nations in deteriorating trade balances, disinvestment, and, ultimately, declining employment in the manufacturing sector.

The D1DT is tested in Model 4. A negative relationship between LDIO and the employment share of manufacturing is observed. The highly significant nature of this relationship (and its relative stability across Models 5 and 6) is somewhat surprising. Given the criticisms voiced above of popular statements of the D1DT and the speculative nature of the alternative theories that I touched on, one might expect to find only modest
support for the DIDT in the context of an examination of the effect of total outflows of direct investment. While the R2 of .303 indicates that the three variables already discussed each provide a better fit than LDIO, the results do suggest an important role for DI in the deindustrialization experienced in the 17 nations under study. As suggested above, this result may be consistent with a combination of factors: the direct labor-displacing effect of DI stressed in the NIDL and GOP literatures, the effect of comparatively high (and growing) levels of DI on domestic capital formation, and the "wealth trap" which turns capital exporters into rentier nations.

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Model 5 collects all of the variables examined thus far in isolation, LRGDP and its square remain highly significant and correctly signed, as do LUNEMP, NMX, and LDIO. The outflow of direct investment thus remains an important determinant of the employment share of manufacturing net of positive, negative, and trade-related deindustrialization. The period indicators also remain significant, while the size of their coefficients declines noticeably. This suggests that while the full model does a better job at capturing time-specific effects than either of the preceding four models, some unmeasured effects remain (as one might expect given its relative simplicity). The fit of the full model (R2 = .650) is impressive for a model of this type, indicating that the variables collected in it account for a good part of the phenomenon of deindustrialization in these 17 nations.

Finally, Model 6 introduces a measure of direct investment inflow (LDII). If outflows of DI are negatively related to the relative size of the manufacturing labor force, might not inflows of DI, given that their composition should tend to be similar, have a positive effect on manufacturing employment? In some conventional economic treatments of the employment effects of DI, it is argued that any job loss due to DI outflows may be made up by DI inflows (in addition to being offset by domestic employment growth prompted by increased demand for the inputs of overseas subsidiaries) (e.g. Frank and Freeman, 1978; Dicken, 1986). In others, it is simply maintained a priori that the net impact of DI on employment is near zero (e.g. Graham and Krugman, 1991). As regards manufacturing employment, however, the results do not support these conclusions. LDII is not significantly related to the relative size of the manufacturing labor force. And controlling for LDII does not appreciably influence the coefficient of LDIO or its significance level. This surprising finding lends additional gravity to the role of direct investment outflows.

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CONCLUSIONS
The results presented here are based on a dataset that pools observations on 17 OECD nations over the 1967-1990 period. They show that the deindustrialization experienced across this period is largely explained by a model that combines classic generalizations of the process of economic development with a range of more immediate factors identified by contemporary students of deindustrialization. The findings support a number of conclusions. First, deindustrialization in the contemporary period has not been the result of a "natural" process of "positive deindustrialization" alone. While the results suggest that it is of continuing importance and should not be ignored, they also indicate a role for the sort of "negative deindustrialization" discussed in more critical and specific treatments of deindustrialization in the contemporary period. Support is also found for arguments which stress the role of international trade in deindustrialization. Success, as indicated by a manufacturing trade surplus, has tended to lead to the devotion of additional labor to manufacturing. And where nations have historically specialized in other sectors, or, as with the UK, US, and France, have faltered, international trade has accelerated the move away from manufacturing.

The main goal of this paper was to assess the role of direct investment outflows in deindustrialization. While the NIDL and GOP literatures offer a variety of arguments for the existence of a link between globalization and core deindustrialization, such arguments have generally not inspired empirical research by sociologists. This is unfortunate since the issues of globalization and deindustrialization impinge directly on a number of core sociological concerns, including social stratification, the sociology of the labor force, and political sociology. I have tried to address this omission by exploring one element of the broader discussion surrounding globalization and its effects.

I find surprisingly strong support for arguments that link deindustrialization to the outflow of direct investment. As I suggested above, a reasoned interpretation of this link will require additional theoretical work. While North to South capital flight would seem a clear enough (if not uncontroversial) mechanism through which direct investment might contribute to deindustrialization, most direct investment flows between core societies. This suggests that a general account of the effects of direct investment must necessarily incorporate additional, indirect mechanisms through which direct investment might operate. I have offered two such mechanisms. While I would stress again that arguments regarding the effect of direct investment on capital formation and the "wealth trap" remain speculative, the results of my analysis lend additional import to the pursuit of such hypotheses. I am currently exploring these issues, and it is my hope that this research might encourage other sociologists to continue to rigorously engage the variety of profound issues that surround globalization. Sociological discussions of globalization have too often taken on a very general and polarized character - alternating between a stance which suggests that globalization means that in some sense "everything has
changed" and one in which *plus ça change, plus c'est la même chose*. While it may indeed be the case that grander claims for the significance of globalization are overblown, this does not mean that the most recent round of globalization has not been intimately involved in many of the most important social changes that the past two to three decades have witnessed.

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Endnotes

1. A direct investment is one which involves an ongoing, managerial interest on the part of the investor in the firm or operation invested in. The IMF (1977: 136) defines direct investment as "Investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise." As such, direct investment is distinct from portfolio investment: "long-term bonds and corporate equities other than those included in the categories for direct investment and reserves" (IMF, 1977:142). The key distinction between direct and portfolio investment is one of control. Control is usually defined in terms of a certain level of ownership (see OECD, 1987). This subject is taken up again below.

2. These seventeen nations are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Great Britain, and the United States. Data come from the IMF's Balance of Payments Statistics Yearbook (various years).

3. "Deindustrialization" has of course been defined in a variety of ways. For the purposes of this paper, I define deindustrialization as the relative decline of the manufacturing labor force. Under this definition, absolute levels of output or employment in the manufacturing sector are not a concern. This is not meant to imply, however, that attention to absolute levels is unimportant for our understanding of the phenomenon (e.g. Singh, 1977; 1989).

4. The NIDL and GOP literature is simply too large to attempt to review it here. I assume that the participants in this session are familiar with it. See Gordon (1988) for an appreciative, yet highly critical, review. In terms of "foundational" statements, the NIDL account is most strongly linked with Fröbel, Heinrichs, and Kreye (1980), while the GOP school is probably best represented by Bluestone and Harrison (1982) and Piore and Sable (1984).

5. It is interesting to note, for instance, that in a relative sense the liberalization of controls on international capital flows - one of the hallmarks of the latest round of globalization (Harvey, 1989) - has proceeded at a faster pace in the developing world
than it has in the developed world (UNCTC, 1991). The developing countries did, however, start the general liberalization process with a higher average level of control (Oxelheim, 1993: 22).

6. Which is not to suggest that importance of the MNE and its activities for the developing world has declined. Indeed, as commercial bank lending has come to be seen, in the wake of the debt crisis of the early eighties, as a highly unpredictable source of development finance, direct investment has found new favor of late in the eyes of reformers and advocates (Helleiner, 1991).

7. Direct investment is weighted by gross domestic fixed capital formation because it is the domestic indicator which is most similar to DI (Jetto-Gillies, 1992). GDP and GNP are also commonly employed as normalizers in empirical analyses of direct investment. There are high correlations ($r > 0.97$) between the results of these different weighting schemes in my dataset.

8. There is, of course, an extremely large literature on deindustrialization. A good bit of the early discussion of deindustrialization was taken up with a debate over its definition and whether it was in fact occurring. As I noted above, I adopt the common current definition under which deindustrialization is defined as the relative decline of employment in manufacturing. The argument linking DI and deindustrialization appears to have found its contemporary form in the context of the broader debate in Britain over the "British Disease" or "Englanditis" of the early 1970s (see, for example, the views collected in Coates and Hillard's (1986) volume on the economic decline of Britain). Many of the key terms and concepts that emerged in this debate were quickly taken up, largely wholesale, by American and Canadian researchers. Outside of the Anglo world, the direct investment/deindustrialization issue - if electronic searches of the relevant literatures can be used as an indicator - is one that has only relatively recently come to concern the broader public outside of labor movement circles in nations such as France, Germany, and Japan.

9. In Harrison and Bluestone's (1988) defense, they do note that direct investment is influenced by an array of factors in addition to labor costs. Nonetheless, in discussing the hollowing of the manufacturing sector, they stress that labor cost differentials were the prime determinant of the upswing in direct investment that the past two decades or so have witnessed. Even more finely drawn statements of the DIDT by authors who work more directly with the specialized literature on DI sometimes fall into arguments like this (e.g. Cowling and Sugden, 1987). Scholars unfamiliar with the large (primarily economic) theoretical and empirical literature on direct investment can find excellent reviews in Jetto-Gillies (1992), Dunning (1988), and UNCTC (1992).

10. This generalization concerning the process of economic development, Clark suggests, was first made as long ago as 1691 by one Sir William Petty. More recently, A. G. B. Fisher and Simon Kuznets, among others, also offered similar arguments for the relative growth of the service sector.
11. One could, of course, more directly test Bluestone and Harrison's version of the DIDT with data on north to south flows of manufacturing direct investment. Given my interest in the globalization of production, however, data on total DI flows are more appropriate. As noted above, North to South flows do not represent the general pattern of DI in the past few decades.

12. The OECD (1987) provides a detailed account of the collection techniques and definitions applied by various nations. As regards ownership thresholds, this source provides information on a number of the nations under consideration in the present study. In these nations, the following minimums were (circa 1985) set for an investment outflow or inflow to qualify as direct investment: Australia (25% / 25%), Austria (no acknowledged minimum / 5%), Belgium (no minimum for outflows or inflows), Canada (10% / 10%), Denmark (10% / 10%), Finland (20% / 20%), France (20% / 20%), Germany (25% / 25%), Japan (10% / no minimum), Netherlands (no minimum for outflows or inflows), New Zealand (25% / 25%), Great Britain (20% / 20%), United States (10% / 10%). These minimums have occasionally changed over the time period under consideration. For instance, prior to 1980 Japan applied a 25% minimum to outflows (Julius, 1990). These changes appear to have been undertaken in an effort to achieve harmonization with the benchmark IMF/OECD Common Reporting System for Balance of Payments Statistics which suggests a minimum of 10% for outflows and inflows.

13. In total, the IMF offers the following on this issue (1977: 138):
Much stress is often laid on the difficulty of defining direct investment precisely and of applying the concept in practice. It may be pointed out, however, that these problems, serious though they may seem, do not necessarily have a corresponding importance for the validity and intercountry comparability of the statistics on direct investment. Most direct investment enterprises, in fact, either are branches or are subsidiaries that are wholly owned by foreigners or in which a clear majority of the voting stock is held by a single foreign investor or group. The real borderline cases are thus likely to form a rather small proportion of the universe. Moreover, since an enterprise is most apt to be inconsistently classified when the share of the investor in question is quite small, the weight of the doubtful cases tends in principle to be further reduced by adherence to the [prescribed benchmark classification system].

14. These deviations from the standard classification system are a result of the national data collection and reporting systems in use in such countries. Two systems are currently employed: surveys of investing companies and reports of related cash-flows through the banking system. Most OECD nations employ either a survey methodology or combine survey techniques with cash-flow data. Some nations (e.g. France), however, employ only a cash-flow system and thus forms of equity other than cash, such as reinvested earnings, are not covered. Nations also differ in how they approach taxes and in how they treat short-term loans, trade credits, interest payments and dividends (see OECD, 1987).
Substantively, the REM and FEM results were identical. The FEM estimates did produce much higher $R^2$'s (as all between-country variation is perfectly fitted with indicator variables).

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Hegemons, Leaders and Followers: A Game-Theoretic Approach to the Postwar Dynamics of International Political Economy

by

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Abstract

The article introduces the concept of hegemony to leadership theory, which has developed mainly as a critique of hegemonic stability theory. We argue that it makes sense to combine the two theories by introducing the concept of 'size' into neoliberal thinking about International Political Economy. We accept the neo-institutional hypothesis that a hegemon is not needed to provide public goods, and demonstrate with non-cooperative games how multiple leaders may jointly provide public goods. A game-theoretic model is developed illustrating with Nash equilibria the conditions under which a hegemon rationally switches from hegemony to leadership. It also shows why followers rationally switch from free-riding in their consumption of the public goods to taking part in leading, in the sense of contributing to covering the cost of the production of the public goods. The emergence of joint leadership leads to multiple equilibria in the sense of allowing for multiple stable leadership constellations. The actors are in a mixed-motive or coordination game where they have different preferences for the equilibria, and thus different preferences for which strategies to choose, and for who is to take part in covering the cost of the production of the public goods. Two aspects of joint leadership 'after hegemony' are treated, namely coercive and benevolent leadership on the one hand, and collective action in the sense of joint leadership on the other hand. Finally, future leadership constellations and the quest for international order are discussed.

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Zusammenfassung

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1 **Introduction**

Hegemonic stability theory has over the last two decades emerged as one of the predominant theories within international relations theory and international political economy. Briefly, it holds that a dominant actor uses its power to create international economic regimes, most notably the International Monetary Funds in finance and exchange-rate politics, and the General Agreement of Tariffs and Trade. Drawing on the theory of public goods, the hegemonic stability theory argues that only a dominant actor, a hegemon, has the interest and capacity to maintain the stability of an open international economic system (Kindleberger 1976; Keohane/ Nye 1977: 44). Stated boldly, the advocates of the theory assume that a single hegemonic power creates a stable international economic order by providing international public goods. The theory also asserts that the decline of the hegemon leads to global economic instability and to regionalization of international economic affairs (Kindleberger 1986).

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Hegemonic stability theory has also received criticism for its various limitations, such as limitations in the applicability of the public-goods hypothesis. Critics suggest that collective action on the part of small groups in the international system may be possible (Snidal 1985a; Gowa 1989: 307) and argue that the provision of openness and stability in the world political economy implies the supply of excludable rather than public goods (Conybear 1984). In both respects it is crucial to note that there are different versions of hegemonic stability theory. Keohane (1980) and, in particular, Lake (1993) have distinguished between a deterministic theory of hegemony and a far less deterministic leadership theory. The crucial point separating both theories is the possibility of international cooperation, defined as change in the behavior of actors in response to the actual or anticipated preferences of other actors through a process of policy coordination (Keohane 1984: 51; Milner 1992: 467). The distinguishing feature between hegemonic and leadership theory lies in their explanation of international stability and international institutions. While hegemonic theory relies upon power differences, neoliberal cooperation theory considers international regimes constituted by international cooperation.

This article illustrates the possibility of introducing a concept of power and the notion of hegemony into leadership theory, thus uniting a couple of previously competing perspectives. Most important, in applying game-theoretic models, the article both rationalizes the strategic shift of followers from free-riding to taking part in leading, and shows the exact sense in which interaction between leaders occurs. In the international relations literature, several simultaneous leaders are often referred to as cooperating, while cooperation is defined as the adjustment of policies between several countries. However, not to obfuscate matters unnecessarily, we try to avoid the term since game theory distinguishes between cooperative and non-cooperative games. We make no reference to cooperative game theory. If two or three actors are all adopting a strategy of leading, they do not do so because of binding agreements but because this constitutes a Nash equilibrium in a non-cooperative game. Subsequently, we discuss the nature of conflict in joint-leadership models, stemming from the second-order problem of which actors contribute to the production of the public good. The main objective of this article is to show how various kinds of games between a hegemon and followers or between a group of leaders can be used to describe the changing structure of postwar international political economy, distinguishing between different epochs, 1945-1950, 1951-1970, 1971-1995.

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Section 2 provides background material, introduces the theory of hegemonic stability, focusing especially on the concept of public goods in international political economy, and discusses briefly its neoliberal critique. Section 3 presents a game-theoretic model of hegemony and joint leadership. Section 4 analyzes the model, illustrates the changing equilibria in postwar world politics, and discusses the United States' hegemonic decline.
and the emergence of joint leadership. Section 5 considers further implications of parametric changes within the model. Section 6 discusses coercive and benevolent hegemony and leadership. Section 7 provides an exhaustive characterization of all possible equilibria given the three strategies hegemon, leader, follower for different costs of producing the public good. Section 8 evaluates the prospects for prediction and the quest for international order.

2 The Theory of Public Goods in International Political Economy

For more than three decades since the publication of Morgenthau's seminal work Politics among Nations (Morgenthau 1948/1973), the dominant theory of international relations, realism, was based on the assumption that international politics takes place within the shadow of war (Aron 1962: 6). The anarchical international system and especially the absence of an authoritative government creates a permanent threat to all countries, which have to rely on the means they can generate and the arrangement they can make for themselves (Waltz 1979: 111). Therefore, to ensure their survival and independence in the long run, countries have a predominant interest in avoiding a loss in their relative capabilities even in the short run. In consequence, realism argues, economic well-being is not the prime interest of countries. Only if their survival is assured can countries seek other goals among which welfare holds a prominent role (Carr 1946: 145; Waltz 1979: 126; Grieco 1990: 39).

Arguing from these points of view, realism postulates a mercantilist world economic system as a natural consequence of international politics. While seeking to avoid relative losses, countries turn out to be anxious about the distribution of benefits and they are therefore very pessimistic about the possibility of international cooperation. Nevertheless, cooperation is considered a necessary condition for the existence of a liberal international trading system. A liberal international economic order presupposes the joint and, to some extent, coordinated political action of countries.

The resulting gap between realist expectations and the observable reality of postwar economic politics was not discussed until Charles Kindleberger (1973) analyzed the great depression and concluded that there is a crucial relationship between global economic stability and the existence of a single leader, a country which provides international public goods. Public goods are the kind of goods where exclusion of consumers is impossible and consumption by one actor does not exhaust its availability for other actors. In international economic affairs an open trading system, well-defined property rights, common standards of measures including international money, consistent
macroeconomics policies, proper action in case of economic crisis, and stabilized exchange rates [2] are said to be public goods (Kindleberger 1981).

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It is not surprising that the foundations of the 'theory of hegemonic stability' were developed by an economist. Ever since David Hume the economics profession has been fully aware that a liberal international economic order is in the interest of all countries. However, the theory still breaks with classic liberal political economy (Frey 1984: 15-20). Countries may prefer protectionism if other countries do not reciprocate. David Ricardo’s theorem of comparative advantage argues that free trade is in the interest of countries even if other actors do not liberalize their trade regimes. The theory of hegemonic stability is not a liberal theory in the sense of neoclassical economics. All the same, it is less mercantilistic and therefore closer to the liberal economic tradition than realism had been before. Furthermore, the notion of free trade being a public good is nowadays much more plausible than Ricardo’s theory, which assumed capital to be nationally bounded.

The idea that a liberal international economic order is based on reciprocity is crucial for the analysis of international political economy. If we assume, contrary to Ricardo, that the reciprocal structure is considered a fair approximation of the world economy, then it follows that a common interest in an open and stable world economy does not necessarily lead to the provision of public goods since all actors have an incentive to free-ride (Olson 1965). The public-goods analysis of international political economy gained prominence parallel to the ascent of regime analysis. Regimes, international institutions, and the decision-making procedures which led to them, have been considered to serve the interest of all countries. However, in the absence of external enforcement, countries are reluctant to negotiate international regimes since all actors have an incentive to free-ride. Stated game-theoretically, defection is the dominant strategy of countries.

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As Mancur Olson has argued, the probability that public goods (including those constituting a liberal international economic order) will not be provided is high, if the number of actors is large. According to Olson, one way to solve the problem is to introduce selective incentives. If a 'private good' is unavoidably linked to the public good, the latter may result as a by-product. Another explanation of the origins and persistence of collective action emphasizes the role of a dominant power [3]. Early contributions to this theory (Wagner 1966; Breton/Breton 1969; Frohlich/Oppenheimer/Young 1971)
were appreciated by Olson (1971), but considered valid only if the imaginative leaders were to find selective incentives:

A leader or entrepreneur, who is generally trusted (or feared), or who can guess who is bluffing in the bargaining, or who can simply save bargaining time, can sometimes work out an arrangement that is better for all concerned. . . . There is no certainty, and often not even a presumption, that an entrepreneur will sometimes be able to work out an arrangement that is agreeable to the parties concerned. . . . When the group in need of a collective good is sufficiently large, an entrepreneur cannot possibly provide an optimal supply of the good through bargains or voluntary cost-sharing agreements with those in the group. (Olson 1971: 176-177)

Mancur Olson and Richard Zeckhauser argue in their economic theory of alliances that in the provision of collective goods there is a tendency for the largest member to bear a disproportionately large share of the costs (Olson/ Zeckhauser 1966). Natural leaders gain more from the provision of public goods and they place a higher absolute value upon it. Likewise, it can be argued that hegemons are more interested in international economic stability and openness and will therefore construct international regimes serving this end.

Even though hegemonic theory originated in the work of an economic historian, it is nevertheless hardly surprising that realism has adopted the power-based theory of public goods with only slight differences. Most important, political scientists argue that hegemons create liberal international economic orders not from altruism but from their own self-interest in open markets (Stein 1984: 357). According to Robert Keohane (Keohane 1980; Keohane 1984: 31) two statements are central for the realist theory of international stability: First, order in world politics is created by a single great power, a hegemon, who will stabilize the world economy (Kindleberger 1973: 305; Krasner 1976). Second, cooperation, the mutual adjustment of policies, depends on the perpetuation of hegemony, since the dominant power must enforce the rules and institutions.

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Deviating from Mancur Olson's formal theory, realism assumes different constraints and capabilities of actors (Kindleberger 1976: 57). Countries simply differ in power, size, and wealth, and they therefore have different interests. How countries choose between their options depends strongly upon their position within the international system (Krasner 1976). This position is determined by economic factors such as availability of capital, the size of the internal market, and a competitive advantage in the production of manufactured goods. To be considered hegemonic, a country must have access to crucial raw material, control major sources of capital, maintain a large market for imports, and hold an absolute advantage in the production of advanced goods and services (Keohane 1984: 33).
From time to time through history, a hegemon emerges (Kennedy 1987) which has a strong incentive and the capabilities to produce a liberal world economic order. Since the hegemon has efficient production capabilities, the dominant power will be the primary beneficiary of a free international economic system (Wallerstein 1980: 38). More importantly, the hegemon also has the ability to 'punish' defectors (Alt/ Calvert/ Humes 1988: 446). If the dominant power also desires an open world economy, this power accepts its hegemonic role and stabilizes international economic relations and coerces other countries, i.e. followers, to open their economies as well. The hegemon might also tolerate the free-riding of small countries (Kindleberger 1976: 19). Therefore, the theory of hegemonic stability rests on a simple causal relationship, namely that a liberal and stable world economic system requires a single great power (Kindleberger 1973: 305). Consequently, if no hegemon exists, the public good of international economic stability will not be provided.

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This argumentation was challenged by the neoliberal theory of international cooperation, namely by Duncan Snidal (Snidal 1985a). Following Robert Keohane's *After Hegemony* (Keohane 1984), Duncan Snidal argues convincingly that a small group of cooperating actors, what we refer to as 'joint leaders', can replace a hegemon, thus jointly providing international public goods. Openness, therefore, can arise or be maintained in the absence of a hegemon. Leadership theory, as David Lake (1993) coined this research program, is able to argue, without referring to hegemons, that joint leaders may provide international public goods. Countries are able to adjust their economic policies through a process of policy coordination. The problem that countries face in regard to the production of stability and wealth in the world political economy is dominantly expressed by the prisoners' dilemma (Conway 1984), which is considered to resemble the logic of collective action (Brams 1975: 144; Taylor 1976: 17-25; Hardin 1982: 25-30, Morrow 1994b: 281).

For Conway, the analytical shift from pure public-goods theory to the prisoners' dilemma is crucial since he denies that free trade, for example, is a public good. First, he stresses that the principle of non-excludability is not given. Countries may hinder economic subjects from one particular country from entering their markets. Tariffs and even more so quotas can be employed against different actors to quite different extents. Secondly, Conway points out that there is rivalry in the consumption of the benefits from free trade (Conway 1984: 9). It is therefore, as Timothy McKeown put it, "not very sensible to view the international system as isomorphic with an economic system of perfect competition" (McKeown 1983: 78).

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The possibility of monitoring the behavior of other actors and the resulting rivalry and excludability explain not only that the burdens of providing a public good can be shared; they also make clear that the benefits from an international public good may not be equal. This is crucial since it is quite common to assume that larger countries in general gain more from an open world economy than small countries do (although other factors such as the [export + import]/GDP ratio also play a role). Therefore, one should expect that larger countries have a higher incentive to invest in international openness (Krasner 1976: 322). However, by trying to maximize its own payoffs, a hegemon serves the benefits of other countries, and international public goods might be created as a by-product of the hegemon's production of private goods (Russett 1987: 222).

The problem Conybeare refers to depends heavily on the dichotomous notion of goods being either purely public or purely private. Conybeare is correct in stating that a liberal economic order and international economic stability are not pure public goods, but neither are they pure private goods [4]. In all cases but monetary affairs the possibility of excluding single actors exists. However, this possibility is costly, for example in regard to the monitoring of norm-deviant behavior and to enforcement measures. Quite different from the production of private goods, the exclusion of other actors requires a political act. Therefore, the definition of a collective good in the narrow sense is not met. On the other hand, without costly discriminatory measures, openness and stability come close to resembling public goods. Moreover, if the enforcement of a cooperative agreement is costly (Oye 1985: 15), the policy measures themselves become a public good (Gowa 1989: 315).

It is currently undisputed that the connection between hegemony and openness in the world economy is more complex than previous contributions to the theory have so far considered. But it is also widely appreciated that an interrelation between power distribution and the maintenance and creation of international institutions does exist. Therefore, the hegemonic and the leadership strands of argument about international economic stability are not necessarily in competition. The present article shows that they are easily and fruitfully linked if one presupposes both, that is both the possibility of a hegemon as well as several joint leaders. In this regard we distinguish between hegemonic and leadership provision of public goods. Joint leadership between two or several large powers is possible, but unilateral, hegemonic provision of international public goods demands less transaction costs and will pay off for all actors under certain circumstances.

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More important, the following game-theoretic model develops simple explanations, illustrating how and why a hegemonic system turns into a joint-leadership system. It
indicates the conditions which presuppose unilateral or collective action. In addition, we
discuss the consequences of joint-leadership systems in general, pointing out the
relevance of disagreement and political struggle among second-dominant powers, namely
the EC and Japan, over the participation in covering the cost of producing international
public goods. These aspects, which resemble either a battle-of-the-sexes or a coordination
situation, are ignored in the dominant prisoners' dilemma model of international politics,
which focuses on commitment, enforcement and strategic interaction.

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3 A Game-Theoretic Model of Hegemony and Joint
Leadership

Game theory, or more specifically non-cooperative game theory, provides a powerful tool
for the analysis of international affairs since strategy is the essence of politics. The
strength of game theory involves focusing on strategic interaction between two or more
players, where each player has a set of strategies available, and where the payoff to each
player depends on the strategies chosen by all the players. Contrary to play against "dead
nature," where a player maximizes his payoff in a given, fixed environment, in game
theory each player seeks to maximize his payoff given that all the other players also seek
to maximize their respective payoffs. Hence in an n-player game, we get n simultaneous
maximization problems to solve. The most famous and frequently used solution concept
in game theory, which we will also use in this article, is the Nash equilibrium. A Nash
equilibrium is a state of affairs where no player has an incentive to deviate unilaterally
from his chosen strategy. That is, he can not improve his payoff by deviating unilaterally.
Hence we also have an equilibrium e.g. if two players can both improve their payoffs by
deviating in a certain manner, while a third player receives a lower payoff. In non-
cooperative game theory, binding agreements between the players are thus not allowed.
Each player seeks instead to maximize his own payoff disregarding the payoffs others
receive. There are frequently more than one equilibrium, and the players typically have
different preferences between these, and try to coordinate on one they prefer. Which
equilibrium is chosen may depend on historical precedent, framing effects, saliency,
anchoring and adjustment procedures, etc. In world politics and international political
economy game theory is used to illustrate the structure of decision-making of countries
confronted with collective dilemmas. Unfortunately, game theory very seldom takes into
account that actors differ. The game-theoretic approach to international politics has been
restricted to equal-actor games and treats, as Duncan Snidal puts it, "very large and very
small ones as equal partners in a prisoners' dilemma" (Snidal 1985b: 47). As a result, its
direct usefulness to the analysis of international relations and more particular to the
analysis of the consequences of power distribution is limited. This restriction obviously
limits also the game-theoretical analysis of hegemonic decline. Furthermore, it is quite
common for international-relations theorists to restrict game-theoretic models to their
simplest form, namely 2x2 matrices. To illustrate the concepts of hegemony, free-riding, and joint leadership, however, a more complex model is required. We present in this section five assumptions underlying the model and the model itself, which is able to illustrate much more than previous models how a decline in interest in international public goods leads to an increase in joint action. The hegemonic decline of a leading actor, therefore, should lead to more 'cooperation' as this phrase is used in international relations theories. In section 4 we analyze the implications of changing the one variable in the three-actor model, namely the size of each country, and in section 5 we discuss the implications of changing four parameters in the model, namely production costs of public goods, transaction costs, and the sharing rules of the hegemon and of the leaders.

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We use size to reflect a country's interest in stable international economic relations. Even though small countries may profit more in relative terms, larger economies import and export more in absolute terms and they also participate more in the production of international liquidity. The interest in international public goods and the gains from the provision of these, therefore, depends to some extent on relative size.

In order to keep the model as simple as possible, we introduce a 3x2x2-model which is based on the following five assumptions:

Assumption 1

Public goods are produced if a minimum of either one hegemon or two leaders exist. [5]

This is a rigid assumption and it may seem to be implausible. But since we introduce this assumption to a three-actor model, it can be reformulated so that contribution to covering the costs by a suitably chosen majority of the actors involved leads to the production of international public goods.

Assumption 2

Only the US has so far been capable of acting as a hegemon. The EC and Japan can at most act as leaders. Therefore, the US has three strategies: to act as hegemon (H), to lead (L), or to follow (F). The EC and Japan can either lead (L) or follow (F).

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The literature holds that only the largest countries are willing to act as hegemons (Lake 1984: 150). The model allows for the assumption that either the EC or Japan acts as a hegemon. However, the model also indicates that this will lead to huge losses, which can be referred to as 'imperial overstretch'. To keep the model as simple as possible, we have opted for a 3x2x2-matrix instead of a 3x3x3-matrix, assuming that only the largest actor can be a hegemon. In the general analysis in section 7, the EC and Japan are also allowed to be hegemons.

**Assumption 3**

There is costly excludability of consumption. However, countries with 'larger economies' are likely to receive a higher payoff from the consumption. We roughly indicate the payoff from the consumption as the size of a country's economy relative to the aggregated size of the OECD economies, that is us/oecd, ec/oecd, and j/oecd.

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The empirical relevance of this assumption is open to discussion, though we consider it to be an approximation to reality. For any model a tradeoff has to be struck between simplicity, generality, empirical support, etc. Using the empirical data available today, it is not clear that an alternative to assumption 3 is more appropriate, because a multiplicity of other factors interact in many different directions. In the light of this, there is virtue in simplicity. However, it is important to note that assumption 3 can be varied in any way for which one might find an argument or empirical support without altering the deeper nature of our argument presented in this article. Assumption 3 nevertheless needs a few comments. Competing concepts would argue that it is not size but world market integration that is causing an interest in a stable and open world economy. In this regard, there are both a relative and an absolute measurement of world market integration. The relative one is called openness and is calculated as exports plus imports divided by the countries nominal gross domestic product. This assumption would lead to the hypothesis that highly specialized and small countries like Sweden (which has an export/GDP ratio about five times that of the US), Taiwan, and Korea have a larger interest in stabilizing the liberal world economy than large countries such as the US and Japan. The absolute indices of world market integration are simply exports. Countries which export more goods and services have an higher interest in a liberal trading system. Again, there are good reasons to doubt this. Countries with a highly specialized export industry that has a world market monopoly have no interest in open trading structures since they are able to sell their goods anyway. The oil-exporting countries are a good example for this case. Furthermore, even if we consider exports as the basis of an interest in international public goods, the US, EC, and Japan can be considered the dominant actors. The only difference would be that the three actors are more similar, which leads to political results that we discuss in more detail in sections 7 and 8. There may be a better measurement of the
payoffs a country gains from the world economy than size. However, there is no obviously better, simpler way to measure this.

Assumption 4

Both the political process to reach an agreement on providing a public good and the coordination of policies are costly. If we denote the total costs of producing a public good as \( c_n(c+c_r) \), where \( c \) is the cost of hegemony if there are one hegemon and two followers, \( c_r \) are transaction costs of coordinating policies, and \( c_n \), \( 0c_n \), is a sharing rule specifying what fraction of the costs each actor incurs. The transaction costs are then \( c_r=0 \) if the public good is provided by a hegemon and \( c_r>0 \) when there is joint leadership.

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The production cost of an international public good includes the political-economic process of coordinating macroeconomic policies. It is perhaps impossible to measure this cost exactly, and it may make sense to assume that this cost is higher in the early years of an international regime than in later ones. However, international regimes do not work perfectly immediately upon implementation. They have to be maintained, which requires continued input of political and economic resources. The same can be said about transaction costs, which include the costs of reaching an agreement, the costs of monitoring the political action of cooperative actors, and the cost of agreeing to maintain an international regime.

Assumption 5

A follower does not take part in covering the cost of producing the public good.

This is self-evident since a free-rider does not change its policies but rather gains from the policy changes of other actors.

Let us assume for expositional convenience linearly increasing transaction costs,

\[
c_r(h+1) = a(h+1-1) \quad \text{for} \quad h+1 \geq 1
\]  

(3.1)

where \( h, h=0,1 \), is the number of hegemons \( l, l=0,1,\ldots,3-h \), is the number of leaders, and \( a \) is a parameter [6]. This means that the more actors are involved, the more difficult it is to reach an agreement and the higher are the monitoring costs. Hence it is easier to integrate a limited number of similar countries than to integrate the world economy.

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The sharing rule we use for the hegemon's cost is \( c_s = c_a = 1 \) for \( l = 0 \), \( c_a = 2/3 \) for \( l = 1 \), and \( c_a = 1/2 \) for \( l = 2 \). We do not need a function to specify this sharing which is exhaustively described in the previous sentence. However, in order to account more conveniently for the sharing in our model, let us choose a function that goes through these three points. An appropriate function is

\[
c_s(H \mid h = 1, l) = \frac{1}{12} l^2 - \frac{5}{12} l + 1 \quad ,
\]

which allows for the possible joint presence of a hegemon and one or two leaders. We refer to this constellation as coercive hegemony, which we discuss in further detail in section 7. Briefly, coercive hegemony refers to an intermediate political constellation between pure hegemony and joint leadership, and thus introduces the possibility that a hegemon may urge followers to bear some production costs of the international public good.

In the absence of a hegemon (\( h = 0 \)) assume \( c_s = c_a = 1/2 \) for \( l = 1 \) or \( l = 2 \), and \( c_a = 1/3 \) for \( l = 3 \).

With a hegemon (\( h = 1 \)) assume \( c_s = 1/3 \) for \( l = 1 \) and \( c_a = 1/4 \) for \( l = 2 \). Although a function for \( c_a \) is not necessary either, let us, consistently with equation (3.2), choose one that goes through the desired points, viz.

\[
c_a(L \mid h = l) = -\frac{1}{12} l^2 (1 - h) + \frac{1}{4} l \left(1 - \frac{4}{3} h\right) + \frac{1}{3} \quad .
\]

Summing up, if there is a benevolent hegemon, it bears all the costs. If the hegemon urges followers to participate, the hegemon bears twice the costs of each leader. If there is a joint-leadership constellation, the costs are shared equally.

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The payoff for being a hegemon is

\[
P(H \mid h = 1, l) = 10 \frac{\text{country}}{\text{oecd}} - c_s(H \mid h = 1, l)(c + c_a(1 + l)) \quad ,
\]

where we multiply by 10 to get conveniently sized payoffs.

The payoff for being a leader is
\[ P(L \mid h, l) = \begin{cases} \frac{c_{\text{country}}}{\text{oeecd}} - c_{d}(L \mid h, l)(c + c_{r}(h + l)) & \text{if } h = 1 \text{ or } l \geq 2 \\ - c_{d}(L \mid h, l)(c + c_{r}(h + l)) & \text{else} \end{cases} \] 

(3.5)

The payoff for following is

\[ P(F \mid h, l) = \begin{cases} \frac{c_{\text{country}}}{\text{oeecd}} & \text{if } h = 1 \text{ or } l \geq 2 \\ 0 & \text{else} \end{cases} \] 

(3.6)

Obviously, it is more expensive to act as hegemon than to act as a leader. And it is more expensive to lead than to follow. But since the provision of an international public good is a positive-sum game for all countries involved, it may pay for countries to be a hegemon or to participate in joint leadership. The requirements of these constellations are discussed in the following sections.

4 Analysis of the Model

We have already discussed the fact that no unequivocal indicator for the size of an economy exists. To keep the model as simple as possible [7] and adhering to what is common in the literature (Krasner 1976; Kindleberger 1981: 249), we estimate the interest of countries in an open and stable world economy according to their size. We lay down the size of an economy as real gross domestic product in accordance with the Penn World Tables, which permit cross-country comparisons [8]. Our model is such that other values for the sizes of the various economies, and also other factors not pertaining to size, can be used without altering the nature of our argument. Moreover, we do not intend to argue about the ability of actors, especially the US, to operate as a hegemon (Strange 1987; Russett 1987).
convenient to keep the other parameters constant in the analysis. The exact level of these parameters is secondary. However, changing these parameters affects the analysis. Hence in section 5 we discuss implications of parametric changes within the model, and in section 7 we carry out an exhaustive characterization of the equilibrium strategies. We believe there is empirical support for choosing $a=12/5$ in equation (3.1), which gives $c_1(h+1)=0$, $c_1(h+2)=12/5=2.4$, and $c_1(h+3)=24/5=4.8$. We also choose $c=21/5=4.2$, which is varied further in section 7. For 1960 we estimate the size of the economies as a percentage of the OECD economy as $(u,e,c)=(50,35,5)$, where oeecd=100. With these parameter values, equations (3.1)-(3.6) can be illustrated by the game in Table 4.1.

<table>
<thead>
<tr>
<th></th>
<th>EC</th>
<th>F</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>F</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>-2.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>0.6</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5</td>
<td>0.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>EC</th>
<th>F</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan follows</td>
<td>F</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>1.7</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>0.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Japan leads</td>
<td>F</td>
<td>5.0</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>2.0</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>0.5</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Table 4.1 The game in 1960 with $c=4.2$

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Table 4.1 has two Nash equilibria in pure strategies, viz $[H,F,F]=[0.8, 3.5, 0.5]$ and $[L,L,F]=[1.7, 0.2, 0.5]$. A situation in which two leaders provide the public good, even if the hegemon is able to produce the public good unilaterally, can be defined as coercive hegemony. Our model implies that after a point in time, which we estimate to be about 1950, the US would have preferred the latter of these options. However, historically determined by even larger differences in the sizes of actors in the advent of the second World War, the former has been chosen, in preference to the EC [9] and Japan. Since $[H,F,F]$ constitutes a Nash equilibrium, it is costly for the US to choose the leadership option unless it coerces the EC to switch from following to leading simultaneously. Therefore, a declining relative advantage may lead to a political struggle between the hegemon and the second ranking powers even before the hegemonic period comes to a definite end. Since coercion is costly even for a dominant power and more so for a declining power, the hegemon may opt to ignore the possibility of coercive burden-sharing.

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Furthermore, the model also illustrates that the hegemonic strategy \([H,F,F]\) is not just the historical equilibrium but also has a higher 'collective payoff' for all involved. This is a plausible assumption at least for the period from 1945 to 1965. What is important for the production of order in the international system, since there are just two equilibria and both lead to the production of a public good, is that the public good continues to be provided even though political struggle may occur between the US and the EC over the participation of the latter. Game-theoretically, Table 4.1 illustrates a mixed-motive game where the US prefers the equilibrium \([L, L, F]= [1.7, 0.2, 0.5]\), the EC prefers the equilibrium \([H, F, F]= [0.8, 3.5, 0.5]\), and Japan is indifferent toward the equilibria.

For 1975 we estimate the size of the economies as a percentage of the OECD economy according to the Penn World Tables as \((us, ec, j) = (40, 35, 15)\), where oecd = 100. With \(c = 4.2\), equations (3.1)-(3.6) give the game in Table 4.2.

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Table 4.2 has only one Nash equilibrium in pure strategies providing the public good, viz \([L, L, F] = (0.7, 0.2, 1.5)\) which means that the EC has an interest in emerging as a leader and accepting part of the cost of producing the public goods, while the US changes from being a hegemon to being a leader. Japan still has a dominant strategy in following. Note that \([H, F, F] = (0.2, 3.5, 1.5)\) is no longer an equilibrium as hegemonic leadership becomes too costly for the US. Table 4.2 also has a Nash equilibrium where all actors choose the strategy of following, thus indicating that the probability of the public good being produced diminishes. This situation corresponds to a coordination game between the US and the EC. If the US and the EC agree upon the mutual destructibility of the situation should both opt for following, then negotiations and eventually joint action may be expected to follow. The emergence of an \([F, F, F]\) equilibrium indicates that joint-leadership systems are much more vulnerable against instability than hegemonic systems. In cases of emergency or crisis it is not at all clear whether joint action will be achieved. Moreover, a time gap between hegemonic and collective leadership systems should be expected since there is a conflict between the former hegemon and the former follower over the conditions and the distribution of costs between major actors in a joint-leadership system. It is at this point crucial that countries learn that structural conditions have changed and that thorough analysis is required.

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The model discussed so far has a number of satisfactory implications, which in general illustrate the postwar development of international political economy. Fig. 4.1 shows the chronological development from 1945 to 1995 of the payoff to the US of choosing H (hegemony) when both the EC and Japan choose to follow; the payoff to the US of choosing L (joint leadership) given that either the EC or Japan choose L; and the payoff to the US of choosing F when the public good is not provided, that is, if either EC or Japan or both choose F.

Observe in Fig. 4.1 that the curve for the US payoff for hegemony goes through the points (1960, 0.8) and (1975, .0.2), and that the curve for the US payoff for joint leadership goes through the points (1960, 1.7) and (1975, 0.7). This is consistent with the payoffs in the matrices in Tables 4.1 and 4.2. The US hegemony payoff turns negative circa 1968, which conforms with the broadly accepted views of the situation. The US joint-leadership payoff is higher than the US hegemony payoff after circa 1950, which can be given a game-theoretic justification. Some supporters of hegemonic stability theory (Kindleberger 1976) hold that US hegemony was also beneficial for all, both the hegemon and its followers, during the period 1950-1968. Joint leadership was not observed during the period 1950-1968, and it is therefore difficult to estimate the accompanying payoffs. On game-theoretic grounds, however, it seems more plausible to argue that US hegemony during the period 1950-1968 was chosen because it gave a positive US payoff, and that the alternative was a follower strategy yielding zero payoff. That is, no non-US actor was willing to opt for joint leadership during this period, and the joint leadership payoff for the US was thus not attainable. The reason can be seen from the Tables 4.1 and 4.2. For the EC, the payoff for joint US/EC leadership was 0.2 both in these years, whereas the EC follower payoff was 3.5 in 1960 as well as in 1975.
Fig. 4.1 Chronological development from 1945-1995 of US payoffs

This considerable difference constituted a powerful disincentive for the EC to opt for anything other than a follower strategy, leaving the burden to the US, which was not capable of coercing the EC into joint leadership. The situation was even more pronounced for Japan. The joint US/Japan leadership payoff for Japan was -2.8 in 1960 and -1.8 in 1975, whereas the Japan follower payoff was a considerably higher: 0.5 in 1960 and 1.5 in 1975. Hence it seems plausible to argue that the US accepted hegemony during the period 1950-1968 not because hegemony gave a larger payoff than joint leadership (which it did not), but because it gave a larger payoff than 0 for the follower strategy, and because no one could be enticed or coerced into joint leadership. Before 1950, however, the US hegemony payoff was plausibly larger than a hypothetical joint-leadership payoff. Europe lay in ruins after the war. The US provided not only economic aid in the form of the Marshal Plan and facilitated European integration, but was also the dominant actor in the establishment of global economic institutions. This helps explain how US hegemony first got started. Once established, the HFF equilibrium became historically entrenched and remained for decades a salient focal point (Schelling 1960).

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The following sample of 3x2 models shows the development of international postwar politics. In order to explain the central findings as simply and familiarly as possible, the Tables 4.3-4.6 operate with two rather than three actors. The actor labeled 'rest of the world' does not refer to all other actors in the world aside from the US, but rather to any actor endowed with sufficient unity and power to choose between the two strategies of following and leading. The games are illustrated from the US's viewpoint relative to the rest of the world, showing the strategic dilemma of a hegemon in decline and the strategic dilemma of followers given hegemonic decline. Confining attention to the ordinarily ranked preferences of these two actors, Table 4.3 shows the situation during the period 1945-1950.

<table>
<thead>
<tr>
<th></th>
<th>Rest of World</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Follower</td>
<td>Leader</td>
</tr>
<tr>
<td>US</td>
<td>1,1</td>
<td>1,0</td>
</tr>
<tr>
<td></td>
<td>0,1</td>
<td>3,2</td>
</tr>
<tr>
<td>Hegemon</td>
<td>4,4</td>
<td>2,3</td>
</tr>
</tbody>
</table>

Table 4.3 A simple model of the world political economy, 1945-1950

Between 1945 and 1950 there was no political struggle between the US and other actors over the distribution of costs in the provision of international public goods. Table 4.4 illustrates two equilibria, [H,F] giving (4,4) and [L,L] giving (3,2), and the actors easily coordinate on the former. The situation can be interpreted as one in which the transaction costs of coordinating joint leadership exceed the additional costs a hegemon incurs if it provides the public good on its own.

Table 4.4 A simple model of the world political economy, 1950-1970

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Around 1950, due to the recovery of the European countries from the Second World War, the equilibrium strategies from Table 4.3 remain, while the equilibrium payoffs change to (3,4) and (4,2), as shown in Table 4.4. That is, the game changes from a coordination game in Table 4.3 to a battle-of-the-sexes game in Table 4.4, the latter introducing distributional conflict over who is to provide the public good. Table 4.4 shows that the hegemonic role of the US had been an historical equilibrium, not maximizing its utility.

Since 1970 the payoff to the US for choosing the hegemonic strategy has fallen short of the payoff for choosing the follower-strategy. Increasing costs and decreasing capabilities have led to a situation in which the hegemon has opted to contribute only partly (in the sense of leading short of hegemony) or not to contribute at all (in the sense of following, i.e. defecting) to covering the cost of the production of the public good. This situation is shown in Table 4.5.

<table>
<thead>
<tr>
<th>Rest of World</th>
<th>Follower</th>
<th>Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Follower</td>
<td>1,1</td>
<td>1,0</td>
</tr>
<tr>
<td>US Leader</td>
<td>0,1</td>
<td>4,3</td>
</tr>
<tr>
<td>Hegemon</td>
<td>0,5</td>
<td>3,4</td>
</tr>
</tbody>
</table>

*Table 4.5 A simple model of the world political economy, 1971-1995*

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In Table 4.5, [H,F] has disappeared as an equilibrium strategy and has been replaced by the equilibrium strategy [F,F]. The equilibrium strategy [L,L] from the Tables 4.3 and 4.4, however, remains. Hence the battle-of-the-sexes situation in Table 4.4 has been replaced by a new coordination game, where the actors have to coordinate on the strategy combinations [F,F] and [L,L]. Although the latter might seem most appropriate, it took about five years to realize it, probably mainly because of historically entrenched inertia and rigid perceptions of the situation in international relations. First, the EC was reluctant to opt for joint leadership since it hoped that the US would proceed in its hegemonic role of providing the public good of openness and stability in economic affairs. Secondly, realizing that even a minimum degree of leadership in the form of cooperative behavior is vulnerable to exploitation, the US opted for the very opposite of hegemonic leadership, viz a follower strategy, yielding the payoff [1,1]. The [F,F] strategy during the period 1970-1975 led, among other things, to the collapse of the Bretton Woods system of fixed exchange rates. Since 1975 the actors have gradually realized the alternative equilibrium strategies [L,L], with the accompanying payoffs (4,3), and have started to explore the various manners in which this equilibrium can be realized.
The equilibrium development over the last half century, as discussed in the Tables 4.3-4.5, can be characterized as in Table 4.6. The structural change from a coordination game between [H,F] and [L,L] to a battle-of-the-sexes game between [H,F] and [L,L] and then to a coordination game with a different set of equilibrium strategies, [F,F] and [L,L], explains why post-hegemonic international governance has become more complicated. The first transition involved no change in equilibrium strategies, and the same focal point equilibrium (Schelling 1960) could be maintained. The latter transition, however, shattered the focal point equilibrium [H,F], and introduced a new one [F,F], leading to uncertainty about whether this latter equilibrium or an unexplored joint-leadership equilibrium [L,L] is to be chosen.

5 Implications of Parametric Changes Within the Model

Our model allows for changes of one variable, country-size, and the four parameters: production costs of public goods, c, the transaction costs, cT, and the sharing rules of the hegemon, ε(H/H,L), and of the leaders, ε(L/H,L). Additionally, assumption 1 in section 3 about the minimum requirement for producing a public good can be changed. Our main concern in the preceding section has been to differentiate between the size of the actors. In this section we discuss changes in the c/cT ratio and changes in the (c+cT)/(us+εc+j) ratio. It is also possible to vary the shape of the transaction-costs function (3.1), although this does not change the nature of our argument and will thus not be discussed further. Moreover, it is possible to vary the distribution of costs between the actors and to change the minimum requirements for the provision of a public good. We can replace the assumption 1 in section 3 that either one hegemon or at least two joint leaders are sufficient to produce an international public good with the assumption that the provision of the public good requires a minimum of input. The latter two modifications are discussed in section 7. All changes have theoretical as well as empirical implications, with richer implications if parameters vary concurrently.
Most important for our study, the general structure of the game, which strongly advocates
bilateral leadership, does not change unless the size of the Japanese economy rises well
above .25 and/or the size of the dominant actor decreases to about .30. This implies that
joint leadership of more than two countries only pays if the actors are similar or even
equal in size. Tripartite leadership is unlikely to occur even when the public good yields a
high payoff and the costs, including transaction costs, of its production are low.

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Transaction costs originate from policy changes and international negotiations. They
emerge when actors have to identify the possible effects of their action, when they are
trying to identify their best option, and when actors are bargaining about an agreement
(Scharpf/ Mohr 1994: 46). These aspects can but need not be quite costly. Generally, one
should expect that rising transaction costs increase the probability that a public good will
not be provided. In our model decreasing transaction costs lead to a greater number of
possible equilibria in which the public good is provided. Most important to note, even in
the period after 1970, as shown in Table 5.1, the [F,F,F] option is no longer an
equilibrium if transaction costs are low. Instead, the US has an incentive to provide the
public good unilaterally if it is unable to coerce the EC or Japan to lead jointly,
Therefore, the model implicates a sharp increase in the probability that the public good
will be produced in the event of the transaction costs $C_T$ being low. The lower the cost $c$
of producing the public good, the more probable is unilateral or joint leadership. As we
discuss in more detail over the next sections, a multiplicity of possible equilibria leads to
a second-order problem of which equilibria to choose. There will be disagreement
between the actors, stemming from the different distribution of net gains from the
different equilibria. While the US is indifferent in regard to which actor it will share the
leadership role with, either the EC and Japan have a strong incentive to follow if the other
actor (EC or Japan) leads. Between the EC and Japan there is a first-mover advantage in
committing to follow, which involves letting the other bear the cost of leadership.
Conflict occurs not only between the EC and Japan, but also between Japan and the US
as well as between the EC and the US if the US tries to coerce one of the former to join in
leadership. Considered from the EC’s viewpoint, the preference structure is $\text{P}_{\text{US}/\text{EC}} = 3.5 >$
$\text{P}_{\text{US} / \text{EC}} = 0.2 > \text{P}_{\text{US} \text{sole leader}} = 0$. However, since Japan has a dominant strategy of
following for all public goods whose production and transaction costs $c + c_T$ exceed 3.0,
the EC has a weak incentive to lead. It is important to note, however, that the absence of
transaction costs and low costs of the public good lead to a situation in which more than
two Nash-equilibria are possible. With $c=2.4$ and no transaction costs, that is $c_T=0$, our
3x2x2-model gives the payoff matrix in Table 5.1.

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Table 5.1 has four equilibria, namely [H,F,F], [L,L,F], [L,F,L] and [F,L,L]. The joint triple-leadership option [L,L,L] gives, not surprisingly, the same total (collective) payoff of 6.6 as the [H,F,F] equilibrium. This implies that each actor has an incentive of switching to following, i.e. free-riding, since the production of the public good requires only two actors. If joint leadership in this regard is considered to be fair, the actors are in a collective dilemma, which resembles a prisoners' dilemma. Conflict occurs since the costs of providing the public good must be distributed while each actor has a first-mover advantage of switching to free-riding. The assumptions of this payoff matrix, therefore, are the closest approximation of our simple 3x2x2-model to Olson's (1965/1971) theory.

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The most controversial assumption of our model, assumption 1 of section 3, holds that the production of an international public good requires either one hegemon or two leaders. This assumption was helpful in modeling the changes in the strategies of the hegemon and the followers during hegemonic decline. However, this assumption is far less convincing when the nature of joint leadership is discussed.

There are at least two ways of changing the model in a manner that allows for a discussion of minimum requirements in the provision of public goods. First, the requirement that the existence of and the coordination between two leaders is sufficient for the production of a public good can be relaxed or given up. The requirement that three actors are necessary for the provision of a public good implies that the public good most probably will not be provided if the transaction costs and the production costs of the public good are high. Only if actors are more similar in size than we have assumed, or actors' sizes become more similar in the future, is tripartite leadership likely to occur.

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The second way of allowing for a closer approximation to reality involves the introduction of a distributive function of production costs. So far we have assumed an
equal distribution of costs between all actors in a joint-leadership group. As Yoichi Futabashi has shown, it is—at least in some issue-areas—possible to distribute costs between actors unequally. In his analysis of exchange-rate management within the Group of 5 and the Group of 7, he pointed out that the distribution of intervention shares was a major source of political conflict. While in the first draft proposal of joint action the distribution was 25% for the US, 25% for Japan and 50% for the EC, the compromise plan proposed a share of 30% each for the US and Japan and 40% for the EC (Futabashi 1988: 20). Incorporating these assumptions into our model while using the comparative sizes of 1985 from the Penn World Tables, we arrive at what resembles a prisoners' dilemma with [F.F.F] as the unique Nash equilibrium. However, with joint action, all actors can receive a higher payoff both collectively and individually. The distribution of costs within the European Community has involved smaller shares for Great Britain, France and the smaller countries than it has for Germany. It seems that Germany has found this distribution unfair and has thus not covered the cost in full. Hence it is hardly surprising that Germany has later been accused of free-riding by the US. The smooth cooperation of Japan, however, is not predicted by the model. The model predicts that Japan should be much more reluctant to lead than has actually happened. It is feasible, however, that the US coerced Japan to lead, since the economic imbalances between both countries made Japan vulnerable to political pressure.

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Concluding this section, we now summarize the implications of our model. The following hypotheses emerge from the preceding analysis:

1. Increasing the cost $c$ of producing the public good reduces the possibility for one single actor to act as a hegemon because this becomes too costly. Increasing the cost of producing the public good, in response to a world economic crisis for example, requires joint leadership even if the capabilities of the hegemon are sufficient to stabilize international regimes in normal situations.

2. Decreasing the transaction costs $c_T$ of producing the public good increases the likelihood of the emergence of joint leadership. In our model it increases the number of Nash equilibria in which multiple leaders jointly provide the public good.

3. The possibility of distributing production costs of a public good among multiple actors increases the likelihood of joint leadership even though the situation still resembles a coordination game and distributive conflict might prevent actors from reaching a joint-leadership equilibrium.

4. The number of actors participating in joint leadership depends predominantly on the minimum requirement for their production. In addition, it is influenced by the shape of the transaction-cost function, $c_T$ in equation (3.1). If additional actors do not significantly
increase the transaction costs of decision-making, the probability of tripartite leadership increases.

Joint-leadership systems require an agreement between the members of a small or a 'k-group' on every political action which needs policy coordination. Contrary to what is the case for a hegemonic system, different interests have to be taken into account. This not only increases transaction costs, but also makes agreement problematic even if actors agree that a coordinated solution is in the interest of all actors. Considerations of this kind have led Robert Keohane to distinguish between harmony and cooperation (Keohane 1984: 51). While harmony refers to a situation in which the pursuit of self-interest by one actor contributes to the interest of all, cooperation requires that conflicting viewpoints and actions are brought into conformity:

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Cooperation therefore does not imply an absence of conflict. On the contrary, it is typically mixed with conflict and reflects partially successful efforts to overcome conflict, real or potential. Cooperation takes place only in situations in which actors perceive that their policies are actually or potentially in conflict, not where there is harmony. (Keohane 1984: 53-54)

In other words, Keohane argues that cooperation is needed to overcome conflict stemming from uncoordinated policies that lead to suboptimal outcomes for all actors. The situation Keohane has in mind and analyzes resembles a typical prisoners' dilemma. Joint action can help the actors to achieve a better outcome if an institution is implemented. This allows for an easy observation of the noncooperative behavior of actors and helps to enforce rules.

In a prisoners' dilemma an agreement on mutual cooperation should be easy to negotiate, but the enforcement of the norms is difficult. This is the reason why a strong institutional setting, a dominant group of countries which seek to enforce the agreement, may help to create and stabilize international regimes (Martin 1993: 99). However, from this perspective it is quite unclear why a hegemon should unilaterally create and maintain international public goods. With the assistance of other main actors it would be easier to ensure rule compliance. A similar assumption holds for joint leadership exercised by a limited number of countries. We discuss this topic, based on the notion of transaction costs, in the following section. Returning to the assumption of equation (3.2) that coercive hegemony is possible, we analyze the structural requirements, which lead to such a constellation in one issue-area.

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6 Coercive and Benevolent Hegemony and Leadership

The assumption that multiple actors join in the production of public goods partly contradicts the empirical findings of hegemonic eras as well as contemporary world politics. The central decision-making body for international economic leadership is the world economic summit. This institution embodies the United States, Canada, Japan, Germany, France, Great Britain and Italy. Our model accounts for disagreement, since it assumes increasing transaction costs when the number of actors participating in the decision-making process increases. Furthermore, our model also encapsulates a second and more political notion of disagreement: in all cases in which more than one equilibrium leads to the provision of international public goods, we should expect political conflict over the proper way to produce it.

The analysis of our model has led to the conclusion that the emergence of joint leadership yields multiple equilibria, implying that contemporary world politics does not resemble a prisoners' dilemma but rather a coordination game emerging from an earlier battle-of-the-sexes game. In this case as well as in classical hegemonic constellations, actors can use power resources to cause other countries to participate in the production of international public goods.

During the declining phase of US hegemony, the main source of conflict has been whether other countries, most notably European countries or Japan, should share the leadership role with the US. It had been possible for the US to force European countries and Japan to share the burdens of international leadership. In current world politics, the main source of disagreement is rather which two leaders should contribute to the provision of international public goods, or whether trilateral leadership is appropriate. The leaders can be selected 'randomly' or based on their interest in special issue-areas. Actors can also use power to change 'natural' leadership constellations. They can urge followers to participate in the production of an international public good.

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Pertaining to these issues, there is currently much ongoing debate regarding whether the leader acts benevolently or coercively. Beth and Robert Yarbrough (1992: 50), for example, state that the main source of disagreement within hegemonic stability theory stems from the extent of benevolence or exploitation (coercion) by the hegemon. The model in section 3 allows us to make a more succinct specification of whether the hegemon will act benevolently or coercively [10]. If we assume that coercion is more costly than benevolence, the cost of coercion can then be considered as part of the hegemon's transaction costs \( c_{\text{Theo}} = c_T \) given in equation (3.1). We thus rewrite (3.1) so that
\[ c_{\text{rco}}(h+l) = \frac{12k}{5} (h+l-1) \quad \text{for} \quad h+l \geq 1 \quad , \quad (6.1) \]

where the parameter \( k \) increases as the cost of coercion increases. We assume that the nature of hegemonic coercion of other actors, whether it is through providing positive incentives or negative sanctions, is such that the other actors get a higher payoff from compliance than from non-compliance. The hegemon will act benevolently if

\[ P(H_2 / h=1,l=0) > P(H_c / h=1,l) \quad . \quad (6.2) \]

Inserting (3.4) into (6.2) gives

\[ c_{sh}(H_1,l)(c + c_{\text{rco}}(1+l)) > c \quad . \quad (6.3) \]

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Inserting (6.1) into (6.3) for \( h=1 \) and resolving with regard to \( k \) gives that the hegemon will act benevolently if

\[ k > \frac{5c}{12l} \left( \frac{1}{c_{sh}(H_1,l)} - 1 \right) . \quad (6.4) \]

If (6.4) is not satisfied, the hegemon will coerce two other actors rather than one to lead if, analogously to (6.2) and (6.3),

\[ -c_{sh}(H_1,2)(c + c_{\text{rco}}(2)) > -c_{sh}(H_1,1)(c + c_{\text{rco}}(2)) \quad . \quad (6.5) \]

Inserting (6.1) into (6.5) for \( h=1 \) and resolving with regard to \( k \) gives that the hegemon will coerce two other actors rather than one to lead if

\[ k < \frac{5c}{12l} \left( \frac{c_{sh}(H_1,1) - c_{sh}(H_1,2)}{2c_{sh}(H_1,2) - c_{sh}(H_1,1)} \right) . \quad (6.6) \]

Let us assume \( c=4.2=21/5 \). Inserting the sharing rule (3.2) into (6.4) and (6.6) then implies that the hegemon will act benevolently if \( k>7/8 \) and will coerce the two other actors to lead if \( k<7/8 \). With a sharing rule \( c_{a}(H/1,1)=2/3 \) (as before) and \( c_{a}(H/1,2)=3/5 \), the hegemon will act benevolently if \( k>7/8 \), will coerce one other actor to lead if \( 7/32<k<7/8 \), and will coerce the two other actors to lead if \( k<7/32 \). With a sharing rule \( c_{a}(H/1,1)=3/5 \) and \( c_{a}(H/1,2)=1/2 \) (as before), the hegemon will act benevolently if
k>7/6, will coerce one other actor to lead if 7/16<k<7/6, and will coerce the two other actors to lead if k<7/16. A hegemon therefore acts unilaterally if it considers the costs of coercion higher than the possible contribution of followers. The probability of coercion increases the more costly an international public good is and the lower the transaction costs are.

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The question of benevolence versus coercion is also relevant in a situation of joint leadership where hegemony is absent. Benevolent leadership occurs if a couple or a group of actors can produce the public good without other possible leaders since the institutional costs of rule enforcement exceed the enforceable contribution of followers. Coercive leadership occurs if the cost of punishing defectors is outweighed by the contribution defectors make when they switch to cooperation. A case of coercive leadership is the multilateral exchange-rate management within the institutional setting of the world economic summit between the Plaza and the Louvre agreement (Funabashi 1988). [11]

7 An Exhaustive Characterization of the Equilibrium Strategies

This section provides an exhaustive characterization of all the possible equilibria for the model in section 3: for four different costs c of producing the public good, that is c=4.2, c=4.8, c=6 and c=3.6, given transaction costs c1 according to equation (3.1), that is given c1(2)=2.4 and c1(3)=4.8. The change we make in the assumption is to allow all three actors, the US, the EC and Japan, to choose between the three strategies of being a hegemon, a leader or a follower. Both changes bring symmetry into the analysis and provide for a more timeless evaluation which is valid for any three actors, any of which may emerge as a future hegemon. We also assume for simplicity that us+ec+j=90=constant. A cost c=4.2 of producing the public good gives the equilibrium characterization in Fig. 7.1.
Fig. 7.1 shows that one predominant actor, say the US, leads to the unique hegemonic equilibrium HFF (simplified writing of [H,F,F]). (The analysis is symmetric and yields the unique hegemonic equilibrium FHF or FH if the EC or Japan, respectively, is predominant.) As the predominance of the one actor decreases to (us,ec,j), where \( us \leq 42 = 10e \), HFF is no longer an equilibrium. If the size \( j \) of Japan is close to zero and the size of the US is sufficiently larger than the EC beyond the minimum of \( us = 10e = 42 \), then LLF emerges as a second equilibrium, as illustrated by the trapezium in the upper left part. The reason is that the relative sizes of the EC and the US converge, resulting in the joint equilibria HFF and LLF. There are analogously two joint equilibria HFF and LFL when the size \( ec \) of the EC is close to zero, for \( us > 42 \), as illustrated by the upper right trapezium. If the size \( j \) of Japan is close to zero and the size of the US is sufficiently larger than the EC beyond the minimum of \( us = 42 \) and below the maximum of \( us = 48 \), then FHF also emerges as a possible equilibrium, as illustrated by the HFF/LLF/FHF triangle in the center left part. If the EC and Japan have comparable sizes and \( 24 < us < 42 \), there is a unique defection equilibrium FFF, as illustrated by the not entirely circumscribed triangle pointing down between \( us = 42 \) and the point \( (24,33,33) \). The reason is that the three actors then have comparable sizes, no single actor being sufficiently large to act as a hegemon, and no two actors jointly being sufficiently large to
engage in joint leadership. However, for $10(c+c_T(2))/2=33<us<42$, and the sizes of the EC and Japan being sufficiently unequal, say $c>c_T$, there are two equilibria FFF and LLF, as illustrated by the parallelogram slightly to the left from the center $(30,30,30)$. The reason is that the US and the EC are then both sufficiently large to provide joint leadership. If the sizes of the EC and Japan become more unequal, $j$ approaching 0, given $33<us<42$, FFF disappears as an equilibrium and is substituted with FHF, as illustrated by the FHF/LLF trapezium on the left in Fig. 7.1.

![Figure 7.2](image_url)

**Fig. 7.2 Equilibrium characterization for c=4.8**

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Increasing the cost $c$ of producing the public good to $c=4.8$ gives the equilibrium characterization in Fig. 7.2. Fig. 7.2 illustrates a more strict requirement for attaining a hegemonic equilibrium, viz that an actor has a size larger than $10c=48$, say HFF for $us>48$. The HFF/LLF trapezium in Fig. 7.1 has moved leftward and has been replaced by the tiny triangle far left in Fig. 7.2 for the size of the US being slightly larger than $us=48$ and the size of Japan being sufficiently close to $j=0$. The 'downwardly' directed triangle, giving the unique defection equilibrium FFF, will expand upward to $us=48$ and downward to the point $(18,36,36)$. Further, the FFF/LLF parallelogram in Fig. 7.1 has moved leftward and been replaced by the five-edged area to the left in Fig. 7.2. Finally, the small HFF/LLF/FHF area to the left in Fig. 7.1 surrounding the point $(45,45,0)$ has
disappeared since hegemony is no longer possible when the size of an actor is less than 48.

Note especially that Fig. 7.2 has fewer areas with multiple equilibria than Fig. 7.1. We find that this is a general trend when the cost c of producing the public good increases. The reason is that the more strict requirement for hegemony yields a smaller HFF area (if an actor is sufficiently large, which is less likely), a larger FFF area (if the actor sizes converge, which is more likely), and very few areas where joint leadership alone or combined with a hegemony or a follower strategy is possible (if two actors are comparably large and the third actor is small, which also is less likely).

\[ \begin{align*}
(0,\rho,\rho) & \\
(\rho,0,\rho) & \\
(\rho,\rho,0) & \\
(0,0,\rho) & \\
(0,\rho,0) & \\
(\rho,0,0) & \\
(\rho,\rho,0) & \\
(0,0,0) & \\
(0,\rho,\rho) & \\
(\rho,0,\rho) & \\
(\rho,\rho,0) & \\
(0,0,\rho) & \\
(0,\rho,0) & \\
(\rho,0,0) & \\
(\rho,\rho,0) & \\
(0,0,0) & \\
\end{align*} \]

Fig. 7.3 Equilibrium characterization for c=6

Increasing the cost c of producing the public good further to c=6 leads to the equilibrium characterization in Fig. 7.3. Fig. 7.3 illustrates a unique HFF equilibrium for us>10c=60. The 'downwardly' directed triangle from Fig. 7.2 has increased in size and been replaced by what is virtually a hexagon surrounding the center in Fig. 7.3. Finally, the five-edged area to the left in Fig. 7.2 has become smaller and been replaced by the tiny FFF/LLF triangle to the left in Fig. 7.1 surrounding the point (45,45,0).

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The decreasing number of areas with multiple equilibria is even more pronounced in Fig. 7.3 than in Fig. 7.2. For an increasing cost c of producing the public good, one either gets unique hegemony (if the strict requirement is met), a unique all-follower FFF scenario (if the strict requirement is not met), or an unlikely third FFF/LLF option if two actors (e.g. the US and the EC) have sufficiently equal sizes and the third actor (e.g. Japan) has a size sufficiently close to zero.

As the cost c of producing the public good increases beyond c=6, the FFF/LLF area (with the corresponding FFF/LFL and FFF/FLL areas) vanishes, which happens at c=6.6 (since this gives 10(c+c_{1}(2))/2=45). Furthermore, the HFF area decreases and the FFF area increases. For c=9 the entire triangle gives a unique FFF equilibrium, which means that the cost of producing the public good is too high. Decreasing the cost c of producing the public good to c=3.6 results in the equilibrium characterization in Fig. 7.4.

![Fig. 7.4 Equilibrium characterization for c=3.6](image)

Fig. 7.4 should be compared with Fig. 7.1 and the description thereafter. The HFF/LLF trapezium gets longer, the HFF/LLF/FHF triangle gets larger, the 'downwardly' directed triangle around the center gets smaller and now extends from us=36 and down to the center (30,30,30) (as 10(c+c_{1}(2))/2=30), and the FFF/LLF parallelogram slightly up to the left moves toward the center (30,30,30) and impinges on it.

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As \( c \) decreases further, given \( 3 < c < 3.6 \), the two trapezia HFF/LLF and HFF/LLF (and their analogs) become narrower and gradually turn into parallelograms, the FFF/LLF parallelogram and the FFF triangle (and their analogs) gradually vanish, and the HFF/LLF/HFF triangle (and its analogs) becomes larger and gradually turns into a trapezium. For \( c \approx 3 \) hegemony is possible for all combinations of \( 0 = \text{us}, c, j < 90 \), where \( \text{us} + c + j = 90 \). More specifically, for \( c = 3 \) the center 'upwardly' directed triangle stretching from \( \text{us} = 10(c + c_1(2))/2 = 27 \) to the point \((36, 27, 27)\) consists of three sub-triangles and three sub-parallelograms. All these six areas allow for the three equilibria LLF, LFL, and FLL. Each sub-parallelogram also allows for one hegemonic option, the upper one e.g. for HFF. Each sub-triangle also allows for two hegemonic options, the left one e.g. for HFF and FHF.

As \( c \) decreases further to \( c = 2.4 \), in which case \( 10c = 10(c + c_1(2))/2 = 24 \), the center triangle gradually increases in size to stretch from \( \text{us} = 24 \) to the point \((42, 24, 24)\) and gradually changes in content of equilibria to allow for all the six equilibria HFF, FHF, FFH, LLF, LFL, FLL. Simultaneously, the two parallelograms HFF/LLF and HFF/LLF (and their analogs) gradually vanish, being replaced by the HFF/LLF/HFF trapezium (and its analogs), which is increasing in size. The area for each unique hegemonic equilibrium in each corner, e.g. HFF close to the upper point \((90, 0, 0)\), also gradually decreases in size.

Decreasing the cost \( c \) of producing the public good to \( c = 1.8 \) results in the equilibrium characterization in Fig. 7.5.

Fig. 7.5 is noteworthy since unilateral production of public goods, for \( c > 2.4 \), is less costly for a single actor than half the cost of bilateral joint production of public goods. This constellation appears if \( c \) is smaller than \( c_1 \). Nevertheless, joint leadership remains a viable option when two actors are nearly equal in size.

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Decreasing \( c \) further to \( c = 0 \) moves the \( \text{us} = 10c = 18 \) line in Fig. 7.5 gradually downwards to the \( \text{us} = 10c = 0 \) line, while the \( \text{us} = 10(c + c_1(2))/2 = 21 \) line in Fig. 7.5 is moved gradually downwards to the \( \text{us} = 10(c + c_1(2))/2 = 12 \) line. As the reader can see, each of the three corner parallelograms allows for all the three hegemonic options HFF, FHF, and FFH. Further, the center triangle gets larger, spanned by the points \((66, 12, 12)\), \((12, 66, 12)\), and \((12, 12, 66)\).

Analyzing the triangles in political terms leads to the following conclusions. The way an international public good will be produced greatly depends on the costs which are necessary to produce it and on the relative size of the actors. Observe that in the discussion from \( c = 3.6 \) in Fig. 7.4, to \( c = 3 \), then to \( c = 2.4 \), then to \( c = 1.8 \) in Fig. 7.5, and
finally to \( c=0 \) in the previous paragraph, there is a gradual increase in the number of multiple equilibria in each of the various areas. The 'cheaper' an international public good is, the easier it is to produce political solutions, but the higher is the political conflict resulting from the free-rider problem. This is the reverse effect, which is consistent with the trend described above that the number of areas with multiple equilibria decreases as the cost \( c \) of producing the public good increases. The reason is, conversely, that both the requirements for hegemony and joint leadership are now less strict, as well as that FFF is still an option if \( c>3 \) and the sizes of the three actors are sufficiently equal. In other words, for small costs \( c \) of producing the public good, there are many possible leadership constellations, viz. hegemony (always possible given \( c<3 \)), or joint leadership, or an all-follower situation (if no single actor is comparably large and \( c>3 \)). Even if there was a hypothetical international public good that any country in the world was able to produce, it would still be possible for all countries to stay aside. Extremely expensive international public goods can only be provided by a hegemon. The problem stemming from joint leadership in regard to costly provision of the public good is that transaction costs exceed the gains from joint action.

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*Fig. 7.5 Equilibrium characterization for \( c=1.8 \)
8 Future Leadership Constellations and the Quest for International Order

Any stylized model has its limitations. This model analyzes the problem of size in collective action. Its limitations mainly stem from the neglect of variations in the cost of providing international public goods. In the case of global economic crises, for instance, the transaction costs needed to reach an agreement may decrease considerably. Having learned the lessons from the disastrous economic consequences of the Great Depression in the 1930s, countries today may, when confronted with an economic threat of collapsing growth rates, increasing inflation and unemployment, more easily opt for joint leadership. On the other hand, the continuing integration of economic affairs leads to an increase in the price of policy changes. Our model allows for parametric changes of the cost c of producing public goods and transaction costs eT, but it does not treat these as variables; the only variable in our model is size.

The strength of the model presented in this article is that it permits predictions of future leadership constellations in international political relations, given estimates of the sizes of the actors' economies, that is any combination (us,ee,j). It is also possible to assume other actors than us, ee, and j, and it is of course possible to increase the complexity of the model to four or more than four actors, although this will complicate the analysis.

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Predictions are necessarily speculative though not without precedent (Kennedy 1987; Gilpin 1987; Thurow 1992). In this concluding section we discuss the relationship between actor size and the costs of providing an international public good. We have assumed (us,ee,j) = (50,35,5) in 1960, (us,ee,j) = (40,35,15) in 1975, and we may assume (us,ee,j) = (38,35,18) in 1995. The relative sizes in 1975 and 1995 are sufficiently similar so as to give no changes in the Nash equilibria. With the possible further size convergence of the three actors we may assume (us,ee,j) = (35,30,25), which would lead to a significant increase in the degree of conflict about leadership. Future development may lead to the emergence of a 'Pacific bloc', pac, agreed upon either by the ASEAN and Japan, by the APEC, or by an other institutional form. Let us assume (us,ee,pac) = (25,25,25), which leads to the game in Table 8.1.

The game in Table 8.1 resembles a three-person prisoners' dilemma. Everyone would benefit and receive a positive payoff 0.1 from LLL. However, each actor has an incentive to deviate unilaterally to F to receive the free-rider payoff 2.5. If everyone deviates to F, however, the unique mutual-defection equilibrium FFF ensues.
With size convergence and a cost \( c = 4.8 \) of producing the public good, the challenge in international relations is thus to overcome the logic of the prisoners' dilemma. This can be done if the actors can mutually agree to reduce the cost \( c \) of producing the public good. Table 8.2 shows the game when \( c = 3 \).

Table 8.2 illustrates four equilibria, LLF, LFL, FLL and FFF, the former three providing the public good. Hence, a low cost \( c \) allows for producing the public good since two actors then have an incentive to lead. The game for the low-cost public good, therefore, does not resemble a prisoners' dilemma, but rather a coordination game.

Table 8.2 illustrates the second-order problem of future leadership constellations. All the three actors have a first-mover advantage of committing not to lead, illustrated by the first-mover receiving 2.5 rather than 0.4. Hence, although the actors may possibly be capable of avoiding the mutual defection equilibrium FFF, there is conflict regarding which actor constellation should provide the public good, which may easily lead to an 'undersupply' of joint-leadership activity.

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Although the model used in this article has shown a multiplicity of equilibria allowing for hegemonic or joint leadership, the all-follower FFF equilibrium is also a prevalent option for c<3. Comparable to a hegemonic era where international public goods are produced with a high degree of certainty, our model predicts an increasing likelihood of international public goods not being produced if the sizes of the various actors converge. Thus, the most salient problem of contemporary and future world politics seems not to be hegemonic decline but rather the emergence and existence of multiple joint- leadership equilibria. If multiple constellations of joint leaders are able to produce international public goods, the increasing number of available strategies for each actor easily leads to situations where international public goods turn out not to be producible. That is, the probability increases that the actors find themselves in a deadlock. The possibility of agreeing upon tripartite leadership does not necessarily resolve the deadlock, both because that leads to rising transaction costs and because one actor will have an incentive to free-ride in the sense of not contributing to the production of the public goods.

It is typically the case that expensive public goods are much more likely to be provided by a hegemon than by a group of leaders. This is illustrated, for example, by Fig. 7.3, which suggests that international public goods will be provided with probability one if the size of an actor is larger than 60 (e.g. the HFF area), whereas both the all-follower FFF and the joint leadership LLF options are realizable equilibria if the US and the EC are equally large and Japan is very small in size, say (u,s,c,j)=(45,45,0).

Furthermore, given hegemonic decline and the emergence of joint leadership, the probability increases that the largest actor may be too small to provide costly international public goods unilaterally, while the followers are too small to join in the production. This is illustrated by the center portion of Fig. 7.4. This is a plausible constellation if the second- and third-ranked actors are almost equal in size. The increasing difficulty in producing expensive public goods may lead to a situation where the actors become less likely to agree upon the establishment of international regimes which are broad in scope. One should expect, therefore, that the international regimes agreed upon by countries in the foreseeable future are more limited or sectorial in scope.

Most important, however, the article shows that after hegemony international regimes can be established, and international stability and openness can be provided. A joint- leadership system does not lead to anarchy and chaos, but it does require more cooperation among countries. However, a joint- leadership system leads to a different
international order than the hegemonic system we have been accustomed to over the last half century.

**Appendix:** The Relative Size of OECD Actors

*(To see each graphic up-close and in color, click on it.)*
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Endnotes
1. We would like to thank the National Bureau of Economic Research, which provides the scientific community with the public good of the Penn World Tables via the Internet. Our thanks go also to Matthias Kenter, Institut der deutschen Wirtschaft, Cologne, for helpful hints concerning the data. For their various constructive comments we are indebted to Margaret Levi, Matthias Mohr and Fritz W. Scharpf.

2. It is much disputed whether stabilized exchange rates are to be considered a public good or public bad. We are not concerned with this question, but in general we agree with the economic mainstream that fixed exchange rates are a public bad while stable and stabilized exchange rates are a public good.

3. Confusingly, economists define this role as leadership, while international relations scholars distinguish between a single leader, called hegemon, and a group of leaders. These differences are mainly ignored in economic theory. However, as we show later, the analytical separation of hegemons and leaders does make sense. Therefore, we rigidly differentiate between a single leader, referred to as a hegemon, and multiple joint leaders.

4. For the suggestion that there is a continuum between pure public and pure private goods rather than a dichotomy, see Bruce Russett (1987: 225).

5. We will discuss and amend this assumption in sections 5 and 7.

6. We have experimented with logistic functions of arbitrary complexity for the transaction costs, which do not change the nature of the results.

7. We acknowledge the critique of John Ruggie (1982) and David Lake (1984) that relative size can explain only the necessary, but not the sufficient, conditions for the emergence of a liberal international economy. We nevertheless think it makes sense to provide international relations scholars with the analytical tools to analyze the political-economic consequences of size within the game-theoretic approach to international politics.

8. The Penn World Tables, also known as the Summers-Heston Tables, display a set of national accounts economic time-series covering a large number of countries. It is an attempt to get closer to a system of real national accounts, and its unique feature is that it allows for international, not just intertemporal, comparisons (Summers/Heston 1991).

9. It is debatable whether the EC (or an equivalent thereof) had the strategic capability of acting as an actor in the 1950s and early 1960s. An interesting discussion of whether corporate actors, coalitions, collective actors, and aggregate actors can be treated as unitary players applicable for game-theoretic analysis is provided by Scharpf (1991). It might be argued that the EC until the early 1960s was an aggregate actor without strategic capability and thus only capable of choosing the strategy of following, which provides further support for the early [H,F,F] equilibrium. However, the early EC consisted of certain dominant subactors such as Germany, France, and the UK, which either alone or through some mechanism of tacit self-coordination could engage in
strategic action. This justifies considering the EC as an actor in its own right as early as the 1950s.

10. See also James Morrow (1994a) for an integration of coercive and benevolent leadership. Note that our model differs from Morrow’s model, even though we agree that leaders need not be superior. We assume that they must have a minimum size, which is determined by the cost of the public good. Therefore, actors can be leaders in one issue-area while they fail to lead in another.

11. For a more general discussion of whether actors have the incentives to punish deviators to ensure cooperation or rule compliance, see Boyd and Richerson (1985, 1992).

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Evolutionism and its Critics

by

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Evolutionary theories have held a prominent place in the history of the social sciences. Although there are many kinds of evolutionary theories, the essential element that they hold in common is their assumption that history is more than just a series of particular and unique events. On the contrary, the evolutionist assumption is that history reveals a certain directionality in the sense that there are similar processes occurring at similar times, at various points throughout the globe. The best of these theories do not limit themselves to simply describing directional patterns, but go on to provide some sort of model or causal explanation for the observed sequence or sequences.

The social sciences, sociology and anthropology in particular, have long enjoyed a love-hate relationship with evolutionary theories of society, with the periods of love alternating with periods of hate in a striking pattern of ebb and flow. The second half of the nineteenth century -- the period when sociology and anthropology were born as social-scientific disciplines -- was overwhelmingly a period of love. Most anthropological thinking, and a large amount of sociological thinking, was evolutionary in nature. In anthropology the two most important evolutionary theorists were Lewis Henry Morgan (1974[1877]) and Edward Burnett Tylor (1871), both among the most important founding fathers of that discipline. In sociology there was, of course, Herbert Spencer (1972), whose evolutionism is very familiar to sociologists even today. There were many other evolutionists in both disciplines during this period, and even thinkers whose main contributions were not evolutionary in nature commonly held deep, and often implicit, evolutionary assumptions. In this regard, I am thinking especially of Emile Durkheim. Anyone familiar with his *The Division of Labor in Society* (1933[1893]) cannot help but notice his strong, and completely unquestioned, evolutionary assumptions about the progress from mechanical to organic solidarity.

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But by the last decade of the nineteenth century things had begun to change. In anthropology, evolutionism began to fall into disrepute at the hands of Franz Boas (1932,
1940) and his disciples, who dominated anthropological thinking until the 1930s. Boas thought that evolutionism was flawed in many ways. Boas was an extreme historical particularist, or what many sociologists today call a historicist. He argued that neither history nor cultures had any patterns at all. Every culture was just a polyglot of shreds and patches put together largely by culture contact and diffusion. Each culture had its own unique structure and its own unique history. Generalizing about either history or culture was foolhardy in the extreme, if not utterly impossible.

Although evolutionary thinking was strongly criticized during this period, we should not assume that it was absent. Indeed, it was embraced in the 1920s by such prominent sociologists as William Graham Sumner and his disciples (Sumner and Keller, 1927). But evolutionary thinking had acquired a bad reputation among many of the intellectual leaders of anthropology and sociology (especially the former) and the students of these leaders recognized that to think evolutionarily was to risk one's intellectual career.

Nevertheless, evolutionism survived. The first stirrings of this revival came in the 1930s in the hands of V. Gordon Childe (1936, 1951, 1954), an Australian who became a famous archaeologist working in Scotland. Childe argued that history revealed few patterns if we studied it in minute detail; if we stand back and view it from a wider perspective, patterns reveal themselves. Childe was followed in the 1940s by two other would-be evolutionary revivalists, Leslie White (1943, 1945, 1949, 1959) and Julian Steward (1949, 1955). White was a maverick, both intellectually and in personally. The story of his career is particularly interesting. He received his doctorate in anthropology at the University of Chicago in the late 1920s, and many of his professors were fervent disciples of Boas. Naturally, he was taught that evolutionism was basically worthless and that the works of the evolutionists were not worth reading. Not surprisingly, he absorbed these ideas, and thus started his career as a strong anti-evolutionist. But, for some reason, White began to read the works of Morgan and Tylor a few years after finishing his Ph.D. As White tells the story, he was stunned, for these scholars were nothing like what he had been taught. They were far more sophisticated than he had ever imagined, and he felt they hardly deserved the strong criticism that they had received. As a result of this experience, realized that he could no longer defend the Boasian critique of evolutionism, nor teach it to his own students. White became in the 1930s a fervent evolutionist, a position which he defended the rest of his life.

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Along with Childe and Julian Steward, White not only resurrected evolutionary theory, but played a major role in bringing about what I have called the second generation of the evolutionary revival. In the 1950s, and especially in the 1960s, evolutionism became not only respectable in anthropology, but actually a major perspective. The most important evolutionists in this period were, in anthropology, Marvin Harris (1968, 1977, 1979), Robert Carneiro (1970, 1973), Marshall Sahlins (1958, 1960, 1963), and Elman Service
(1960, 1962, 1975), all of whom were students of either White, Steward, or both. In sociology, which had, by this time, become almost hermetically sealed off from anthropology, these ideas had little influence—indeed, were probably largely unknown—but evolutionism was revived there by such thinkers as Talcott Parsons and Gerhard Lenski. Lenski was actually one of the few sociologists to be strongly influenced by anthropology, and the evolutionary model he formulated in his major work on stratification, Power and Privilege (1966), and in his textbook Human Societies (1970), was very similar to White's. With Parsons, the situation was quite different. Stung by the criticism that his structural-functional model was incapable of dealing with social change, Parsons responded by writing two short books (1966, 1971) in which he formulated an extremely ambitious evolutionary interpretation of the past 5,000 years of human history. As we shall see in more detail later, this theory is strikingly different from currently dominant evolutionary in anthropology at this time. It seems to me that it is one of our poorest evolutionary theories, and perhaps the contemporary theory most vulnerable to the charges of today's evolutionism critics. I shall return to look at it later.

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The second generation of the evolutionary revival had begun to burn out by the late 1970s, in both anthropology and sociology. Today anti-evolutionism is rampant in both fields. Both fields seem to be beating a hasty retreat to a modern version of Boasian historicism, arguing that history reveals few if any directional patterns and that we must be extremely cautious about generalizations. In sociology, Weberians like Randall Collins (1986) and Michael Mann (1986) are highly suspicious of evolutionary thinking, as are most Weberians. They are hardly alone. In anthropology, the situation may be even worse. This conclusion is suggested to me by a personal incident. In 1990 I published a book entitled Social Evolutionism, which was a critical dissection and evaluation of evolutionary theories in the social sciences over their entire history. The book was reviewed favorably in the American Journal of Sociology, and received mixed reviews in Contemporary Sociology and Social Forces. I kept waiting to see a review in the American Anthropologist, but my wait was in vain. I finally contacted the journal's editor about the matter, and she replied that the book review editor had not felt that my book was worthy of review. You could have knocked me over with a feather. I was stunned, and plenty angry too. I was being told that a book devoted to undertaking a full-scale critical examination of one of the most important types of theory in the field of anthropology did not deserve to be reviewed. To me, this was just unimaginable. I couldn't believe it. But in retrospect, perhaps I should have known. I knew that evolutionism had become much less popular among anthropologists, but I greatly underestimated the depths to which that discipline had sunk.

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Recently one of my students and I conducted a survey of members of the Theory Section of the American Sociological Association concerning their theoretical preferences and their views on a variety of matters. They were queried about evolutionary theories, and their responses give us a bird's eye view of current sociological views of evolutionism. A mere three (3) percent of the theorists thought that evolutionary theories were fundamentally sound and undeserving of the criticism they had received, whereas 38 percent of the respondents thought that these theories were seriously flawed and should be abandoned. The remaining respondents who voiced an opinion (47 percent) thought that evolutionary theories were sound in principle, but that they needed considerable modification and improvement.

These findings certainly show the degree of skepticism among today's sociological theorists about evolutionary theories, just as impressionistic evidence has suggested to us, but at the same time they are cause for some optimism. Half of the respondents are willing to endorse an evolutionary perspective at least in principle, even though the vast majority of these believe that current evolutionary theories will not do the trick. (By the way, I place myself within the 47 percent who see evolutionism as sound in principle but as needing improvement. In fact, since I am a member of the Theory Section and answered the questionnaire, this was my answer.) This gives me hope that evolutionary thinking in sociology will once again become popular in the future. I shall return to this point at the end of the paper when I consider the question as to why the popularity of evolutionary theories has ebbed and flowed so dramatically over time.

But what is it, exactly, that critics of evolutionism object to in this form of social theory? Let me take up and respond to six different criticisms:

1. It has frequently been charged that evolutionary theories are illegitimate because they explain history and social change teleologically, thus conceiving history as nothing but the unfolding of predetermined patterns toward some ultimate goal. My own reading of evolutionary theories is that this criticism, while not entirely wrong, grossly overstates its case. The classical evolutionists of the second half of the nineteenth century often seemed to employ this kind of model of change, but I think it has largely disappeared since that time, and I don't think that either Marx or Engels in their version of evolutionism ever held such a view. Virtually all forms of evolutionism in the twentieth century have abandoned such thinking in favor of looking at social evolution as the outcome of particular conditions operating at particular times in the lives of particular individuals. (The most striking exception may be Parsons's version of evolutionism.) In other words, evolutionists attempt to explain social evolution in terms of simple causal models.

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2. It is often asserted that evolutionary theories have a strong endogenous bias, i.e.,
that they look at evolutionary events as occurring entirely within societies and fail
to consider the role of various external influences, such as diffusion or political
conquest. Leslie White took up this criticism in the 1940s with respect to the
evolutionism of Morgan and Tylor and showed it to be manifestly false; both
Morgan and Tylor, in fact, gave diffusion an important role in the evolutionary
process itself. And more recent versions of evolutionism, while perhaps more
endogenist than exogenist, usually leave plenty of room for the role of external
factors. Moreover, as I shall argue below, world-systems analysis, which is
extremely notable for its criticism of purely endogenist models of change, is in
fact a version of evolutionism.

3. Critics of evolutionary theories such as Giddens (1981, 1984) and Irving Zeitlin
(1973) have objected to them on the grounds that they employ a specious concept
of adaptation. This objection seems to be rooted in the notion that the concept of
adaptation is incurably functionalist and, since both thinkers object to
functionalism, this makes evolutionary versions of functionalism highly suspect.
It must be conceded that some versions of evolutionism do employ a functionalist
notion of adaptation. This is most apparent in Parsonian evolutionism, in which it
is societies that do the adapting, and these societies evolve toward continually
higher degrees of "adaptive capacity." But the concept of adaptation can be
reformulated so that it is individuals rather than societies that do the adapting, and
so those notions that perceive evolution as producing increasing adaptive capacity
are cut away. In fact, I shall argue that there are current evolutionary theories that
do precisely that.

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4. Many critics also object to evolutionary theories for being inherently
progressivist, i.e., for assuming that social evolution is tantamount to one or
another form of improvement in the human condition. When I first began my
survey of evolutionary theories, I expected to find that this assumption was true of
early evolutionary theories but that it has been discarded in the twentieth century.
But I turned out to be wrong. In fact, the vast majority of evolutionary theories
are progressivist, some of them strongly so. The question then remains as to
whether progressivism is justified by the actual historical record. My view is that
this is an extremely complicated question which permits of no easy or simple
answer. History is really a mixed bag in which some things have become better
and others become worse, and the answer also depends on whether you are
looking at social evolution over its entire course or simply at some phases of it.
For example, it matters a great deal whether you are talking about social evolution
before the rise of capitalism in the sixteenth century or social evolution since that
time. But the real issue is whether evolutionary theories are inherently
progressivist, i.e., whether or not they must be such. And the answer to this
question is no, there is no inherent association between evolution and progress. The best example of this is the work of the anthropologist Marvin Harris, who has formulated an evolutionary theory that, while viewing history as a mixed bag, is often anti-progressivist, and his anti-progressivism is backed up with striking empirical data. I have tried to develop my own version of evolutionism directly on the basis of Harris's model.

5. Anthony Giddens, one of the leading anti-evolutionists in sociology today, has made a special point of criticizing evolutionary theories for their lack of any concept of human agency, which for Giddens completely invalidates any social theory. In Giddens's view, evolutionary theories are hard forms of determinism that see individuals as just the playthings of blind social forces. My reading of evolutionism, or at least of the best current evolutionism, is quite different. I see the best current evolutionary theories as clearly implicating the individual and his or her choices in social evolution. For example, what was going on in the first great evolutionary transformation, the Neolithic Revolution, which brought agriculture and agricultural communities into the world? My answer, based on the work of many anthropologists and archaeologists, is that individuals were making choices about shifting toward a new mode of production in terms of their various interests: the standard of living they wanted to enjoy, the amount of time and effort they wanted to expend in making a living, and so on. The Neolithic Revolution was a human creation, just as later evolutionary transitions were. No one was reacting blindly to unseen social forces. Agency and structure were intertwined. Now, of course, the notion of agency I am employing here is one that sees individuals as making choices within the context of a set of constraints, and thus these choices are not truly voluntaristic, which may cause Giddens to object that this is no real concept of agency at all. But to my mind it is. It is just what Marx was talking about when he declared that "Men make history, but they do not make it exactly as they please."

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6. But perhaps the biggest objection to evolutionary theories today, especially among sociologists, is that they impute far too much directionality to the flow of history. Weberian sociologists like Collins (1986) and Mann (1986), for example, see history in terms of particularity and the general absence of definable patterns. This is perhaps the hardest of all the criticisms of evolutionism to respond to. In his famous critique of evolutionism written over a quarter of a century ago, Robert Nisbet (1969) said that the detection of historical pattern is not a property of history itself, but is simply in the eye of the beholder. To a large extent this is correct, but Nisbet doesn't play fairly. He claims that pattern is in the eye of the beholder, but that the absence of pattern apparently isn't. It is just the way things are! But how can that be so? I would argue that both patterns in the form of directionality and historical uniqueness, are fundamental parts of the historical
record. Some scholars seem more attuned to one, others more attuned to the other, for reasons that we don't fully understand. This seems to be like one of those Gestalt drawings where first you see a woman's face, and then you see a candlestick rather than the face, and then you see the face again. My point is simply this: Why not play it both ways and recognize that pattern and unique event are there to be observed? Why deny the one in order to embrace the other? Evolutionists don't deny the existence or the importance of historical uniqueness and divergence, but simply try to discern directional patterns that may be, let's face it, a lot harder to pick out.

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(As an aside it is interesting to see how critics of evolutionism sometimes become, in spite of themselves, evolutionists of a sort. In his famous book *The Sources of Social Power* [volume 1, 1986], Michael Mann argues against evolutionary interpretations of history, at least with respect to the last 5,000 years. However, one of his major points in his book involves the steady concentration of power over time, or increasing power capacity, and he spends a lot of time talking about how this has come to be so. That looks pretty much like a type of evolutionary argument to me. Also, consider Anthony Giddens, an even more severe critic of evolutionism. Giddens's own alternative to evolutionism is a theory of what he calls *increasing time-space distanciation*. Take a look at this theory as it is spelled out in several of his books [e.g., 1981, 1984]. If it's not a theory of directional social change, and thus a version of evolutionism, I don't know what it is. The reason that Giddens thinks it is non-evolutionary is because he doesn't have a very good understanding of what an evolutionary theory actually is. Why that should be, I examine below.)

To return to the main theme, let me just say that I don't see how the broad features of human history can be viewed except in evolutionary terms. Most of my recent book *Social Transformations* (Sanderson, 1995) is devoted to outlining and explaining the three greatest transformations of world history: the Neolithic Revolution beginning some 10,000 years ago, the evolution of civilization and the state, beginning some 5,000 years ago, and the beginnings of the modern capitalist world some 500 years ago. The Neolithic Revolution occurred in at least six (and probably eight) different parts of the world at remarkably similar times, and the outcomes were strikingly similar in each case. The same can be said for the rise of civilization and the state. The modern capitalist world can be dated to about AD 1500, and was to a large extent a European phenomenon, although Japan provides a strikingly parallel case, and in fact much of the world was evolving in a more capitalistic direction after about AD 1000 (McNeill, 1982; Modelski and Thompson, 1996). Nor should we overlook the long time period between about 3000 BC and AD 1500. All over the world during this time we find striking directional trends in the form of population growth, technological change, increasing commercialization, increases in the size and scope of political empires, and even ideological changes. These
changes, which to me are highly deserving of the name evolutionary, were fundamental in setting the stage for the events after AD 1500 (Sanderson, 1995).

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If I am right in my defense of evolutionism against its critics, then an obvious and crucial question arises: How have these critics gone wrong? What has led them astray? Let me suggest two basic reasons, although there are very likely others. The first reason involves the very nature of the sociological enterprise as it has come to be defined in the second half of the twentieth century. Most sociologists, as we know, are pretty ahistorical, but even so-called historical sociologists have what I believe is a serious limitation: they are concerned with very small slices of time. I think it is often difficult for such sociologists to appreciate the value of evolutionary theories, because such theories are normally concerned with extremely long periods of time.

The second reason, and I strongly suspect the more important of the two, is that the critics have a remarkably incomplete awareness of the broad range and variety of evolutionary theories. Some sociologists, when they think of evolutionary theories, seem to think only of the classical evolutionists. Many others seem to think that evolutionary theory is some sort of unitary model, and the model they have in mind is either Parsonsian evolutionism or some derivative thereof. But much more than this is going on, and evolutionary theories can be more different from each other than similar. For example, in his The Constitution of Society (1984), Giddens's discussion of evolutionary theories focuses almost exclusively on Parsons, and other types of evolutionary theory are barely mentioned.

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There are at least two fundamentally different types of evolutionary models, although there are others, and the differences within each of these two types are often very significant. The first of these types is essentially a functionalist sort of evolutionism, represented by the anthropologist Elman Service, but best by Parsons. In my Social Evolutionism (1990), I devote a whole chapter to describing and criticizing Parsonsian evolutionism. I find it objectionable in many ways. It misuses the concept of adaptation by assuming that it is societies (rather than individuals) who do the adapting, and it boldly asserts that societies continually strive for higher and higher levels of adaptation, thus making it not only strongly progressivist, but teleological as well. When Parsons does depart from his teleological mode of reasoning and seek to identify actual causes of evolutionary changes, he constantly falls back on idealist assumptions. Parsons proclaims that his theory is a big improvement over those of the classical evolutionists, but this
claim is dubious. Even Herbert Spencer, of whom Parsons is highly critical, did much more in the way of identifying a range of causal forces in evolution than Parsons does. A careful reading of Parsonian evolutionary model will show that it is a modernized and updated version of Hegel's philosophy of history -- and hardly any more palatable.

So much for the bad news. The good news is that there is another very different type of evolutionary model, which is the materialist model that passes from Childe, White, and Steward down through Carneiro and Harris. In my extension and formalization of Harris's model (Sanderson, 1995), which I call evolutionary materialism, the leading features of the Parsonian functionalist evolutionary model are gone. This model reconceptualizes adaptation as the striving of individuals to reach their goals and satisfy their interests, and there is no suggestion that societies achieve higher levels of adaptive capacity as they evolve. The model is explicit in its claim that imputing progress to social evolution is always problematic; whether progress or regression is occurring is always an empirical question that must consider the historical time period and the particular dimension of social life. Most importantly, evolutionary materialism is explicitly anti-teleological; evolution is simply the response of particular individuals located at a particular point in time and space to the conditions that they face. Evolution over the longest periods of time is the sum total of these responses. Plenty of room is given to a variety of evolutionary responses, i.e., no assumption is being made that social evolution is a unitary, purely unilinear process. It involves not only parallel lines of change undergone by different societies, but divergent evolution as well.

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Evolutionary materialism as I have formulated it is a very broad theoretical strategy that allows room for a variety of more specific theories. It includes theories that are ordinarily not thought of as evolutionary and placed under that conceptual umbrella. I have specifically in mind world-system theory as formulated by Immanuel Wallerstein. I regard, and I believe Wallerstein regards, his approach as a type of evolutionary perspective (Sanderson, 1991). It is just that the unit that is doing the evolving is a complex network of societies, what Wallerstein has called a world-system. Wallerstein (1979) has made it clear that he is not trying to oppose his framework to an evolutionary one, but rather to oppose one type of evolutionary framework to another (this other being functionalist evolutionism and modernization theory). Christopher Chase-Dunn and Thomas D. Hall (1997) have developed a modified form of world-systems analysis that can apply to a much longer period of social evolution than Wallerstein has considered. Andre Gunder Frank and Barry Gills (1991) have done something similar by positing that the world system began not in AD 1500 but in 3000 BC, and that it has been evolving for these past 5000 years under the directive impetus of capital accumulation.

There are, of course, other types of evolutionary models, quite a few of them in fact. Some people, for example, have tried to develop Darwinian models of social evolution
(Campbell, 1965; Langton, 1979; Runciman, 1989), an approach I think is somewhat misguided and doesn't take us very far. And there have been a number of attempts from non-academic to present extremely progressivist models that can be explicitly used to guide the evolutionary process from here on out, attempts that I consider highly dubious. But space does not allow consideration of these. The point I am making is simply that evolutionism comes in various colors and shades, and we shouldn't condemn the whole because of the sins of some of its parts. Just as a rose is not a rose is not a rose, evolutionism is not evolutionism is not evolutionism.

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In concluding, I want to consider the question as to why the response to evolutionary theories has shown such an up and down pattern over the past century and a half. Why is evolutionism popular at some times but unpopular at others? To answer this question, I would like to draw on two important concepts from world-system theory, A and B phases and hegemony cycles. A and B phases are the economic expansion and contraction phases, respectively, of Kondratieff waves, an economic phenomenon postulated by the Soviet economist Nikolai Kondratieff (1984[1928]) in the 1920s and since appropriated by a variety of scholars, world-system theorists in particular. The ebb and flow of responses to evolutionism seems to have a close association with Kondratieff waves. The A and B phases of Kondratieff waves since 1850, the real beginning of social evolutionism, may be sketched as follows (Hopkins and Wallerstein, 1979):

**A 1850-1873**

**B 1873-1897**

**A 1897-1913/20**

**B 1913/20-1945**

**A 1945-1967**

**B 1967-present**

What happens if we try to match these cycles with the ebb and flow of evolutionary thought? The result is a fairly good match: Evolutionism hits its peaks of popularity largely during periods of expansion (A phases) and moves to a trough of unpopularity during periods of contraction (B phases). Evolutionism emerged and became extremely popular during the 1850-1873 A phase (although some major evolutionary works were written somewhat after that time, which probably means that we have to allow for a certain amount of lag of intellectual phases after economic phases). Evolutionism was starting on its first decline during the latter part of the B phase of 1873-1897 (intellectual
lag again). The next A phase does not appear to be associated with a revival of evolutionism, clearly an anomaly, but the unpopularity of evolutionism continues through the B phase of 1913/20-1945, which again fits the pattern. And it is during the A phase of 1945-1967 that evolutionary theorizing rose to the peak of its popularity in the twentieth century. It is true that Childe and White wrote their first evolutionary works before 1945, but it was not until after this date that there was a general rise in evolutionary theorizing and in evolutionism's popularity (as late as 1949 Julian Steward was still extremely nervous about offending the anti-evolutionary powers in anthropology, which led him to be very cautious in using the concept of social evolution). We are now living in the latter part of a B phase, and it was precisely during this phase that evolutionism fell from grace again.

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But there's more. Hegemonic cycles seem to be involved, too. According to Wallerstein, there have been three major hegemonies in the capitalist world-economy, Holland (the United Provinces) between 1625 and 1672, Britain between 1815 and 1873, and the United States between 1945 and 1967. The last two of these correspond both to A phases and to the greatest periods of popularity of evolutionary thought. (Note also that the evolutionary thought in each case was produced primarily by intellectuals in the hegemonic country, i.e., by British scholars in the nineteenth century and American scholars in the twentieth.) What is the connection? A phases are periods of widespread popular optimism, whereas B phases are more likely to be associated with pessimism; periods in the world-economy when a hegemon reigns supreme are ones of extraordinary optimism and a feeling that all is right with the world. There is no better example than the A phase of American hegemony, the period between 1945 and 1967. And such historical periods have intellectual consequences. Because of the close linkage in people's minds of the concepts of evolution and progress, A phases, especially when they correspond to a hegemony's control of the world-economy, will be periods during which evolutionary ideas will seem especially attractive. B phases, by contrast, because of the pessimism and malaise they create, will seem unprogressive to many people, and this will carry over in the case of intellectuals, especially the leading intellectuals, to a general skepticism of evolutionary theories with their implication of general human progress.

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If the above is reasonably valid, a prediction is in order. We are now very near the end of a B phase that has been associated with a great deal of pessimism and malaise. This phase is due to come to a close fairly soon, perhaps by the year 2000. Wallerstein has suggested that the next A phase in the world-economy may be the greatest of all A phases in terms
of economic productivity and prosperity. The optimistic feelings this phase will undoubtedly induce should lead to a major revival of evolutionary thought. We are in for, I believe, a new phase in the development and widespread acceptance of one of the most important lines of thinking in the entire history of the social sciences. Because of the probable intellectual time lag, this may not occur until some 5 or 10 years after the beginning of the A phase -- in 2005 or 2010, say, assuming of course that the A phase begins in 2000. I want to be in on this major intellectual shift right from the beginning.

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Divergent Development: The Pursuit of Liberty, Equality, and Growth in Argentina and the Republic of Korea*

by

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Divergence in the development of East Asian and Latin American NICs is catching the attention of a growing number of political economists. This divergent development has sparked debates over theory between advocates of neo-liberal and neo-dependency approaches (Biersteker; Stallings: 370) in accounting for the regional divergence: does the East Asian success confirm modernization theory (neo-liberalism) generally, or does each region require its own theory? (See Barrett and Whyte on Taiwan; Alschuler: chap. 4 and Lanzarotti: chap. 5 on Korea; Evans, 1987). East Asian "miracles" have led to equally bitter controversies over practice with regard to policy recommendations for third world nations: is the East Asian model exportable and is this desirable? (see Amsden; Fishlow; Broad and Cavanagh).

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In addressing these issues I propose to account for the divergence between the NICs of these two regions through a comparative analysis of a member state from each region, Argentina and the Republic of Korea. By accounting for, that is explaining and predicting, the divergent development of these two nations, we will have a basis for asserting which theoretical approach (neo-dependency or neo-liberalism) is more valid. And once their divergent development is explained, we will be able to identify the conditions responsible for the success of the East Asian model and to say whether these same conditions may be found elsewhere allowing for the successful export of that model.
Though much of the research on divergent development focuses on "economic growth" or "economic development", if we are to express a preference for either the East Asian or the Latin American model we will require a broader definition of development. The following labels suggest trade-offs between aspects of a broader notion of development: authoritarian growth, development with(out) equity, growth without development. Under what circumstances, indeed applying which model, would growth, liberty, and equality be compatible? We include these three aspects of development in our definition so that we may assess the desirability of one model over another.

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The trail for this research has been blazed by Gereffi and Wyman in Manufacturing Miracles and by Haggard in Pathways from the Periphery. These political economists make inter-regional comparisons of NICs from Latin America and East Asia. In order to build on their research we need to understand first, how they have structured the discussion and second, what questions they have left unanswered. The research on divergent development has been structured around five main topics:

1. the conditions underlying the choice of development strategy at the end of the first stage of import substitution (Stallings: 365; Haggard),

2. the conditions for the effectiveness of state intervention to formulate and implement development strategies (Jenkins),

3. the conditions of the world economy impinging on the success of development strategies (Stallings: chap. 1),

4. the responsibility of development strategies for successes and failures (Gereffi and Wyman),

5. the conditions behind the compatibilities and incompatibilities between aspects of development: growth, equality, and liberty (Alschuler: chap. 5; Stallings: 3, 350).

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Previous research has been uneven in its treatment of these five topics. For example, Haggard (chaps. 9, 10) has documented convincingly topic 1 and has opened a fruitful discussion of topic 5. Many authors in the volume edited by Gereffi and Wyman emphasize topics 1, 2, and 4, though they treat topics 3 and 5 more briefly. My impression of these and other key studies of divergent development (Ranis and Orrock;
Anglade and Fortin; Jenkins) is that topic 1 is already researched adequately, that topic 2 offers serious alternative explanations which have not yet been tested, that topic 3 has not been researched adequately, that topic 4 seems to be taken for granted without adequate testing, and that topic 5 remains at the stage of compelling questions without answers.

The present study builds on the previous research and addresses the limitations noted in the five topics by extending my work in comparative political economy on alternative development strategies in Korea and Argentina (Alschuler). More specifically, my work has a theoretical framework that already encompasses the influence of development strategies (topic 4), of multinational corporations and dependency relations (topic 3), and of capital accumulation on the three aspects of development: liberty, growth, and equality (topic 5). This framework has been refined and extended to include the impact of external shocks from the world economy (topic 3) and the influence of state effectiveness (topic 2). Furthermore, I have formulated a new method suitable for the testing of theory-based predictions about divergent development. This method of qualitative causal path analysis will allow us to overcome a further limitation of recent research, namely the insufficient testing of the contending theoretical approaches each claiming to account for divergent development.

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This paper begins with the theoretical formulations and ends with the results of the empirical tests. The first section, "The Model", presents a set of causal propositions to explain developmental change. After offering a revised "dependency sub-model", an "interventionist sub-model" describes the policies belonging to each development strategy and links them to developmental change. Concluding this section is a set of propositions on the influence of state effectiveness and external shocks on development.

In the second section, "The Methods", we introduce a method, called "qualitative causal path analysis", for formulating testable predictions about development. We also make explicit our research strategy.

In the third section, "The Cases", we summarize the main historical periods in the political economy of Argentina and Korea since the 1960s. The summaries provide a context for the specific policies, external shocks, and levels of state effectiveness that form the basis for our predictions of developmental change. The section ends with the predictions, formulated according to our qualitative causal path technique and using the table of policy values.

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In the fourth section we present the results of the empirical tests. In the concluding section we discuss the role of development strategies, external shocks, and state effectiveness in the explanation of divergent development. Also on the basis of the results we comment on the debates over the theory and practice of development.

I. THE MODEL

Our propositions on development are interrelated within a causal model, a revision of the one in Alschuler (1988). The model contains five groups of variables, including development. The broader concept of development has three aspects: growth (the economic aspect), equality (the social aspect), and liberty (the political aspect). In the pursuit of development there may be trade-offs between these aspects, making it a challenge to promote growth, equality, and liberty simultaneously. One aim of our research is to reveal the conditions under which these aspects of development are compatible and incompatible. Three versions of the model are required to explain the three different and semi-autonomous aspects of development.

The five groups of variables in the model include development, multinational presence, dependence, capital accumulation, and state intervention. The first four groups make up a "dependency sub-model" while the last is an "interventionist sub-model". We begin by defining the variables and their causal relationships in the "dependency sub-model".

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The Dependency Sub-Model

**Development**

The broad meaning of development is founded on the idea of personal growth, itself defined in terms of humanization, conscientisation, and individuation. The broad definition then includes those societal conditions that promote personal growth (Galtung et al.): economic growth, equality in the distribution of wealth, and political liberty. Economic growth as commonly understood is the increase in the production of wealth in society. Our indicator, in common use, is the rate of change in the gross domestic product per capita.

The degree of equality in the distribution of wealth may be analysed along a number of national dimensions: urban-rural, labor-capital, and along intra-class dimensions: large-small industries, large-small farms, skilled-unskilled labor. We adopt only one dimension, labor-capital in manufacturing. Our indicator for the degree of equality in the distribution of income between labor and capital is the ratio of the real wage index to the productivity index in manufacturing. Many authors support the validity of this indicator
in both Korea and Argentina (Wontack Hong: 30; Hagen Koo; W.C. Smith: 30; Mallon and Sourrouille: 117; Feralta-Ramos: 61-62; Hasan and Rao: 35, 199; Shafer: 127).

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Liberty is an essential element of democracy, along with a state executive accountable to an elected parliament and regular, fair elections (Rueschemeyer and Evans). More specifically, liberty includes both political rights and civil liberties. Expert ratings of both aspects over time for Korea and Argentina serve as our indicator (Gurr; Gastil).

**Multinational presence**

This variable reflects the qualitative aspect of foreign direct investment rather than its quantity. Qualitatively, multinational presence in industry takes the form of either investment in manufacturing branch plants or in manufacturing export platforms. A branch plant is a subsidiary which manufactures in the host country in order to sell in the local market. An export platform is a subsidiary which employs unskilled, low-wage labor to produce manufactured goods for export to core country markets. "High" signifies a predominance of branch plants over export platforms. "Low" means the opposite tendency.

**Dependence**

The coherence of this group of conditions stems from the following definition: "Dependence is a situation in which an asymmetrical exchange between nations reinforces the power of one (the dominant) nation and inhibits the self-reliance of the other (dependent) nation (Alschuler: 16). Each of the many kinds of exchange may be characterized by more or less dependence. Those kinds include trade, technology, capital, food, and debt. Trade dependence, for instance, is high when, due to deteriorating terms of trade, the volume of raw material exports must continually increase in order to import a constant volume of manufactured goods. Debt dependence is high when, due to rising interest rates and appreciation of the dollar, new international loans are required in order to continue debt service payments on past loans. Technological dependence is high when the royalty payments on imported technology reduce resources available for local research and development, inhibiting technological self-reliance. Food dependence is high when the payment for food imports to meet minimum caloric standards derives from the exports of agricultural cash crops, further shifting land use away from subsistence crops. Capital dependence is high when new inflows of foreign investment are needed to compensate for the outflows of profit repatriation and the asymmetrical transfer payments between subsidiaries and the head office of multinational firms.

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**Capital accumulation**

Within this group are those conditions which contribute directly to capital formation. One sub-group is the reserves of foreign exchange or hard currency. These reserves permit the import of technology, raw materials, intermediate and capital goods required for the expansion of industry. A second sub-group contains two conditions of the industrial process; the degree of capital intensity and the degree of industrial concentration. The factor mix of labor and capital influences directly the accumulation of capital. Modern technology combines with skilled labor to enhance productivity and higher profit rates for reinvestment. Generally, high capital intensity accompanies industrial concentration, meaning the share of the market controlled by a small number of firms, the top ten, for example. Concentration contributes to accumulation through economies of scale which permit large reinvestable profits. Smaller, labor-intensive firms also contribute to capital accumulation through low wages to unskilled labor and low technology costs which permit reinvestable profits. These two alternatives mark important contrasts between the East Asian and the Latin American approaches to development.

Between these four groups of variables there are eleven causal relations that constitute the **dependency sub-model**. In formulating this sub-model we specify the sign and direction of each causal relation. Dependency theory, as revised during the 1980s, is the basis for the causal propositions linking multinational presence, dependence, capital accumulation, and development (Cardoso; Evans: 1979; Alschuler). Each causal proposition corresponds to the dependency literature and has been supported by empirical research. The propositions 6 through 10 apply to all three aspects of development both in East Asia and Latin America. Proposition 11 is modified depending on the aspect of development and the region (see "the methods" section on causal complexity and conjunctural causation). This means that the conditions promoting growth may not be compatible with the conditions for equality or liberty. We should keep in mind that we are formulating a general model for East Asia and Latin America, even though we are applying the model to Korea and Argentina.

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**LINK 6.** The more multinational presence takes the form of branch plants, the greater the capital intensity and industrial concentration.

**LINK 7.** The more multinational presence takes the form of branch plants, the greater the dependence.

**LINK 8.** The greater the dependence, the less the foreign exchange reserves.
LINK 9. The greater the dependence, the greater the capital intensity and industrial concentration.

LINK 10. The greater the foreign exchange reserves, the greater the economic growth, the greater the equality, and the greater the liberty (all three aspects of development).

LINK 11. (EQUALITY) The greater the capital intensity and industrial concentration, the less the equality (between capital and labor).

LINK 11. (LIBERTY IN LATIN AMERICA) The greater the capital intensity and industrial concentration, the less the liberty.

LINK 11. (LIBERTY IN EAST ASIA) The greater the capital intensity and industrial concentration, the greater the liberty.

LINK 11. (GROWTH IN LATIN AMERICA) The greater the capital intensity and industrial concentration, the greater the economic growth.

LINK 11. (GROWTH IN EAST ASIA) The greater the capital intensity and industrial concentration, the less the economic growth.

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What are the implications of the five versions of causal link 11 taken together? What are the trade-offs between the three aspects of development as incorporated into the model?

a. In Latin America, where capital intensity sustains capital accumulation, growth tends to be incompatible with liberty and equality. Sectoral conflicts in Argentina are known to revolve around the trade-off between capital accumulation and income distribution. On the one hand, repressive regimes pursue growth at a social cost to labor or on the other hand democratic regimes improve labor conditions at the cost of slower growth.

b. In East Asia, where labor intensity sustains capital accumulation, growth tends to be compatible with equality but incompatible with liberty. Korea has a reputation for authoritarian growth while maintaining a high degree of income equality, judged by international standards.

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In Figure 1, given for "growth in Latin America", the sign (either + or -) has the following meaning: (+) the relationship is direct; (-) the relationship is inverse.

**FIGURE 1: MODEL FOR GROWTH IN LATIN AMERICA**

The dilemmas of dependency theory sparked debates in the 1970s. According to the classical formulation of the theory, dependence was incompatible with growth. Yet such cases as the Brazilian "miracle" under the military (1964-1975) were in blatant contradiction with the theory. Cardoso (1973) then coined the expression, "associated dependent development", to describe the new reality. Evans' concept of "the triple alliance" of the state, MNCs, and local capital (1979) and O'Donnell's concept of "bureaucratic authoritarianism" further helped to reformulate dependency theory. One might ask whether or not our dependency sub-model reflects this reformulation.

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The sub-model includes two different and possibly opposite influences of dependence on growth. Links 8-10 and 9-11 can be contradictory, one promoting and the other impeding growth. In accordance with classical dependency theory, capital and technological dependence reduce foreign exchange reserves (due to profit repatriation and royalty payments), reducing growth. Yet, in accordance with the revised theory, these forms of dependence also increase capital intensity (due to technology transfer and fresh investment in manufacturing firms), increasing growth. While the sub-model includes both relations, the predominance of one over the other depends on the quantity of multinational investment.

Bornscher and Chase-Dunn (83, 94) make the important distinction between the accumulated stock and the annual flow of foreign direct investment. Their research findings indicate that the stock has a long term negative impact on growth, while the flow has a short term positive impact on growth. They also suggest that the positive impact of continuing inflows of FDI tends to mask the negative impact of large stock. The Brazilian "miracle" illustrates this. When the inflows of FDI slowed after 1975, the negative impact of the large foreign capital stock predominated, resulting in the reduced growth rate and the end of the "miracle". Our model incorporates this dependency dynamic in the following way. As long as there are continuing inflows of FDI, the positive impact will predominate (path 9-11). When the inflows slow or halt, the negative impact will predominate (path 8-10). Appendix 2 gives further details.

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**The Interventionist Sub-Model**

**State Intervention**

Each of the various development strategies pursued by the state is a package of policies. The strategy of import substitution industrialization (ISI), for instance, is made up of a policy package which contrasts with that for the export substitution industrialization (ESI) strategy. The state's choice of policies changes over time, in response to past failures, to new challenges from the world-system (e.g. external shocks), and to the political orientation of a new regime. Seven policy dimensions have been selected to represent state intervention in accordance with the various development strategies. The policy dimensions include the regulation of foreign direct investment, the promotion of agriculture, subsidies to industry, the exchange rate, state enterprises, unionization of labor, and wages. Each state policy is defined below and linked to a group of variables in the dependency sub-model. Using the same set of policy dimensions for both Korea and Argentina enables us to compare their changing strategies over time.

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Foreign investment and tariff policy. This policy dimension varies from (high) the promotion of branch plants of multinational corporations to (low) the promotion of export platforms of MNCs. The policy instruments are two: the level of tariffs and the foreign investment code. High protective tariffs and an investment code with incentives (e.g., tax holidays, high limits for profit repatriation) for branch plants indicate "high" on this policy dimension. Low tariffs and an investment code with incentives for export platforms indicate "low" on this dimension.

POLICY 1. The higher the tariffs and incentives for branch plants, the more branch plants predominate over export platforms among new subsidiaries.

Agriculture policy. This policy dimension varies from (high) support to (low) neglect of agricultural production. The chief policy instruments are farm credit subsidies, rural infrastructure investment, and the internal terms of trade between agriculture and industry. Making credit available, building infrastructure, and supporting terms of trade favorable to agriculture indicate "high" on this policy dimension. "Low" signals the opposite policy conditions.

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POLICY 2. The more internal terms of trade favor agriculture, the less the dependence. Dependence here pertains to agricultural production that either fails to meet the requirements of food self-sufficiency or limits the agricultural surplus available for export.

Banking policy. Loans may be subsidized through reduced interest rates and made available to selected categories of industrial firms. "High" indicates preferential credits to larger, capital-intensive, industrial firms while "low" indicates preferential credit allocation to smaller, labor-intensive firms.

POLICY 3. The more the subsidization of capital-intensive firms, the greater the capital intensity and industrial concentration.

Exchange rate policy. Through devaluation the state can bring about undervaluation of the national currency. The high ratio of the local currency to the dollar gives a "high" exchange rate. Overvaluation comes from a revaluation of the local currency, or "low" ratio of local currency to the dollar.

POLICY 4. The more the undervaluation of the exchange rate, the greater the reserves of foreign exchange.
Public investment policy. The creation and expansion of state firms may accompany state investment in infrastructure, signifying "high" promotion. When investment in infrastructure declines and state enterprises are privatized, promotion is "low".

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POLICY 5-Growth. The less the expansion of state enterprises (more privatisation), the greater the rate of economic growth

(see Appendix 2 for several contingencies).

Wage policy. "High" signifies that the state sets high wages in the public sector and allows private sector wages to rise as well. "Low" means that public and private sector wages are frozen or rolled back and that penalties may be imposed on firms that fail to conform.

POLICY 5-Equality. The higher the wage setting, the greater the equality (see Appendix 2 for several contingencies).

Labor policy. "High" refers to permissive and pro-labor union legislation. "Low" means the opposite; anti-labor laws affecting union rights and conflict settlement procedures.

POLICY 5-Liberty. The more pro-labor the union legislation, the greater the liberty.

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Effectiveness of State Intervention

The state's choice of policies, as indicated in the interventionist sub-model, influences developmental performance. According to a number of researchers on divergent development, the "effectiveness of state intervention" further influences policy impacts on development (Jenkins; Rueschemeyer and Evans; Anglade and Fortin). State effectiveness refers to the rationality of policy choice and the fullness of policy implementation. Effectiveness encompasses 1. flexibility: the ability to change policies in response to unsatisfactory impacts, 2. selectivity: the use of policies that target specific groups of firms, 3. coherence: consistent and coordinated policies, and 4. promotion: policies that give incentives rather than regulations to private enterprises (Jenkins: 199-200).
Of the many conditions which contribute to state effectiveness (e.g. the type of regime, the class alliance with the state, and state bureaucratic capacity) researchers generally posit the relative autonomy of the state from dominant classes. "High" effectiveness then derives from the high relative state autonomy from dominant classes, allowing the state to govern in the long term interests of society as a whole. "Low" effectiveness stems from low relative state autonomy, when the state is bound to act more as the instrument of the dominant classes (Jenkins: 200, 202). These complex ideas may be simplified in one causal proposition: the greater the relative autonomy of the state from the dominant classes, the greater the effectiveness of state intervention.

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The location of this proposition in the model is described in the Appendix 2. State effectiveness influences the impact of policy five on growth and equality.

External Shocks

In two ways so far our model incorporates linkages between the national political economy and the world-system: through the presence of multinational corporations and the relations of dependence. The international conjuncture changed radically at three particular moments during the period under study. These moments are the external shocks of 1973, 1979, and 1982 (Masini). The influence of these shocks on the development of the NICs is mediated by the variables in the dependency sub-model and provokes state responses in the interventionist sub-model (Ominami). Taking the policy context into consideration enables our model to reflect the different impacts of the external shocks on development in Korea and Argentina.

1973: The first oil shock created an abundance of liquidity through the recycling of petrodollars for the LDCs. This, in addition to the low real interest rate for international borrowing, reduced debt dependence. The devaluation of the dollar, due to the termination of the gold standard, stimulated an increase in the international prices for raw material exports from LDCs, leading to an increase in their foreign exchange reserves.

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1979: The second oil shock and the rise in U.S. interest rates increased debt dependence in LDCs. The revaluation of the dollar contributed to a fall in the prices for raw material exports from LDCs, leading to a decline in their foreign exchange reserves.
1982: The return of recession in DCs reduced their demand for LDC exports. The lack of liquidity (new loans) for LDCs and the increase in the debt service combined to reduce their foreign exchange reserves.

According to these descriptions, the external shocks influence the dependency sub-model at two points of vulnerability: debt dependence and foreign exchange reserves. Since propositions 8, 9, 10, and 11 link these two points with development, our model incorporates the external shocks into our explanation. Our model contextualizes the impacts of external shocks by placing them in the conjuncture of all the other causal relations operating at the time of the shocks (see Appendix 2).

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II. THE METHODS

The general methodological approach of this study, comparative historical analysis, encompasses a number of specific methods: the "comparable-cases strategy" to guide the selection of cases, "qualitative causal path analysis" to formulate testable predictions, and "analytic induction" to guide the dialog between theory and data.

The Selection of Cases

The Comparable-Cases Strategy

At first glance it may not seem feasible to compare the development of two countries, Korea and Argentina, on the basis of five or more variables simultaneously. We appear to be facing the dilemma of "too few cases and too many variables", noted by Lijphart (57). By placing the many variables into only five groups we have already followed his advice in one respect. Lijphart also recommends increasing the number of cases by extending the study longitudinally so as to study the same nation at more than one point in time (Lijphart: 56, 61). We have done this by identifying as our "cases" the key time periods within the history of Argentina and Korea. Any year in which policies change or external shocks occur marks the beginning of a key period as temporal case. Our study spans thirty years, from the early 1960s to the early 1990s, which we have divided into six key periods for Korea and seven for Argentina.

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Lijphart describes the logic of hypothesis testing when the cases are selected in order to maximize their similarity on the control variables, as we have done. By comparing the
key periods of a nation the cases are maximally similar on such control variables as
colonial history, culture, geography, and geopolitics. The variation of control variables,
external to our theoretical model, is minimized while the variation in the independent
variables (the policy variables and external shocks) and dependent variables (the
development variables) is maximized. It then becomes possible to assess the covariation
of the independent and dependent variables, while non-relevant conditions are "held
constant". This is the logic of hypothesis testing within the "comparable-cases strategy",
also known as the "most similar systems" design (Lijphart: 59).

The Formulation of Testable Predictions

Causal Complexity

Comparative case studies or "case-oriented comparative methods" have several
advantages over "variable-oriented methods" (Ragin, 1987: 15-16). Our model and its
testing incorporate especially one of these advantages, "causal complexity". Explanations
of development generally include multiple causes which act in combination. The eleven
causal linkages in our model, plus the external shocks, combine in a complex way to
influence developmental performance. By following Ragin's distinction between
"multiple and conjunctural causation" we can observe how our model incorporates this
causal complexity. Conjunctural causation refers to the "intersection of a set of conditions
in time and space" that produces changes, "...not the separate or independent effects of
these conditions" (Ragin, 1987: 25). The eleven causal relations in our model describe
"the intersection of a set of conditions" (the high or low values of the policies and
external shocks) in time (during a key period) and space (in a country). A further aspect
of conjunctural causation is the "context". A particular causal condition "may have
opposite effects depending on the context" (Ragin, 1987: 27, 48). In our model, causal
link 11 relates "capital intensity" to "growth" in two opposite ways, depending on the
context, East Asia or Latin America. In the Latin American context capital intensity
promotes growth, while in East Asia labor intensity promotes growth. The context here is
the overall development strategy founded on comparative advantage in abundant
unskilled or skilled labor.

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Multiple causation refers to the situation where several different combinations of
conditions produce the same effect (Ragin, 1987: 25). In our model the same effect, an
increase in liberty, equality or growth may occur with different combinations of policies.
Here are two different policy combinations both of which may promote economic
growth: low tariffs-neglect of agriculture-high industrial subsidies-currency
overvaluation and high tariffs-agricultural promotion-high industrial subsidies-currency
undervaluation. The formulation of our predictions for the key periods allow for multiple
causation in just this way.
Qualitative Causal Path Analysis

In order to test the causal model we formulate a series of predictions which are then compared to empirical observations. The observations are the tendencies of change in growth, equality, and liberty in each of the key periods, our cases. The predicted tendencies for each key period derive from a method called "qualitative causal path analysis" (QCPA). Our method is analogous to quantitative causal path analysis which applies to interval level data. Since our model incorporates ordinal dichotomous data (high versus low, present versus absent) on policies, external shocks, and state effectiveness, an alternative method is required. Much of the logic of QCPA is borrowed from its quantitative analog: 1. the correlation between two variables can be decomposed into the sum of simple and compound paths; 2. a compound path is the product of the simple paths comprising it (Asher, 32-33). The application of QCPA to formulate predictions from our causal model is described in Appendix 1.

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The Dialogue between Theory and Data

Analytic Induction

Our research process is neither wholly inductive nor deductive, but lies somewhere between as an instance of analytic induction (Rueschemeyer, 1991; Ragin, 1994). We begin with a thoroughly reflected analytic framework of concepts and relationships taken largely from Alscheuler (1988), Ominami (1986), and Gereffi and Wyman (1990). In a second step we formulate a number of predictions about developmental tendencies (in growth, equality, and liberty) on the basis of the analytic framework. Next we adopt indicators for the three aspects of development and make empirical observations of these indicators in the key periods (cases) of Argentina and Korea. In a fourth step of analytic induction we compare predictions with observations in order to identify confirmed and unconfirmed cases. Our dialogue with the data enters a final stage when we treat the unconfirmed cases as anomalies and make revisions in the model or in the techniques of observation in order to reduce the number of anomalies.

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The Calculation of Empirical Tendencies

Comparative averages
The predicted tendencies in each key period are compared with the observed tendencies in growth, equality, and liberty. The annual data on each aspect of development are averaged for each key period. The average of each key period is compared with the average of the preceding period, resulting in three possible empirical tendencies: "increase", if the previous period average is lower; "decrease", if the previous period average is higher; "stability", if the previous period average is the same.

In order to complete the task of formulating predictions we need to assign empirical values of "high" or "low" to each of the five policies, to effectiveness of state intervention, and to the three external shocks. Each of the key periods has a distinct set of initial values. Our study of the political economic history of Korea and Argentina covering the last three decades has enabled us to find these initial values. In the following section we describe the historical context of each key period in which the initial values are found. The section ends with a table of initial values for each country's key periods.

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III. THE CASES

The Seven Argentine Cases

For the most part, the key periods in Argentine history correspond to successive political regimes, beginning with the Frondizi regime in 1959. Whenever successive regimes followed essentially the same set of policies, these have been fused into a single key period in our analysis. The initial period (1959-62) marks the start of the second phase of the strategy of import substitution (ISI-2), following the Peronist period of ISI-1 and military interlude. As in the study of Korea, we begin at the historical moment when the development strategies of the two countries diverge from their common base, ISI-1. The description of each period emphasizes the class alliance with the state, the challenges, and the development strategy.

1959-1962: Frondizi (Government of the Intransigent Radical Civic Union Party)

The social class coalition supporting Frondizi's civilian government consisted of the large industrial bourgeoisie, the agrarian bourgeoisie, excluding mainly organized labor and the entrepreneurs of small and medium firms (Peralta-Ramos: 36). The development strategy promoted larger, capital-intensive industrial firms through tariff protection, credit subsidies, and the encouragement of foreign direct investment. Currency devaluation encouraged agricultural exports, contributing to foreign exchange reserves and to state revenues through export taxes. Though an IMF stabilization plan enabled Argentina to move out of a recession, the social costs were high in terms of falling real wages, bankruptcies of smaller firms, and new forms of dependence on foreign capital (Alschuler: 41-43).
1963-1965: Ilia (Government of the Radical Civic Union of the People Party)

The intended class allies of the Ilia government were industrial labor and the smaller industrial firms, to the exclusion of the agrarian and large industrial bourgeoisies. Facing mounting external debt and recession, the strategy promoted agro-exports (to help pay the debt) and raised wages (to enlarge the domestic market for industrial production). Taxes on agro-exports were channelled through credit institutions to industrial firms (Alschuler: 44-45). Economic growth was restored and the foreign debt reduced, though at the cost of depending on unreliable agro-exports and ever more on foreign capital which dominated the most dynamic and concentrated branches of industry. Heavy industry imported large volumes of intermediate goods but exported little, contributing to a foreign exchange bottleneck (Alschuler: 45-46).

1966-1972: Ongania, Lanusse (military government called "The Argentine Revolution")

The military coup d'état, to preclude the political reassertion of the Peronist movement, brought to power a coalition of the large industrial bourgeoisie and foreign capital, excluding the agrarian bourgeoisie, the smaller industrial bourgeoisie, and labor. This type of regime has been labelled "bureaucratic authoritarian" (O'Donnell) and a "triple alliance" between the state, multinationals, and local capital (Evans, 1979). The strategy emphasized heavy industrialization, to be led by public investment (Canitrot, 1978: 9). High protective tariffs as well as tax and financial subsidies combined to promote higher efficiency and concentration among the heavy industries (Peralta-Ramos: 50). Wage controls transferred income from labor to capital. The combination of price controls on agricultural products and export taxes transferred income from rural to urban capitalists (Canitrot, 1978: 9). Economic growth was achieved at the cost of political liberty and income equality, leading to a legitimacy crisis and the military's willingness to return to civilian rule.

1973-1975: Peron (the government of the Justicialista Party)

After eighteen years in exile Peron returned to govern a nation divided by class antagonisms and his own Party divided into socialist and moderate wings. Peron forged a coalition within the moderate wing which took the form of a social pact between the peak associations of organized labor and entrepreneurs of the medium size firms, reminiscent
of the Peronist alliance of the 1950s (Peralta-Ramos: 63). Faced with slow economic growth, inflation, a fiscal deficit, and lagging real wages (Canitrot, 1978: 12-13), the strategy had to reconcile capital accumulation and income distribution. Wages and prices were monitored and increased by negotiation. A new export tax on agriculture and a reduction in meat and wheat prices created unfavorable terms of trade for agriculture and a shift of income to industry (Peralta-Ramos: 63). Subsidies to the more capital-intensive firms for imported inputs helped to offset the rising cost of imports following the oil shock in 1973. After Peron's death in 1974, the succession of Isabel Peron to the Presidency ushered in a period of "state terrorism" as economic conditions worsened and as the two wings of the Peronist movement engaged in armed confrontation (Peralta-Ramos: 64-65).

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1976-1982: Videla, Viola, Galtieri (government under alternating branches of the military)

The military applied stabilization policies to provide temporary relief from hyperinflation and the huge public sector deficit. In their view only economic liberalism could remedy the long term problems that started with Peronism in 1946 (Canitrot, 1980: 914-915). The reversal of import substitution policies was thorough. Wages were lowered so as to correspond to productivity levels. Export taxes on agriculture were eliminated. Tariffs were lowered progressively, subjecting manufacturing firms to the discipline of foreign competition (Peralta-Ramos: 77). Subsidies were all but eliminated, save for a nucleus of strategic firms producing intermediate goods and with access to foreign credit. Government expenditure was reduced and public enterprises were privatized (Canitrot, 1980: 917; Peralta-Ramos: 73-74).

The second oil shock of 1979 and the increase in interest rates on the debt forced the military government to increase its foreign borrowing in order to meet the growing demand for scarce foreign reserves (Canitrot, 1994: 79). In 1982 the private foreign debt was nationalized. The failure of devaluation to bring a trade surplus for servicing the foreign debt led to the suspension of debt service payments in 1982. Following the Mexican debt crisis foreign credit was cut off.

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The period ended in "complete economic disorder": high inflation, high fiscal deficit, and falling real wages (Canitrot, 1994: 76). Unprecedented "state terrorism" was aimed chiefly at the Peronists and their union leaders in the "dirty war" (Peralta-Ramos: 70).
After the disastrous military defeat in the Falklands War with Britain in 1982, the government lost legitimacy both as guarantors of welfare and sovereignty.


Facing the Radical Party, elected over the opposition of the Peronist Party, was the need to restore legitimacy to the constitutional system in the wake of the period of state terrorism. The state also confronted the persistent problems of income distribution, runaway inflation, and the foreign debt (Peralta-Ramos: 87). Following the failure of policies like those of the 1960s, in 1985 Alfonsin engaged in economic liberalization, called the Austral Plan, resembling that of the previous military government (Peralta-Ramos: 95, 102). The Plan promoted both agricultural and industrial exports in order to continue the service payments on the external debt. To make industry more efficient and profitable, tariff protection was reduced along with a reduction in real wages (Peralta-Ramos: 95). Public utility rates were raised so that state enterprises could cover their costs and pay their foreign debt. Certain state enterprises were privatized in order to increase their productive efficiency (Peralta-Ramos: 103).

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The priority given to debt servicing reduced the resources for industrial subsidies, sharpening the struggle over income redistribution and slowing economic growth (Peralta-Ramos: 109). The losers in this struggle were the wage earners and a new class of "paupers" in the major cities (Smith: 30). The Peronist victory in the 1989 elections was the popular response to these failed policies.

1989–1991: Menem (Government of the Peronist Party)

The Peronist government under Menem took office in the midst of economic chaos; hyperinflation, food riots, a recession, and a fiscal deficit out of control (Peralta-Ramos: 142, 147; Smith: 28-29). The new cabinet was dominated by non-Peronists from the "liberal" right wing of the business community, the legendary opponents of Peronism (Peralta-Ramos: 147). Menem's neo-liberal "productive revolution" moved away from the traditional Peronist aims of income distribution within a protected domestic market. The general objectives were to insert Argentina competitively into international markets and to attract foreign capital (Ranis: 614, 618). The policies of "economic liberalism" included an overvaluation of the currency, tariff reduction, wage increases, and privatization of state enterprises (Canitrot, 1994: 89-90). New regulations put foreign capital on an equal footing with Argentine private firms (Ranis: 615-16).

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As of 1992 the results were largely positive: a reduction in inflation and the fiscal deficit accompanied by an improvement in the balance of trade, economic growth, and employment (Canitrot, 1994: 89; Ranis: 616-617, 625). The absence of general strikes through mid-1991 may be understood as unionized labor's approval of the new labor policies.

**ARGENTINA: INITIAL VALUES FOR POLICIES, FDI, AND STATE EFFECTIVENESS**

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The Six Korean Cases

The identification of key periods for Korea is guided by the major policy shifts and external shocks which will influence the development tendencies, according to our model. In many studies of Korea researchers customarily identify as key periods the five-year development plan periods, beginning with 1961-1966 and ending with 1987-91. We have not followed this procedure for the simple reason that shifts in policies do not necessarily coincide in time with the announcement of policy objectives in the five-year plans. The case descriptions focus on challenges and policy shifts.

1961-1964: Park (military government called "guided capitalism")

The legitimacy of the dictatorship, brought about by Park's military coup in 1961, would depend on the restoration of economic growth and self-reliance. During the early years of "guided capitalism", as expressed in the first five-year plan, the goals were heavy industrialization for the domestic market, increased primary exports, and agricultural self-sufficiency (Hart-Landsberg: 140). Already by 1964 a number of pressures forced a reorientation of the development strategy from import substitution to export substitution. Faced with declining U.S. foreign aid and foreign exchange reserves, the military government imposed an export-oriented manufacturing strategy as a promising alternative, despite objections by the industrial elite (Hart-Landsberg: 140-3).

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1965-1972: Park (military government called "unbalanced growth")

Under the conditions of the Normalization Treaty with Japan, signed in 1965, Japanese loan capital more than compensated the reduction of U.S. aid (Hart-Landsberg: 145). As Japanese investors took advantage of low wage Korean labor, especially in the newly established export-processing free trade zones after 1970, the U.S. market absorbed the majority of these new exports (Hart-Landsberg: 150, 158).

Within the export substitution strategy the main policy instruments were an undervalued exchange rate to promote the competitiveness of exports, tax exemptions for exporters, tariff exemptions for imported inputs used in exports, subsidized interest rates for exporters, the construction of export processing zones, and control over agricultural prices (Hart-Landsberg: 170-71). Government control over grain prices and farm credit had two consequences for export-led growth. Lower grain prices provided cheap wage goods for urban labor, enabling entrepreneurs to keep labor costs down. Lower prices and insufficient farm credit drove impoverished farmers to the cities in search of work in industry (Hart-Landsberg: 171-74).

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1973-1978: Park (military government called "the Yushin period")

The previous period of unbalanced growth generated pressures for a revised strategy. Political pressures from the countryside derived from the growing income gap between urban and rural populations. Economic pressures derived from the balance of payments difficulties due to the heavy reliance on imported inputs for the export industries (Hart-Landsberg: 189-90). Competitive pressures in export markets derived from increasing protectionism, declining demand for Korea's light manufactured exports during the recession in advanced countries, and the rising competition from lower-wage exporters.

In response to these pressures and conditions the development strategy shifted dramatically. A shift toward the revitalization of agriculture took place through credit, higher guaranteed grain prices, and rural-based industries for off-season employment in the early 1970s.

In industry emphasis shifted to the creation of highly skilled labor for new capital-intensive, heavy and chemical industries (HCI). The HCI firms supplied the light manufacturing export firms with locally produced inputs, especially of chemicals, petrochemicals, iron and steel, and electronics, all in order to maintain Korea's competitive advantage. Control of the banking system enabled the state to create "policy loans" for
targeted industries in the HCI sector, especially the chaebols (large Korean conglomerates).

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Labor absorption reached a turning point in 1975, resulting in pressures for wage increases. The state responded by the restriction of labor union rights and by police repression (Hart-Landsberg: 183, 197-8). Wage pressures induced the new HCI firms to become more capital-intensive and reliant on higher technology.

Multinationals and chaebols benefited from tariff protection, the former providing investment capital and new technology without adding to the debt service.

1979-1981: Chun (military government)

The second oil shock and the renewed recession in advanced countries provoked a recession and political turmoil in Korea (Hart-Landsberg: 192). The HCI drive of the previous period promoted the chaebol firms through policy loans resulting in increased government foreign borrowing and in over-investment in under-utilized industrial capacity (Hart-Landsberg: 193). Reliance on multinationals to provide modern technology also worsened technological dependence and balance of payments problems (Hart-Landsberg: 194). Korea's massive construction projects in the Middle East had the effect of pushing up manufacturing wages at home. As wage increases outpaced productivity increases, light industry faced a squeeze on profits (Hart-Landsberg: 195) and a loss of competitiveness in export markets.

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Park's responses to these problems triggered a recession and massive protests by labor, farmers, students, and church organizations (Hart-Landsberg: 195, 212). Park declared martial law and then planned a "major military offensive". To avoid a bloodbath, the head of the KCIA assassinated Park in October 1979. To foreclose any democratic opening, Major General Chun Doo Hwan took control in a military coup at year's end (Hart-Landsberg: 213-214).

Consolidating state power under martial law, Chun set the stage for new economic policies by repressing the political opposition, by taking over the mass media, and by controlling the labor unions (Hart-Landsberg: 219). This repression forced wages down while allowing productivity to rise, "a central part of Chun's strategy for restoring South
Korea's economic competitiveness as well as its attractiveness to multinational capital" (Hart-Landsberg: 221).

**1983-86: Chun (military government)**

The catchword of this period was "liberalization": market, import, and financial. Some of the import restrictions that had been in place during the 1973-78 HCI drive to protect infant industries were reduced. Complementing this was a selective privatization of many state firms, retaining those in strategic positions to influence the market and provide critical links between branches. More significant yet was the liberalization of the financial system: privatization and deregulation of national banks (Hart-Landsberg: 233). Chun's intentions were to "weaken chaebol power and to force them to become more efficient producers", by forcing them to sell off their non-productive investments to meet credit obligations and to reinvest according to state priorities (Hart-Landsberg: 234).

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Contrary to Chun's intentions, the chaebol took control of many financial institutions and grew by merging and buying out other firms (Hart-Landsberg: 234-5). Policy loans were reduced in importance while small and medium export firms in light manufacturing regained access to credit on terms equal to the chaebol, that is based on their record of export performance.


The rapid growth of the economy in the previous period has been attributed to the "three lows", low oil prices, low interest rates, and a low value of the won (Hart-Landsberg: 237), plus low wages. As these "lows" began to fade, sustained growth was at risk. The wave of strikes beginning in 1987 resulted in a rapid rise in wages, long held down by Chun's repressive labor policies (Hart-Landsberg: 238). Chaebol gains from the previous period's growth were being placed in speculative ventures such as real estate, rather than in improving Korea's international competitiveness (Hart-Landsberg: 238-239). The newly elected Roh government in 1988 faced the challenge of maintaining rapid growth.

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The strategy may be summarized as follows: "...the state still remains committed to an economy driven by chaebol production for export. Its short-term strategy for renewed growth has largely been directed toward forcing chaebol investment into productive core business activities; lowering the value of the South Korean won; reducing imports; and
driving down wages" (Hart-Landsberg: 252). Control over wages has been exercised by imposing penalties on firms failing to adhere to guidelines and by police repression of strikers. Policy instruments included subsidized loans to chaebols and incentives for multinationals to provide new high technologies (Hart-Landsberg: 253).

KOREA: INITIAL VALUES FOR POLICIES, FDI, AND STATE EFFECTIVENESS

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IV. THE RESULTS

The seven Argentine cases and the six Korean cases are identified in the following tables by their span of years. Each case is located in the table according to its predicted tendency and observed tendency. The predicted tendency derives from three sources: 1. the model; the thirteen causal links between the variables in the causal model; 2. the initial values of each case (key period); for the five policies, for state effectiveness, and for the three external shocks; 3. the method: qualitative causal path analysis whose logic combines the causes to generate predicted effects on development. The observed tendency derives from data which have been averaged for each key period (case) and compared with the average of the preceding period.

The tables should be read focusing on the principal diagonal which contains the confirmed (correctly predicted) cases. The cells in the principal diagonal are: increase-increase, stability-stability, decrease-decrease. The off-diagonal cells contain the anomalies, the incorrectly predicted cases.

There are high rates of confirmation in the prediction of growth: five out of seven cases for Argentina and six out of six cases for Korea (Tables 1 and 2). The rates of confirmation in the prediction of equality are nearly as high: five out of seven cases for Argentina and four out of six cases for Korea (Tables 3 and 4). However the rates of confirmation in the prediction of liberty are disappointingly low: three out of seven for Argentina and only one out of six for Korea (Tables 5 and 6).

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**TABLE 1: GROWTH IN ARGENTINA**

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**PREDICTED TENDENCY**

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**TABLE 2: GROWTH IN KOREA**

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**PREDICTED TENDENCY**

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**TABLE 3: EQUALITY IN ARGENTINA**

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**PREDICTED TENDENCY**

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### TABLE 5: LIBERTY IN ARGENTINA

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### TABLE 6: LIBERTY IN KOREA

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Anyone used to cross-tabulations is likely to ask whether our results are statistically significant. Our case-oriented analysis, however, is not a statistical technique. We are searching for patterns of invariance between causes (combined to produce predicted tendencies) and effects (observed tendencies) much in the tradition of J. S. Mill (Ragin, 1987: 39-40, 51-52). If our data were reliable and the indicators valid we would be required either to account for the anomalies or to reject the model. Our data, however, are not completely reliable for the indicators of growth, equality, and liberty. Gurr's data which we used for our indicator of liberty, for example, were collected and coded by one researcher and not subjected to any test of reliability (Gurr: 105-6). Our decision to average all years in a key period may not reflect the most appropriate time lags between causes and effects, casting some doubt on the validity of the indicators. Our coding of the five policies and state effectiveness (high and low) for each key period also is subject to error.

The formulation of predicted tendencies on the basis of the QCPA technique embodies a particular assumption, namely that all five policies are of equal importance. Perhaps some policies deserve more weight than others. In a similar way, the external shocks were weighted the same as a policy. Perhaps the weight of the shocks should be greater and should differ between Korea and Argentina.

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The causal model and the thirteen causal links making up the sub-models were formulated on the basis of past research findings and some untested theoretical expectations. If any sign (+ or -) in a causal link is incorrect, the predicted period tendency might be affected.

As may be apparent from our summaries of the seven Argentine and six Korean cases, there are some unique events and conditions affecting the observed tendencies yet escaping our model. In Argentina, for example, the Cordoba uprising in 1969 and the death of Peron in 1974 had far-reaching impacts on development. In Korea the assassination of Park in 1979 and the Kwangju massacre in 1980 also influenced developmental tendencies.

In our dialogue between theory and data that is called "analytic induction" we have already responded to the initial results (not reported here) by making some modifications that reduced the number of anomalies. For policy 1 we introduced the distinction between the influence of FDI stock and flow. Also, after trying several alternatives, we included the influence of state effectiveness on policy 5 for growth and equality. These modifications reduced the number of anomalies and so were incorporated into the model.

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Conclusion

It is fair to conclude on the basis of the above results and qualifications that our model accounts satisfactorily for growth and equality in the divergent development of Argentina and Korea. The dynamics of liberty elude the predictive capacity of our model. In the light of these results we now turn to the questions and controversies mentioned at the outset.

With respect to the five points that structure recent research on divergent development our contribution may now be summarized.

1. The choice of development strategy has already been researched adequately and our study has not addressed this question.

2. Among the many conditions which influence the effectiveness of state intervention is state autonomy from the dominant class. Our results (rate of confirmation) were improved by including state effectiveness in our model. This provides needed empirical evidence for the relevance of effectiveness in the explanation of divergent development.

3. The inclusion of several conditions of the world-system in our model has enhanced the rate of confirmation. In addition to the three external shocks, our model includes dependency relations and the presence of multinational corporations.

4. The importance of development strategies in the explanation of divergent development is an inescapable conclusion drawn from our results. The policy changes from one key period to another are correlated with changes in growth and equality.

5. Our model incorporates certain suppositions about compatible and incompatible aspects of development. The results confirm these suppositions, though with reservations concerning liberty. In Argentina growth tends to be incompatible with equality and liberty. In Korea liberty tends to be incompatible with growth and equality. At least some of the reasons may be gleaned from the summaries of the key periods (see "The Cases").

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Our results shed some light on the controversies over theory in the explanation of divergent development. Our model includes a dependency sub-model, representing many central propositions of neo-dependency approaches. The model also includes an interventionist sub-model, similarly representing many central propositions of neo-liberal approaches. Since our model combines both approaches and since the model is confirmed
equally in an East Asian NIC and a Latin American NIC, we conclude that there is no need for a different theory for each region.

The controversies over the practice of development focus on the supposed superiority and replicability of the East Asian model. Over the last three decades Korea has caught up to Argentina's level of economic development. Korea's superiority in equality and liberty is less certain. Both countries have adjusted their policies continually from one key period to the next in response to changing domestic and international conditions. Over the last three decades the policies of these two countries have converged to a great extent (see the table of initial values in "The Cases"). In consequence we question the existence of a definitive East Asian or Latin American model to be exported. We prefer to believe that third world countries have much to learn from the experience of both these regions.

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**APPENDIX 1: Qualitative Causal Path Analysis (QCPA)**

This alternative method of causal path analysis uses dichotomous qualitative data. Below are the definitions of the terms and the steps in the calculation of predictions for our causal model.

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**Definition of Terms**

1. **a path**: a series of causal links (causal propositions) in the form of a chain (path) which ends with the dependent variable. The simplest path consists of one link.

2. **an initial value**: the value (high or low) of the first independent variable of the path.

3. **the direction of the path**: the sign (+ or -) of the path which indicates the effect on the dependent variable (at the end of the path) of a cause (independent variable) at the beginning of the path.

4. **the tendency of the path**: the direction of the path in combination with the initial value produces a change (increase or decrease) in the dependent variable.

5. **the tendency of a policy**: the tendency of the majority of the paths emanating from a policy is the tendency of a policy.
(6) the tendency of the period: the tendency of the majority of all policies ending in the same dependent variable is the tendency of the period (for the dependent variable).

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Steps in the Calculation of Predictions for our Causal Model

(1) the identification of a path. One juxtaposes the numbers that designate the causal links of the chain.

Example: policy 1 is linked to growth by three different paths, 1-6-11, 1-7-8-10, and 1-7-9-11.

(2) the initial value. One assigns an empirical value, "high" or "low" to the variable at the beginning of the path.

Example: policy 1 "foreign investment and tariff policy" may have a "low" value, meaning that tariffs are low and foreign investment is promoted in export platforms.

(3) the direction of the path. One multiplies the signs of the links that make up a path. The multiplication rule is:

(+ ) multiplied by (-) = (-)  
(+ ) multiplied by (+) = (+)  
(- ) multiplied by (-) = (+)

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Example: for policy 1 (for growth in Latin America) the three paths have directions as follows:

1-6-11: (+)(+)(+) = (+)  
1-7-8-10: (+)(+)(-)(+) = (-)  
1-7-9-11: (+)(+)(+)(+) = (+)
(4) the tendency of the path. The direction of a path is expressed in several equivalent ways.

For a positive path: the more the X, the more the Y; the less the X, the less the Y.

For a negative path: the more the X, the less the Y; the less the X, the more the Y.

In order to determine the appropriate expression, one must refer to the initial value. If the initial value is "high", the verbal formulation begins with "The more the X". If the initial value is "low", the formulation begins with "The less the X". The remainder of the verbal formulation depends on the direction of the path. The complete formulation indicates the tendency of the dependent variable at the end of the path to increase or to decrease.

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Example: for policy 1 linked to growth, the first path, 1-6-11, has a positive direction and its initial value is "low". The formulation becomes: the lower the tariffs and the more the promotion of export platforms, the less the growth. The tendency here is a decrease in growth (see Figure 1).

(5) the tendency of the policy. The tendency of a policy is the tendency of the majority of all the paths linking a policy to the dependent variable.

Example: for policy 1 linked to growth, let us suppose that the initial value of all three paths is "low". Then the tendency of the first path is "decrease". The tendency of the second path is "increase" since this path has a negative direction. The tendency of the third path is "decrease" since this path has a positive direction. Now the majority of these three paths has a tendency to "decrease" so this is the tendency of policy 1.

(6) the tendency of the period. The tendency of the period is the majority of the tendencies of all the policies ending in the dependent variable during the period.

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Example: since we are examining five policy variables, each will have a tendency to increase or decrease growth. If three of the five, four of the five, or all five have the tendency to "increase", the majority tendency will be an "increase" in growth. When an external shock is included, the period tendency will be the majority of the six. A tie of three "increases" and three "decreases" results in a period tendency of "stability". This prediction means that there is no change in growth from the previous key period.
APPENDIX 2: Special Considerations in Some Predictions

The Influence of the three External Shocks

During three key periods external shocks have influenced the development (growth, equality, and liberty) of Argentina and Korea. These shocks have direct impacts on two vulnerable conditions within the dependency sub-model: debt dependence and foreign exchange reserves. If each of these variables can be considered as the beginning of a causal path leading to development, then the initial value of each path will change in accordance with the characteristics of each shock. The majority tendency of the shock paths, then, is included with the five policy tendencies in determining the majority tendency for development in the key period. Applying the reasoning about the influence of external shocks already presented in the section on the causal model, below is an example of the calculation procedures.

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EXAMPLE. For the growth model of Korea in 1973, the external shock had two impacts: it lowered debt dependence and it raised foreign exchange reserves. There are three paths involved altogether.

Two paths from debt dependence to growth:

Path 8-10: initial value = low, sign of path = (-)(+)= (-), tendency of path = increase

Path 9-11: initial value = low, sign of path = (+)(+)= (+), tendency of path = decrease

One path from foreign exchange reserves to growth:

Path 10: initial value = high, sign of path = (+), tendency of path = increase

The 1973 shock tendency is the tendency of the majority of the three path tendencies, an increase in growth.

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Policy 1: Special Considerations on Foreign Direct Investment
In the discussion of "dependent associated development" in the "model" section, we noted that there were two often opposing consequences of dependence. (1) The flow of foreign direct investment (FDI) tends to increase growth in the short term. (2) The stock of FDI tends to decrease growth in the long term. Our model includes tendency (1) as path 1-6-10 and path 1-7-9-11 and tendency (2) as path 1-7-8-10. As noted in the model section, the predominance of the tendency to increase growth depends on the continuing flow of FDI, which masks the long term negative influence of accumulated foreign capital stock. In view of these considerations, when the flow of FDI is "high", the increase tendency (1) will prevail. When the flow of FDI is "low", the decrease tendency will prevail in the policy 1 tendency.

Policy 2: Special Considerations on Agriculture Policy

Agriculture policy influences the level of food dependence. The promotion of agriculture will reduce the need for food imports and/or increase the quantity of agricultural exports when food self-sufficiency has been reached. The reduction of food dependence will increase the reserves of foreign exchange because less food will be imported and/or more agricultural products will be exported. This is the meaning of link 8. There is no such evident causal relation between food dependence and capital intensity/industrial concentration. For this reason, link 9 will be omitted from policy 2, leaving only one policy path: 2-8-10.

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The Influence of State Effectiveness

The effectiveness of state intervention influences the formulation and implementation of all five policies. In many ways, effectiveness already is reflected in the model. In any key period, depending on changing requirements, the state may alter its policies (from high to low, or the reverse), showing "flexibility". Policy 3 is "selective" in targeting particular groups of firms with subsidies. "Promotion" versus regulation figures in the use of incentives instead of controls for foreign investment (policy 1) and agricultural production (policy 2), for example. The "coherence" of a set of policies is reflected in the majority tendency of the five policies within a key period. The prediction for each key period depends on this majority tendency.

Policy 5-Growth

The level of state effectiveness acts as a contingency which mediates the relation of public investment policy to growth. Link 5G in the model has three possibilities: 1. privatization unconditionally promotes growth; 2. expansion of state enterprises promotes growth when effectiveness is high; 3. expansion of state enterprises inhibits growth when effectiveness is low. Our reasoning is that unless public investment programs are well
conceived and managed, they contribute little to inter-sectoral linkages or to necessary infrastructure.

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**Policy 5: Equality**

State effectiveness mediates the relation of wage policy to equality. Link 5E in the model has four possibilities: 1. high wage setting promotes equality unconditionally; 2. low wage setting reduces equality when effectiveness is high; 3. low wage setting reduces equality when effectiveness is low and when inflation is high; 4. low wage setting promotes equality when effectiveness is low and when inflation is low. Our reasoning is that organized labor naturally encourages high wage setting but opposes low wage setting. The state will succeed in reducing wages when it is effective. When the state's effectiveness is low it will succeed in reducing wages only when it allows a high rate of inflation to erode real wages. When the rate of inflation is low this wage-price scissors will not operate, and an ineffective state will not be able to compress wages over the opposition of organized labor.

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**APPENDIX 3: A Prediction Form (an example)**

**Prediction Form for Growth in Latin America**

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<thead>
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<th>key period</th>
<th>1976-82</th>
</tr>
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<td>path tendency</td>
<td>policy</td>
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<tr>
<td>tendency value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1-6-11 (+)(+)(+)/(+)</td>
<td>(a) DECREASE</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1-7-9-11 (+)(+)(+)(+)/(+)</td>
<td>(a) DECREASE</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1-7-8-10 (+)(+)(-)(+)/(+)</td>
<td>(b) INCREASE</td>
<td></td>
</tr>
</tbody>
</table>
H
DECREASE

FDI: H-(a), L-(b)

L
DECREASE

2-8-10
(-)(-)(+)/(+)

3-11
(+)(+)/(+)

4-10
(+)(+)/(+)

5
(-)/(-)

INCREASE

E = H: H - I
E = L: H - D

EXTERNAL SHOCKS (1973, 1979, 1982)

H
DECREASE

8-10
(-)(+)/(-)

9-11
(+)(+)/(+)

L
DECREASE

10
(+)(+)/(+)

state effectiveness

the number of "increases" --- 1
the number of "decreases" --- 5

PREDICTION OF PERIOD TENDENCY: DECREASE

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APPENDIX 4: Source References for Policies, FDI, and State Effectiveness

ARGENTINA:

1959-62
1. Niosi: 89, 96
2. Niosi: 86; P-R: 29
3. Niosi: 91
4. Niosi: 86
5G. Niosi: 90
5E. Niosi: 98, 99
5L. Niosi: 100

E.

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1963-65
1. Niosi: 142, 145
2. Niosi: 140; P-R: 29
3. Niosi: 144
4. Niosi: 145
5G.
5E. Niosi: 138, 143
5L. Niosi: 156
E. Niosi: 142 (=L), 155 (=H)

1966-72
1. Niosi: 162, 166
2. Niosi: 164 (=L), 167 (=H); Peralta-Ramos: 49-50 (=L until 1971)
3. Peralta-Ramos: 50, 58; Niosi: 166, 167
4. Peralta-Ramos: 77; Niosi: 162, 168

5G. Canitrot (1978): 9; Niosi: 162

5E. Peralta-Ramos: 50, 51, 61; Niosi: 163, 165

5L. Peralta-Ramos: 50; Niosi: 185-87

E. Niosi: 188-89

1973-75

1. Peralta-Ramos: 7

2. Peralta-Ramos: 61, 63; Canitrot (1978): 18, 39


4. Peralta-Ramos: 77

5G. Canitrot (1978): 19, 25

5E. Peralta-Ramos: 64; Canitrot (1978): 16, 33, 36

5L. Peralta-Ramos: 67 (labor control by union hierarchy)

E.

1976-82

1. Peralta-Ramos: 74; Canitrot (1978): 917; Peralta-Ramos: 76-77 (=H for select large firms)

2. Peralta-Ramos: 61, 73-4 (=L), 78-9 (=H); Canitrot (1980): 917, 923 (=L after 1978)

4. Peralta-Ramos: 75; Canitrot (1980): 924
5G. Canitrot (1994): 78 (=L)
5E. Peralta-Ramos: 72; Canitrot (1980): 917
5L. Peralta-Ramos: 72
E. Canitrot (1980): 924

1983-88
1. Peralta-Ramos: 88 (=H), 95, 104 (=L)
2. Peralta-Ramos: 88, 96, 100 (=H: 1985-87)
3. Peralta-Ramos: 88 (L=subsidies to small and medium firms)

5G. Peralta-Ramos: 103; Smith: 14, 23
5E. Peralta-Ramos: 98 (=L)
5L. Peralta-Ramos: 122
E. Peralta-Ramos: 109; Smith: 18, 33

1989-91
2. Peralta-Ramos: 139, 153
3. Peralta-Ramos: 149-52

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5E. Peralta-Ramos: 149, 151; Canitrot (1994): 90

5L. E.

FDI
1959-70: Curhan, Davidson, and Suri: 34; Sourrouille: 21
1970-92: World Bank
1966-70: Sourrouille (mostly reinvested profits, little new inflow)
1963-65: Niosi: 146 (=L)

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1966-72: Niosi: 170 (=L)

INFLATION

Mallon and Sourrouille: 13

FULL REFERENCES FOR ABOVE


KOREA:
1961-64
1. Yang: 244
3. Choi: 33; Lanzarotti: 135 (1963-80)
5G. Sakong: 79-81; H-L: 72; Song: 118

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5E.

5L.

E. Shafer: 130-1; Cheng: 158; Koo: 172-5

1965-72
1. Yang: 245-6, 254, 247; Frank, Kim, and Westphal (1975): 62
4. Sakong: 241-2 (adjusted exch rate)
5G. Sakong: 79-81; Hart-Landsberg: 72-3; Song: 118

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5E.

5L.
E. Shafer: 130-1; Koo: 172-5

1973-78

1. Hart-Landsberg: 86-7

2. Kihl and Bark: 50, 55, 60; Moore: 59; Hasan: 160-3

3. Choi: 37; Sakong: 57, 245; Westphal (1979): 266-7

4. Kuznets: 92 (real exch. rate, 100=1972)

5G. Sakong: 79-81; Hart-Landsberg: 75-6; Song: 118

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5E.

5L.

E. Shafer: 130-1; Koo: 172-5

1979-81

1. Hart-Landsberg: 242


3. Choi: 52; Sakong: 57, 245

4. Kuznets: 92 (real exch. rate)

5G. Sakong: 79-81; Song: 118

5E. Kuznets: 71, 139

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5L.

1982-86
1. Hart-Landsberg: 242
2. Hart-Landsberg: 257 (=L), 258
3. Choi: 42-44; Sakong: 57, 245
4. Kuznets: 92 (real exch. rate); Hart-Landsberg: 237
5G. Sakong: 79-81; Hart-Landsberg: 76; Song: 118
5E. Kuznets: 71

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5L.

E. Shafer: 138-9; Koo: 177-8; Hart-Landsberg: 229, 231-2, 241

1987-91
1. Hart-Landsberg: 243-4
2. Hart-Landsberg: 258
3. Choi: 51-2; Sakong: 57, 245
4. Kuznets: 92 (real exch. rate); Hart-Landsberg: 244 (=H)
5G. Sakong: 79-81
5E. Kuznets: 71; Hart-Landsberg: 252-3 (=L)

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5L. Hart-Landsberg: 275-80
E. Shafer: 141; Hart-Landsberg: 241 (=L)

FDI
1960-72 Jo: 5, 100; Hasan: 63-5
1970-92 World Bank

Inflation
1960-88 Song: 60-61

FULL REFERENCES FOR ABOVE


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World Bank (1994) World Tables on CD ROM.
Yang, Yoonsae (1972) "Foreign Investment in Developing Countries: Korea", in Peter Dyrsdale, ed., Direct Foreign Investment in Asia and the Pacific, Toronto: University of Toronto, pp. 242-257.

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APPENDIX 5: Indicator Definitions and Data Sources

GROWTH

Definition of Indicator

Annual percentage change in gross domestic capita per capita.

Gross domestic product at constant prices in US dollars is divided by the total population for the same year

The percentage change is calculated as the difference between consecutive years divided by the prior year and the quotient multiplied by 100.

Sources of Data

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Argentina


for 1965-92; World Bank, The East Asian Miracle, on CD Rom

Korea


for 1965-92; World Bank, The East Asian Miracle, on CD Rom

EQUALITY


Definition of indicator

The ratio of the index of the real wage per worker in manufacturing to the index of the value added per worker in manufacturing. In other words, the ratio of the average real wage index to the productivity index in manufacturing. This ratio is multiplied by 100.

The average real wage index in manufacturing is defined as the average nominal wage divided by the cost of living index. The productivity index is defined as the value added (sectoral product) in manufacturing (in constant prices) divided by the number of salaried workers employed in manufacturing.

Sources of data

Argentina


Korea


LIBERTY (Gastil and Gurr)

Definitions of two indicators
1. Gastil: Our indicator is a combination of Gastil's measure of civil liberties and political rights. Because his measures vary from low liberty (7) to high liberty (1) we added his measures and subtracted the sum from 15. This gives a maximum of 13 (high liberty) and a minimum of 1 (low liberty).


2. Gurr: Our indicator is a combination of Gurr's measure of democracy and autocracy. Since the two are coded independently, they may be combined. We subtract the measure of autocracy from the measure of democracy. Since each varies from 0 to 10 (maximum), our indicator varies from least liberty (-10) to most liberty (+10).

"There are three essential, interdependent elements of democracy... One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders, Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil rights to all citizens... We do not have coded data on civil liberties. Instead our operational indicator of democracy is derived from codings of the competitiveness of political participation, the openness of executive recruitment, and constraints on the chief executive... Autocracies sharply restrict or suppress competitive political participation. Their chief executives are chosen in a regularized process of selection within the political elite, and once in office they exercise power with few institutional constraints". Source: [Page 204]
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comment: It is worth noting that there is a high correlation between Gurr's and Gastil's measures, evidence of the validity of both indicators. Using the very same indicators as our study, Lane and Ersson state: "It seems justified to conclude that the Gurr and the Gastil/Freedom House indices measure the same phenomena because they are reliable in terms of different time periods as well as in different sets of countries". Source: Jan-Erik Lane and Svante Ersson, Comparative Politics: An Introduction and New Approach. Cambridge, UK: Polity Press, 1994, p. 101.
Sources of data for the indicator based on Gastil's measure:


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for the indicator based on Gurr's measure:

Argentina and Korea: 1955-1986

Polity II dataset, Inter-University Consortium for Political and Social Research. Data as described in Gurr, Jaggers, and Moore (1990).

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**APPENDIX 6: Data Set**

**GROWTH**: change in per capita gross domestic product

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**EQUALITY**: ratio of real wage index to productivity index
LIBERTY: political liberties and civil rights (Gastil)

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LIBERTY: democracy minus autocracy (Gurr)

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Ricardo French-Davis and Stephany Griffith-Jones, eds. 1995.  
Coping with Capital Surges: The Return of Finance to Latin America  
ISBN 1-55587-562-9, $49.95 (hardcover)  
ISBN 1-55587-581-5, $29.95 (paper)  

Reviewed by Luis Llambi  
Centro de Antropología,  
Instituto Venezolano de Investigaciones Científicas (IVIC),  
Caracas, Venezuela  

I acknowledge having mixed feelings reading this book. Nevertheless, I strongly recommend it. My concern, however, is not so much about what the book says but what it is not able, or willing, to say. Most of the book was written in a time of massive capital inflows to selected Latin American countries from 1989 to 1994. The book reflects the general euphoria among government officials, multilateral agencies, and private investors in relation to the resurgence of capital inflows to the so-called emerging markets of Latin America. The 1982 debt crisis, they thought, was over. Structural adjustment programs backed up by the IMF and the World Bank were sending the proper signals to prospective capital investors. The signing of NAFTA and its possible extension to the rest of Latin America promised a new scenario of economic integration between the rich "North" and the underdeveloped "South." The book's main objectives are to explain the sources of these financial flows; to identify their effects on short-term macrostability and long-term economic growth for recipient countries; and to discern the policy implications in both source and recipient countries. Its main concern is how to avoid the risks of real exchange appreciation (undermining export-oriented development strategies) and short-term speculative investments (jeopardizing long-term sustained growth) created in the recipient countries by this capital inflow boom. But the book also reveals a concern for the danger of so-called recurrent systemic crises in this recently globalized financial scenario.

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Yet, as the preface and concluding chapters recognize, at the end of 1994 the economic conjuncture started to shift dramatically. Short-term capital inflows began to dry up, capital flight to the North restarted, and there were fears of a backlash in the multilateral agencies-backed structural adjustment programs. What went wrong? The Zapatista uprising of January 1, 1994, the same day NAFTA was signed, sent a powerful message to the world that economic integration between an impoverished South and a rich North could not be successfully accomplished without paying enough attention to the destiny of a growing population of "losers" as a result of the new economic model. Furthermore, on December 20, 1994, the peso devaluation - "the first large crisis of our new world of global financial markets" as IMF general manager Michael Camdessus aptly put it - and the waves of instability it spurred followed by Latin American financial markets (the so-
called Tequila effect) threatened again to undermine confidence in short-term economic stability and long-term sustained economic growth.

The book is the fourth in a series of policy-oriented research studies funded by IDRC (the International Development Research Centre of Canada). The book's structure reflects the above-stated objectives. The first part analyzes the magnitude, composition and outlook for future capital flows from three different sources: the US, Europe, and Japan. I found Roy Culpeper's chapter on the role of North American investors particularly insightful in explaining the connections between the recent capital inflows to Latin America and the historical development of world capital markets. By contrast, the chapters on the links between the European (Griffith-Jones) and Japanese (Chuhan and Jun) capital markets and recent capital upsurges in Latin America are less convincing.

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The second part of the book deals with the macroeconomic impacts and policy responses of the economic authorities of three Latin American countries: Chile, Mexico, and Argentina. The authors provide valuable insiders' looks at the variegated and sometimes diverging policies which the economic authorities of these three countries have pursued in moderating the impacts of capital inflows on domestic macroeconomic stability. I found particularly revealing the chapter on Chile (by Ffrench-Davis, Agosin, and Uthoff), usually perceived as a stronghold of financial deregulation and market-led economic policies, in its analysis of the flexible and pragmatic regulatory approach followed by its economic authorities after 1987 when portfolio investments threatened to destabilize its basic macroeconomic equilibria.

I especially liked the last chapter about policy recommendations (by Devlin, Ffrench-Davis, and Griffith-Jones). This chapter provides a compelling rationale for the need of regulation of capital markets at various levels. The return of private capital flows to Latin America is to be welcomed, due to their potential positive contribution to the recovery of economic activity in the region. Yet to make the mutual benefits from these flows sustainable, governments in both source and recipient countries should take appropriate measures. Among the measures discussed are better monitoring of the flows and appropriate, as well as coordinated, macroeconomic measures.

The book does a good job of unveiling some of the problems facing recipient countries with capital inflows. However, at the book's end one is left with the idea that it does not tell the whole story. After all, has the debt crisis for the heavily indebted countries of Latin America passed? What is the final balance between these short-term capital inflows and capital outflows resulting from new indebtedness? What are the ultimate effects of capital liberalizations on variables such as wages, employment, poverty, and nutrition? Probably the first question with which one should start is, how truly sustainable are the structural adjustment programs on which the whole inflow of short-term capital flows is based?
Ping-Chun Hsiung
Living Rooms as Factories: Class, Gender and the Satellite Factory System in Taiwan

Reviewed by
Jennifer Bickham Mendez
Department of Sociology, University of California-Davis, Davis, California, USA

"Living rooms as factories," the slogan of a Taiwanese government-sponsored community development program that promotes married women's participation in the work force as homeworkers, captures nicely the interconnections of patriarchal and capitalist interests in controlling women's productive labor. It makes a fitting title for Ping-Chun Hsiung's investigation of the daily reality of Taiwan's "economic miracle" as viewed through the life experiences of married women workers in the satellite factory system. Exploring the reconciliation of the "potential conflict between the capitalists' interests in having plenty of cheap labor and the patriarchal demand for the unconditional service of full-time housewives in the home" (p. 15), Hsiung uses ethnographic, as well as statistical data, to analyze the interplay of macro and micro socioeconomic forces in Taiwan during its transformation from an agricultural to an export-oriented manufacturing economy.

Like many developing countries, Taiwan has seen the establishment of large multinational corporations in export processing zones. In contrast with many such nations, however, Taiwan's uniqueness lies in its strong reliance on small-scale, family-centered subcontracting factories outside of these zones. Indeed, Hsiung contends that these satellite factories have been at the core of the country's economic accomplishments.

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The study incorporates three levels of analysis: the sociopolitical environment of the satellite factory system (including an analysis of the state as a capitalist agent), the organizational structure of the satellite factory system as part of the country's export sector, and the micro-level processes that occur in the day-to-day life of workers and owners on the shop floor. In the tradition of feminist research, Hsiung treats the gendered division of labor within both the family and the factory. In this manner, her project contributes to the ongoing feminist intellectual project of demonstrating the blurred nature of the split between public and private spheres.

In particular, Hsiung is interested in the changes that the shift to manufacturing has brought in the everyday lives of married women, an understudied group in research on gender and global production. Hsiung finds that although the first generation of Taiwan's satellite factory workers tended to be single women, family-oriented factories have increasingly relied on the paid and unpaid labor of married women since the 1970s. While the satellite system has offered men the opportunity to become owners of small
factories, this opportunity rests on the unpaid labor of female family workers or casual homeworkers. Thus, the male "heads of household" can strengthen their authority within the family by becoming the owners of the means of production, and the foundations of the patriarchal family system are simultaneously reinforced.

As industrialization has unfolded in Taiwan, women are not only molded into dutiful wives, mothers and daughters-in-law, but are also transformed into productive laborers. Husbands expect their wives to work in factories as paid or unpaid laborers, making the satellite factory system "the latest version of the Chinese family -- a locus where capitalist logic and patriarchal practices intersect" (p. 13). In this new household economy a woman's procreative capacities are not enough to ensure her financial security. Hsiung, therefore, calls for an amendment to Margery Wolf's notion of the "uterine family" as a financial support system for married women in Taiwan.

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Hsiung's analysis of the labor process within satellite factories outlines the ways in which factory owners utilize work schedules, wage systems and boarding arrangements as forms of labor control. Oppressive labor practices are combined with close surveillance on the shop floor, as factory owners or their family members often work on the shop floor, closely monitoring the labor process and setting the pace of production. In addition, factory owners employ preexisting family and kinship structures as well as elements of ethnic pride to control workers. Often labor disputes are handled as familial matters, thus legitimizing the decisions of the factory owner. This practice, however, is also employed by the workers in labor disputes. Factory owners are called upon as family members who are responsible for the well-being of other members of the family. Thus, satellite workers use the logic of paternalism against factory owners.

Hsiung spent three months working in and visiting satellite factories that produced wooden jewelry boxes. Her work contributes to Burawoy-related literature on the labor process as well as research regarding the gendered dynamics of global capitalism and production politics. Although Hsiung briefly introduces the case of women workers of the Taiwanese factory system as part of a global trend of transnational production, she frames the study almost completely in terms of prior research conducted on Taiwan. In this manner, Hsiung is more concerned with filling the void in research on women factory workers in Taiwan, demonstrating the gender-blindness and biases of prior research treating Taiwan's small factories and updating ethnographic depictions of Taiwanese families than with drawing theoretical connections between the Taiwanese case and factory systems in other areas of the world. Thus, this work is valuable as a first-time analysis of the gendered aspects of the organization of Taiwan's satellite factory system and the labor process within it as well as an investigation of the experience of married women within this system. It lacks, however, an in-depth theoretical treatment of the how this case fits into the larger picture of the global restructuring of capitalism.

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For example, work on gender and industrialization in Latin America and other areas of the world reveals certain commonalities and distinctions with the case presented by Hsiung, and the absence of comparison is disappointing. Hsiung does not explore the similarities between the organization of production of the satellite system in Taiwan and cases like the mini-maquila system in rural Colombia (Cynthia Truelove, "Disguised Industrial Proletarians in Rural Latin America," in Kathryn Ward, ed., WOMEN WORKERS AND GLOBAL RESTRUCTURING, 1990). Another fruitful point of comparison would have been trends in work-force composition in other areas of the world where export-oriented production has existed for approximately the same amount of time, such as northern Mexico (cf. Susan Tiano, PATRIARCHY ON THE LINE, 1994). Sadly, Hsiung does little to remedy the lack of rigorous comparative analyses on gender and industrial work.

The most compelling parts of this book are those devoted to the ethnographic depictions of married women's experiences of transformation into productive laborers and their day-to-day lives as workers on the shop floor. Unfortunately, Hsiung does not turn to this part of her analysis until midway in her book. I found her consideration of worker resistance to be one of the most interesting sections of the book. Adding to the accumulated body of knowledge regarding nonunion resistance on the part of female factory workers, she picks apart the social relationships which constitute the labor process in satellite factories. Hsiung penetrates the "personal" guise of worker-owner relationships to reveal calculated tactics of worker control and resistance.

For example, one common tactic directed at the factory owner is "wrangling": rapid, verbal battles in which opponents attempt to shoot the other down by shaming them or by demonstrating superior verbal prowess. Victorious wrangling sessions build solidarity among workers and may even have material results such as increased wages. In this manner, Hsiung's analysis of workers' resistance to the labor process represents yet another challenge to the notion of female factory workers as docile, passive targets of capitalist and patriarchal control.

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Hsiung's depiction of worker complicity and resistance would be much improved, however, if she had employed a more in-depth cultural analysis of these practices and their meanings. Such an analysis would have imparted to the reader the cultural context in which the meanings of these practices are deployed, providing a richer understanding of the dialectic of worker resistance/control within the satellite factory setting. Hsiung glosses over women workers' use of wrangling as a collective bargaining technique and this is also disappointing. The reader is left wondering about the theoretical implications of this more-collective mode of negotiation.
In addition to exploring the daily life of the shop floor, Hsiung moves her analysis to the state level, demonstrating how state policies and patriarchal norms are mutually supportive. Government policy has defined women's productive and reproductive responsibilities through community development programs, such as the "Mothers' workshops" and the "Living Rooms as Factories programs." These programs are means by which the state has reconciled the conflict between female labor force participation and women's dependent role within the family by "instructing them to remain morally obligated to contribute to Taiwan's economic development through fulfillment of their traditional duties in the family..." (p. 15). In this manner, the government reinforces women's subordinate status in the family, while at the same time incorporating this group into the labor force as subsidiary workers.

By analyzing the implications of state policies and economic processes at the level of the family and the day-to-day experience of individual workers, Hsiung challenges the research of economists and political scientists who have analyzed Taiwan's economic shift from agriculture to manufacturing from a purely macro-level perspective. At the same time, she does not ignore this level of inquiry and uses statistical data to address the macro-level, gender-specific aspects of the country's "economic miracle." Although Hsiung's multi-tiered analysis is impressive in scope and the introduction of her book promises much, the work's short length leaves the reader wanting. With so much to accomplish at so many levels, Hsiung is not able to go into sufficient detail regarding any one aspect of her analysis. Thus, she seems unable to fulfill some of the theoretical promises she makes in her bold introduction.

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For instance, in her analysis of the varied experiences of women factory workers Hsiung promises to "disentangle the tension between women's class and gender identities" (p. 14). Although Hsiung depicts how work in the factories benefits women differently according to their relationship to the factory owner, she pays scant attention to how the women themselves perceive their identities and any tensions among them. In addition, the book's introduction states an intention to derive sociological concepts from Hsiung's ethnographic data regarding worker resistance. The reader is hard-pressed to discern what these concepts are. Here, again, a more in-depth comparative analysis would have been useful. Connecting the satellite factory workers' practices of resistance with personalized, informal tactics in other factory systems and even other work situations would have provided a richer theoretical understanding of how worker resistance in Taiwan fits into a larger, cross-cultural, and transnational scheme.

Although those with interest in the global restructuring of capitalism will find Hsiung's work useful, its lack of comparative analysis means it will mainly be of greatest interest to those who study this area of the world. Despite the contributions this work makes to the existing literature regarding gender and the state, the interconnections of patriarchy and the global restructuring of capitalism, and the interplay of gender and class, the reader is left hungry for richer ethnographic detail. At the theoretical level the reader may
also be disappointed by the work's failure to fulfill the bold promises of theoretical advancement.

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Journal of World-Systems Research
Valentine Udoh James, ed.,
Sustainable Development in Third World Countries: Applied and Theoretical Perspectives

Reviewed by Frederick H. Buttel
Department of Rural Sociology and Institute for Environmental Studies,
University of Wisconsin, Madison, USA

At a time when neoliberal notions of privatization, flexibility, structural adjustment, fiscal discipline and "getting prices right" reign supreme in official development circles, environmental responsibility has become essentially the only effective lever for restraining the powerful impulse to incorporate more completely the peoples and lands of the South in the service of capital. There has been a spate of scholarly studies in and on "sustainability" over the past decade or so. But progress in formulating strategies that yield both meaningful development and resource conservation has been disappointing. At the practical level, sustainable development remains largely confined to the rural renewable resource sectors -- at the same time that depeasantization and urbanization of the South continue to proceed rapidly. At the political level, the successes registered in popular mobilization against socially and environmentally destructive projects and practices remain more than counterbalanced by the fact that sustainability sloganeering has not made a fundamental difference in how the most powerful development assistance and finance institutions approach policymaking and project design. Thus, further scholarship on the topic of sustainability and sustainable development remains very welcome.

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James' edited volume, Sustainable Development in Third World Countries, focuses almost entirely on the practical aspect of sustainable development. The few times that the book's authors delve into social theory are the few occasions when radical criticisms of the precision of the terminology of sustainable development (e.g., M. Redclift, Sustainable Development, 1987) are acknowledged or when topics such as Western colonialism and neo-colonialism are debated briefly. This is not necessarily a shortcoming. A case could be made, nine years after the publication of the Brundtland Report (World Commission on Environment and Development, Our Common Future, 1987), that the time has long since passed that conceptual exegeses of the notion are very useful or interesting. Breakthroughs in practical scholarship are very welcome at this point in time.

World-systems researchers will thus need to recognize that this is not a piece of scholarship that has a strong connection to the world-systems perspective as commonly understood. Not only are the works of Wallerstein, Arrighi, Chase-Dunn, Frank, and others overlooked by the editor and authors, there is scarcely any reference to any of the
major pieces of scholarship in development studies theory. Even the editor's own chapter on the need for national self-sufficiency for African countries proceeds without citing any of the important works on this topic from world-systems and related quarters (e.g., by Samir Amin, Gavin Kitching). Likewise, none of the authors has grappled with Michael Watts's seminal scholarship on the economic geography of environmental degradation in sub-Saharan Africa.

The problems of Sustainable Development in the Third World Countries begin with the book's title. Essentially all of the chapters are about sub-Saharan Africa, so that the reference to the "Third World" is somewhat misleading. Likewise, the subtitle - Applied and Theoretical Perspectives -- misleads in the sense that virtually all of the chapters in the book are applied in orientation. The "theoretical" material in this book is largely confined to theorizing about effective development practices and planning, rather than about development studies in the larger sense. Felix Edoho's chapter on "Toward Sustainable Development in the Twenty-First Century: Reengineering Development in Sub-Saharan Africa" does make an attempt to discuss sustainable development within a larger perspective on African underdevelopment, but this chapter unfortunately gets bogged down in criticizing the notion of "Western culpability" for the crises plaguing sub-Saharan Africa.

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While it is my view that this anthology does not move the field of sustainable development forward to a significant degree, there are some quite useful chapters in this volume. Lamb's chapter on "African Economic History and Its Planning Potential: An Investigation of Sources" and Edoho's chapter are worthwhile reading. D. M. Warren's two chapters on indigenous knowledge -- a chapter in Part I focused on agricultural development, and a second chapter in Part II on biodiversity conservation -- are useful. It would have been appropriate to stitch Warren's two chapters into one, though very likely this was not done because of the fact that the first half of the book is divided into Part I on "Sustainable Development and Agriculture" and Part II on "Conservation, Preservation, and Health Issues." (The three brief chapters of Part II - a total of slightly over 40 pp. - constitute such a thin slice of this subject matter that it would have been less clumsy to combine the two Warren chapters and fold the other two into an expanded Part I.) Constance McCorkle's chapter, "The Roles of Animals in Cultural, Social, and Agro-economic Systems," is a well-argued antidote to Western environmental doctrine about the waste and destructivenness of animal agriculture in the South.

That the best chapters of this anthology are those based on the rural renewable resource sectors -- essentially only agriculture -- suggests that this will not be a volume that breaks new ground in the scholarly tradition of sustainable development. Only a few world-systems researchers with strong interests in sub-Saharan Africa will be drawn to Sustainable Development in Third World Countries.

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Paul E. Lovejoy and Nicholas Rogers, eds,  
Unfree Labour in the Development of the Atlantic World  
ISBN 0-7146-4579-6, $35.00 (hardcover)  
ISBN 0-7146-4152-9, $20.00 (paperback)  

Reviewed by William Canak  
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Murfreesboro, Tennessee, USA  

Unfree Labour in the Development of the Atlantic World (ULITDOTAW) deserves an  
acronym twice over. First, it was birthed by a conference held at York University in April  
1993. Second, as the awkward and vague title suggests the wit and wisdom of committee  
work, it merits a bureaucratic moniker. And as with many committee products, this one  
patches together the good, the bad, and the ugly. Lack of coherent focus is seldom a  
virtue. Many of the chapters, however, are examples of good writing and sound  
scholarship. These save the day.  

ULITDOTAW draws us to consider the ways in which capitalism is marked by patterned  
legal and cultural definitions that shape labor contracts, define social groups available for  
exploitation, and chart the possibilities for social mobilization and resistance. As I read  
the chapters I recognized the American South, Finnish miners in the Northern Range, and  
a myriad of other labor systems and forms of organized social resistance common to  
capitalist relations based on extensive manual labor and a shortage of capital. Only now,  
these familiar faces were transformed into Amerindians, Africans, Brazilian slaves, and  
British workers.  

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The editors propose central themes found in Philip D. Curtin's comparative historical  
approach to European expansion, destruction of Amerindian societies, and creation of an  
Atlantic economy based on unfree labor of various types. Further, they propose a  
thoretical perspective that addresses the possible co-existence of different modes of  
production and labor relations within different social formations. None of this seems to  
matter much when one reads the chapters. What actually draws the authors together is a  
concern with labor relations in the age of European colonial expansion. It's a loose theme  
and produced a set of papers that range widely across Europe, Africa, Latin America and  
the Caribbean. There is little comparative method here, but the informed reader will find  
marvelous material for understanding the common patterns of domination and  
subordination, repression and resistance that characterize colonial capitalism. There is  
some revisionist history here, particularly with regard to the devastating population  
declines of Central America (Bolland) and the response of Amerindians to market  
relations (Melville and Radding). Michael Taussig's The Devil and Commodity Fetishism  
in Latin America will need a thorough rereading after one finishes ULITDOTAW. As is  
common among our historian colleagues, Wallerstein and dependency research are
slammed by the editors for "over-simplifying." But there is no slam dunk. The chapter authors generally ignore Wallerstein's work and dependency theories. The editors' call for an integration of Annalist and world-systems perspectives may strike some readers as naive and others as bold. However, this call seems to have been made after the conference; none of the chapter authors address the issue. Rather, they do solid narrative history focusing on a host of varied topics linked to systems of labor control. Out of these narratives I gained new understanding of how law and regulatory structures have defined the structure and practice of coercion in capitalist labor relations. In addition, these histories compel one to consider the similarities of slaves, indentured servants, and bondmen. These groups' identity is defined in relation to property-owners and legal structures, not derived from innate constituent characteristics. This common relational identity creates a socio-legal basis for alliances between Irish, African, and Indian laborers in specific contexts. Finally, these chapters richly describe the resources and identity brought to the "unfree labor" relationship by peoples who were once free and know the difference through their memories, social institutions, and habits of the heart, as Robert Bellah and his associates would describe them.

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ULITDOTAW is organized into three parts that express the editors' efforts to cobble a logic uniting these papers. Part I, "Frontiers," consists of four chapters which analyze labor, property and market relations in colonial Mesoamerica and the Caribbean. Part II, "Old Worlds, New Worlds," contains four chapters, three of which are linked by a common concern with legislation and criminal codes. Part III, "Aftermath of Abolition," has four chapters which consider post-slavery labor relations in Brazil, in African Yoruba society, in Victorian Britain, and in a broad international comparison. The best chapters are rich with narrative detail identifying the objective social relations, legal institutions, and social policies within which slavery and other labor control systems were meaningful. The worst chapters vaguely sketch the behaviors of capitalists, conquerors, British, Spanish, landowners, slaveholders, and slaves devoid of context, substance, and meaning. These latter chapters assert a mechanistic logic of the sort usually found in bad modernization, dependency, and world-systems theory. In contrast to the old adage about good families being the same while miserable ones are unhappy in their own distinct ways, here we find that good comparative historical research always strikes one as fresh. Slapdash broadsides, whatever their intellectual home, seem to be cut from the same cloth. Once history is devoid of real historical actors, all things may be asserted. One wishes the editors had felt themselves licensed to exercise the scalpel a bit more liberally.

Bolland ("Colonization and Slavery in Central America") precisely documents aspects of the American holocaust's impact on slave exports from Central America to Peru, the Caribbean, and Panama and subsequent demand for African slaves. Bolland follows the alternate paths of Spanish and British Central American colonial economies. Slaveholding and resistance patterns were linked to particular extractive enterprises on one hand, and opportunities afforded by work relations and the possibilities for escape on
the other. Bolland demonstrates that David E. Stannard's American Holocaust (1992) has
far from exhausted this rich vein of revisionist history.

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Elinor G.K. Melville presents a very brief but tightly argued revisionist history of
sixteenth century labor relations. She revises our understanding of the hacienda-wage
labor system by demonstrating that wage labor appeared in the pre-hacienda era on other
agricultural units. She argues that demographic decline and range deterioration in the late
sixteenth century undermined small holdings and common range grazing systems.
Drawing on the work of Gibson, Taylor, Zeitlin, Riley, and others, she asserts that
"...Indians were actively engaged in the formation of land-labour relations in rural areas,
rather than simply responding to Spanish initiatives" (p. 32). We are left with a new view
of Indians' active manipulation of the evolving colonial political economy, their capacity
in many circumstances to hold on to their land and dominate regional production at the
expense of Spanish landowners.

Hilary McD. Beckles' "The Colours of Property: Brown, White and Black Chattels and
their Responses on the Caribbean Frontier" is, as the title suggests, a horse of a different
color. This is the epitome of the Aristotelian project, "We know it if we can define it." Beckles' aim is to evaluate the pattern of slave revolts by responding to Orlando
Patterson's direction that we study the everyday lives of bonded labor to learn what they
thought of their reality. Here English and French, labor market forces, cultural and
ideological factors, and masters and servants are jiggled in a whirlwind of supposedly
comparative profiles. The result is a set of stages and types, the stages chart the
development of plantation agriculture (construction, mature functioning, crisis) and the
types describe slave resistance struggles (day to day, unsuccessful plots, and successful
rebellions). This exercise leads us to the vague and useless conclusions common to such
enterprises, "They rebelled when they could, and in ways peculiar to their specific social
consciousness and circumstances" (p. 49).

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A very different analysis explaining resistance patterns in northwest Mexico, one rooted
in a close analysis of the peasant attitudes toward work and market exchange, marketing
systems developing in the Sonoran area, and native peasants' rationality as a defense of
subsistence. Here we find the social ecology of resistance inextricably linked in the
subsistence patterns characterizing Amerindian communities in a historically specific
time and place. Again we find revealed the ambiguity of control, submission, and
freedom within colonial society. We find concrete evidence that as community traditions
kept Amerindians close to the land, shifts from communal values to commodity relations
defined a major transformation over a long period of colonial rule.
In Part II, "Old Worlds, New Worlds," Lovejoy and Rogers group three chapters on laws and regulations governing labor relations with a fourth, "Background to Rebellion: The Origins of Muslim Slaves in Bahia," where Lovejoy himself argues there are strong parallels between slave revolts in Bahia and the jihad (religious war) occurring in Sudan during these same years, linked by the fact that many prisoners of war were sold into slavery. The first of the three chapters on legal studies summarizes a larger project constructing a quantitative analysis of laws governing employment relations in "common law" contexts, meaning the British empire. Craven and Hay conclude that master-servant laws were not rooted in English common law, but developed penalties and restrictions in similar colonial contexts through various diffusion processes. Roger's chapter reviews vagrancy legislation in England and the practice of impressment. He explores the complex linkages of government manpower needs and employers' concerns with sustaining a moral order legitimating traditional master/employee relations. Elbourne's chapter reviews the changing legal status of free "Hottentot" labor during colonization and the subsequent debate in Britain and the Cape Colony over the legal obligations of Khoi labor.

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Part III, "Aftermath of Abolition," contains four chapters. The first, by Nancy Prieilla Naro, examines nineteenth century Brazilian slavery after the 1850s decline of Atlantic slave trading. Domestic slave markets developed in response to the growing coffee economy, but faced the problem of a declining slave population and a growth of multigenerational slave family units. Naro charts the complex interactions of traditional social relations, the evolving and highly unstable plantation system, and, finally, the response of slave owners, slaves, and free laborers to the historical contingencies of Brazil's social hierarchy as slavery was abolished. Martin Klein presents comparative data to support the claim that abolition movements developed while slavery was still profitable and thus capitalists elaborated various alternatives to recruit and control unskilled labor that was needed for plantation systems. Slave owners never voluntarily rejected the system and abolition was usually forced on colonial societies by "center" interest groups, but usually against the resistance of colonial administrators. Tonyin Falola analyzes the role of slaves and "pawns" in nineteenth century Yoruba estates. Most slaves derived from warfare, raids, kidnapping, or other types of violence. Pawns were free-born individuals whose contracts were linked to loans and who were required to provide labor themselves (or that of a child) in lieu of interest. Child-pawns were usually girls and creditors had rights to their entire labor. Powerful households commanded large numbers of slaves and pawns, thus demonstrating that servile institutions were well developed in the African domestic economy. Finally, James Walvin offers a very brief essay suggesting that within Victorian Britain there developed a popular self-image that the British were a freedom-loving people with an obligation to export their freedoms much as they had exported Christianity along with their colonial conquests.

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As the 20th century draws to a close everyone seems to be obsessed with globalization. The questions -- what it is, and when and how it arrives -- apply as equally to the 21st century as they do to globalization, as if the two go together quite naturally in some millennial dynamic. There is a sense of inevitability on the one hand, and on the other, considerable trepidation. Globalization: Critical Reflections addresses these sensibilities directly. This collection of chapters offers perspectives on globalization from quite diverse standpoints. The editor, James Mittelman, organizes the collection thematically, presenting globalization as the multi-faceted and the quite contradictory process that it is.

Underlying the theme of the contradictions of globalization is Karl Polanyi's double movement, of market forces and the protective response. The book is divided between essays on neoliberal pressures to relax and eliminate market regulations, and essays on social movements resisting the reduction of social life to the commodity form, offering alternative political and cultural paradigms based on justice and an ethic of cosmopolitanism. But all chapters acknowledge, explicitly or implicitly, the complexity of globalization's simultaneously integrating and fragmenting forces.

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Mittelman opens with the questionable claim that globalization is a market-induced rather than a policy-led process. This claim derives from his legitimate proposition that a new global division of labor embodies a series of relationships whereby the sites, practices, and objectives of politics are transformed through the globalization process. The state facilitates globalization through material necessity, but such loss of state power releases historical forces in the form of sub-national identity politics on the one hand, and democratizing forces on the other, including various resistance movements such as feminism, environmentalism and human rights organizations. As he argues, globalization is "about opportunities arising from reorganizing governance, the economy, and culture throughout the world ... opening up possibilities for more vigorous political participation at non-state levels" (p. 237). In a companion opening chapter Robert Cox, using the powerful metaphor of the Wizard of Oz, wonders aloud if there is any coherent regulatory power in the global economy, noting also that globalization undercuts conventional national political authority. Given this, and social polarization on a global
scale, he suggests the conditions may be emerging for alternative forms of civil society and
civilizational unity on a world scale.

The economic dimensions of globalization are featured in chapters by Saskia Sassen and
Gary Gereffi. Sassen juxtaposes the global economy of "flows" (of capital and services),
advanced by information technologies, with the new geography of centrality of regulatory
nodes, stemming from the centralization of command and the provision of services in
global cities. The significance of her juxtaposition is that states remain important vehicles
of the global economy, in the sense that, being spatial and legal organizations, states
accommodate and contribute to the elaboration of new transnational regimes regulating
these flows (rather than withering away). Gereffi reviews the shifting ground of
development strategies, under conditions of transnationalization of production. Referring
to various case studies, his focus is on the global scale of the ladder of industrial
development, represented spatially by commodity chains. Development, here, involves
climbing the ladder by technological upgrading and adapting the institutional practices of
successful upwardly mobile states, such as the Newly Industrialized Countries (NICs).

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A bridging chapter on the state by Leo Panitch is in a category of its own. Here is a
sophisticated argument about how globalization involves the restructuring of states,
rather than bypassing them, as states internalize neoliberal principles and author their
own internationalization. This observation is grounded in a case study of NAFTA, and its
institutionalization of a global property regime through investment and intellectual
property laws that exceed property laws in its member states. The logic of this argument
is that globalization accentuates a long-standing accommodation of states to capital, and
that neither entity in and of itself is an adequate basis for an alternative democratic
politics.

The second part of this collection comprises a rich set of case studies. There is Glenn
Adler's analysis of the rise of the new social unionism in the context of South African
industrialization under the aegis of transnational corporate investment, followed by Fantu
Cheny's recounting of the material and political betrayals of African development projects,
leading to a multi-faceted (and not necessarily coherent) social movement with a healthy
suspicion of formal politics and development rhetoric. And, beyond South Africa, the
experience of globalization is largely one of marginalization. June Nash and Christine
Kovic offer a detailed examination of the limits of Mexican President Salinas's attempt to
restructure political and economic networks to favor entrepreneurialism in the context of
NAFTA, limits that were exposed dramatically by the Zapatista-led rebellion of 1994.
Finally Mustapha Kamal Pasha and Ahmed Samatar peel back the layers surrounding
Islamic movements to reveal a complex and fragile combination of reaction to, and
qualification of, modernity, rooted in a social base increasingly marginalized by the
forces of globalization. While there is by no means a common understanding of what
globalization entails, with each essay situating its subject matter's relationship to
globalization in quite different ways, arguably this is the point. Something is happening,
but we don't know quite what it is, do we? Which is why there is so much up for grabs, and why centers may not yet hold, and why millennial themes and identity politics are in the forefront.

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The concluding section of the book by Stephen Gill and Mittelman offers perspective on the limits of globalization. Gill, who is the progenitor of the idea of the "new constitutionalism," whereby (unrepresentative) rules institutionalizing global market relations overlay member states, sees paradoxes in contemporary globalisation. First, the existence of alternative civilizations make a neoliberal world order a logical impossibility. Second, the democratizing trends associated with global resistances are profoundly limited by the rollback of institutionalized social rights by globalization. Finally, the social inequality produced by contemporary globalization not only unmask development rhetoric, but represents a crisis of social reproduction of such enormity that it can only generate alternatives. There is an inevitability in this scenario, including a certainty that new political avenues will gain ground. Mittelman's concluding chapter synthesizes the collection and explores various responses to globalization via the question: how does globalization work? Perhaps the most prescient line in the book is his final phrase: "what if globalization doesn't really work?"

This is a fine collection of essays overall. The range and variety of treatments of the complex (or inchoate) subject of globalization makes this a quite representative collection. Mittelman's attempts to weave thematic unity through a set of questions work by default because globalization is such a slippery concept. As Panitch and Gill observe, globalization is not unique to the late-twentieth century, and this collection would benefit from a clearer statement of its specificity at this time. In my opinion, all the elements are present in the collection for such a statement, in the discussions of the political project of globalization and its countercurrents. These suggest that this movement involves a profound restructuring of political power, inscribed as it is with an economic logic that presents a selective (and divisive) outcome as a universal benefit. Under these conditions, arguing about corporate/economic power versus the state is a fruitless line of inquiry, since states themselves are integral to relations of production and circulation. As a result, the restructuring of capital is simultaneously the restructuring of states and political power, and vice versa. In this restructuring lies the generation of alternative forms of politics that are featured in theory and in case study throughout this collection. Herein lies the strength of this book. It presents globalization as a moving target, and, as such, a subject that is difficult to conceptualize -- especially when it crystallizes alternative epistemologies and cultures to the rationalizing thrust of those who would manage the global market. In these senses, this is a rich and worthy treatment of a phenomenon that is often taken for granted as an inevitable process of economic integration on a world scale.

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Stephen K. Sanderson, ed.
Civilizations and World Systems:
Studying World-Historical Change
Walnut Creek, California: AltaMira Press, 1995. 324 pp.
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At the tender age of 22, I gave my first public lecture, a paper for my graduate history
club on the cyclical theory of history delineated in the first ten volumes of Arnold J.
Toynbee's A Study of History. (In that distant era, there were still only ten.) Now I find
myself reviewing Stephen K. Sanderson's symposium Civilizations and World Systems,
the same Stephen K. Sanderson who reports in his Preface that "at the tender age of 20
and while still an undergraduate student...I gave a long oral presentation on the work of
Arnold J. Toynbee" (p. 9). My encounter with Toynbee helped inspire my second book,
The City of Man: Prophecies of a World Civilization in Twentieth Century Thought
(1963). Sanderson's encounter with Toynbee surely helped inspire his also recently
Cyclical theory, it seems, may apply to persons as well as to civilizations.

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Civilizations and World Systems: Studying World-Historical Change is, like Social
Transformations itself, a formidable achievement, bringing together 14 contemporary
expounders of comparative civilizations and world-systems theory. The volume originated
as a special issue of Comparative Civilizations Review, published in 1994, but only three
articles from that special issue survive into the present work. Four other previously
published articles and six newly written pieces round out the symposium, together with
four illuminating introductory essays by Sanderson, two of these in collaboration with
Thomas D. Hall.

Sanderson's strategy has been to present the two major current approaches to the study of
world-historical change, the "civilizationist" school and the "world-systems" school, and
then to explore how these disparate approaches may (or may not) complement one
another, in the unconfined hope that they will eventually fuse into a super-theory of
world history. Cyclical, evolutionary, and systemic analysis all enter into the big picture
he seeks to draw.

The articles in the first part of the symposium make the case for the civilizationists.
Matthew Melko discusses "The Nature of Civilizations," comparing and contrasting the
definitions and lists of civilizations furnished by Spengler, Toynbee, Kroeber, Bagby,
Coulborn, and Quigley. Melko concludes by likening civilizations to symphonies: both have themes that pass through stages of development, from beginning to end. David Wilkinson follows with an essay on his thesis that a "Central Civilization" was created about 1500 B.C. by the fusion of the ancient Egyptian and Mesopotamian civilizations. Over the centuries this Central Civilization engulfed all the others, and its "current manifestation" is the single global civilization in which everyone on earth, willy-nilly, now dwells. The final piece in the first part, by the late William Eckhardt, offers what he terms a dialectical evolutionary theory of the relationship between civilizations, empires, and wars. Wealth, power, and conquest, he argues, are directly correlated. Civilizations with surplus wealth produce empires that win wars, but a point is always reached when costs exceed gains, leading to the loss of empires, the collapse of empires, and the unraveling of civilizations. Wars serve as "both midwives and undertakers in the rise and fall of civilizations" (p. 91).

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In the second part of Sanderson's symposium, world-systems theorists take their turn, after a lengthy introduction by Sanderson and Hall devoted chiefly to Immanuel Wallerstein's founding theory. Christopher Chase-Dunn and Hall lead off with an essay comparing world-systems over the past 10,000 years by such measures as size of population, spatio-temporal boundaries, cycles of rise and fall, and settlement systems. Barry K. Gills takes a similarly long view in the next chapter, "Capital and Power in the Processes of World History," an exposition of the work that he and Andre Gunder Frank have done to demonstrate the antiquity of cumulative capitalist development and its integral relationship to the wielding of political power. Gills rejects the "conventional dichotomies" of premodern versus modern, whether applied to economies or to politics. A vast capitalist Eurasian world-system has existed in various forms for 5,000 years. Frank adds an essay of his own sharply critical of the alleged Eurocentric bias of Braudel and Wallerstein. Two other chapters, by Albert Bergesen and Andrew Bosworth, furnish additional support for the Frank-Gills approach to world-systems theory. Bergesen even recommends that we "let go" of the old models altogether, scrapping the notion of a plurality of systems and civilizations, and building a new model of world-historical development that will encompass all of world history from earliest times.

The last two parts of Civilizations and World Systems feature five essays that address the prospects for a synthesis of civilizationist and world-systems approaches. Now that both sides have had their say, can they find common ground? Is there hope for a super-theory of world-historical change?

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Wallerstein is skeptical. In "Hold the Tiller Firm: On Method and the Unit of Analysis," he chides both camps for succumbing to methodological temptations that, in his opinion, place the whole enterprise of world-historical analysis in jeopardy. Many world-systems
theorists, he contends, are either too eager to generalize and posit laws (the nomothetic temptation) or too eager to deny the possibility of discovering meaningful generalizations (the idiographic temptation). Chase-Dunn’s comparative approach illustrates the former, Frank’s single world-system approach illustrates the latter. Holding the tiller firm, for Wallerstein, means the negotiation of a pragmatic balance between these two extremes. As for the civilizationists, their original sin is to succumb to the temptation to reify, to assume that civilizations are real-life organisms, rather than concepts useful for the purposes of socio-historical analysis.

The remaining four essays strike a more optimistic note. Wilkinson returns for an encore triumphantly entitled, “Civilizations are World Systems!” His formula for consensus is quite simple. Civilizationists must agree that the many local civilizations of the past have evolved into the single global civilization of our own time. World-systematists must agree that the global world system of our own time emerged from a plurality of past world systems. And both must agree that past civilizations and urbanized world systems were, and today’s global civilization and world system are, “identical” (p. 248). The body of Wilkinson’s article consists of brief but incisive dialogues with Toynbee, Quigley, Spengler (“brilliantly, perversely, powerfully wrong,” p. 253), Melko, Hord, Sorokin, Huntington, Chase-Dunn, Hall, and Gills and Frank, in which Wilkinson outlines his areas of agreement and/or disagreement with each. Then Sanderson himself weighs in with a chapter critical of the idealist bias of civilizationists and suggesting that the concept of “expanding world commercialization” may provide a bridge between the two perspectives. Next, Victor Roudometof and Roland Robertson contribute a provocative essay arguing for a transcendence of the struggle between idealism and materialism in world-historical analysis. Refuse to privilege either ontology, they recognize that civilizations are networks of political, economic, and cultural-ideological forces.

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The concluding chapter, by the only historian in the volume, William H. McNeill, consists of an unsparing autocritique of his best-known work, The Rise of the West. McNeill concedes that his book, published in the halcyon days of the early 1960s, should be seen today “as an expression of the postwar imperial mood in the United States” (p. 303). Residual Eurocentrism blinded McNeill, he confesses, to the primacy of China in the period from 1000 to 1500 A.D. More importantly, his civilizationist bias led him to represent the span of world history only as a series of cultural efflorescences, first here, then there, without regard for the ecumenical processes leading to the emergence of the modern world system. Implicit in McNeill’s repentance is the possibility of a much improved method of reading world history that combines civilizationist and world-systems analysis.

What impresses me most about this symposium, and has always impressed me most about the principal figures in both civilizationist and world-systems research, is the willingness of all concerned to listen, contend with, and learn from one another. This is only as it should be, but one of the many reasons why another recent scholarly endeavor
with which I fellow-travel, the study of alternative world futures, has fallen so short of its early promise is that futurists, by and large, do not listen, do not contend with, and do not learn from one another. (Of course shutting one's ears is a vice by no means unique to futurists!) In any event, just like Sorokin and Toynbee before them, as evidenced in Sorokin's Social Philosophies of an Age of Crisis (1950) and Toynbee's response to his critics in the last volume of A Study of History (1961), contemporary civilizationists and world-systems theorists do engage in meaningful dialogue. Nowhere is that dialogue more forcefully evident than in Sanderson's symposium, a deliberate effort to bang heads together and strive for consensus.

What impresses me almost as much as this symposium's dialogue, however, is the persistence of an antediluvian modernist social-scientific hubris that almost totally ignores the subjectivity of all scholarly enterprises. Each of Sanderson's contenders is willing to listen, but they rarely descend to irony or relativism. Each wise man appears convinced that he (they are all "he's") carries his own sack of Truth thickly lined with confirming data. If only the various sacks can be combined into a larger one, a super-sack, then perhaps the world-historical-theoretical millennium will have arrived. We will boast the very best and finest model of world history, and then turn our attention to other challenges. Perhaps it is my own idiographic bias as a historian, but I find such expectations more entertaining than inspiring, just as I used to chuckle over the efforts of Sorokin and Kroeber to strain the "facts" of various encyclopedias through the elaborate sieves of their theoretical kitchenware. Is it not possible (and desirable) to take ourselves a little less seriously?

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I have one final, and more serious, thought: Sanderson is convinced, as he tells us elsewhere (Sanderson, Social Transformations: A General Theory of Historical Development, Blackwell, 1995, p. 380), that the "capitalist-sensible" culture of our time is doomed to self-destruct in a generation or two or three. "A major economic, demographic, and ecological crisis, or possibly even a nuclear holocaust, will not be avoided. It is our fate. It is our destiny." I agree, although I make no scientific claims for the veracity of this forecast. But if modern civilization does live under sentence of death, then applying whatever finite and fallible wisdom we can gather about the trends, cycles, and intersections of world history to the most rigorous possible study of the future should be our greatest task - either to understand why we are doomed, or somehow to dodge that doom, or to ensure that a remnant of humankind rises from the ashes. Not only should civilizationists and the various breeds of world-systems theorists try to bridge the gaps that separate them; they owe their progeny an effort still more strenuous to build bridges to the future.

Meanwhile, Civilizations and World Systems is a lucid introduction to the other great issues at stake in the analysis of world-historical change, both for practitioners striving to remain au courant and for their graduate and undergraduate students, who could ask for no better textbook. It deserves many readers.
David A. Smith and Jozsef Borocz, eds.
A New World Order?:
Global Transformation in the Late Twentieth Century
ISBN 0-313-29573-5, $59.95 (hardcover)

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Shortly after the fall of the Berlin Wall and the East Bloc, U.S. President George Bush declared the beginning of a "new world order." To the conservatives, the overthrow of European communism signaled an ultimate victory for the U.S., a sweeping vindication of global capitalism, and even "the end of history."

Titled "A New World Order?" the aim of this volume is to debunk the conservative interpretations of the contemporary global situation. The chapters of this volume were selected from conference papers presented at the April 1994 Political Economy of the World-System annual conference held at Irvine, California. They address many of the most pressing issues raised by the global transformations of the late twentieth century. The chapters are divided into three main themes: (1) the nature of the structural transformation in the contemporary period; (2) the regional ramifications of global transformations in the Middle East, the European Community, and Asia-Pacific; and (3) peoples' responses to global transformations.

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First, how is the worldwide process of global restructuring best conceptualized? Is the world-economy undergoing a fundamental change? Robert J.S. Ross's chapter argues that a new, qualitatively different variant of capitalism has emerged in the last quarter of this century. Different from the "monopoly capitalism" in the early and the mid-twentieth century, the distinguishing feature of "global capitalism" in the late twentieth century is the global mobility of capital. Globalization becomes the major lever by which capital extracts surplus from labor and gains favorable policies from states throughout the world. The emergence of global capitalism shifts the balance of class forces toward capital, leading to the decline of the bargaining power of labor unions and the relative autonomy of the state.

Like Robert Ross, Philip McMichael also argues that the world is on the threshold of a major transition in the political regulation of economic activity: from a primarily national to a primarily global form of regulation. Recent episodes of global restructuring undermine national forms of political-economic organization. In the wake of the debt crises of the 1970s and under the pressure of multilateral agencies, global firms, and
global and regional free trade agreements (FTAs), a new kind of colonialism emerged under which transnational forces have increasingly subsumed the powers of nation-states to police labor and enforce market discipline. The paradigmatic cases are the imposition of "structural adjustment" in Africa and Latin America, where agencies like the World Bank and the IMF dictated policy changes that seriously eroded the prerogatives of sovereign states.

Ross and McMichael have contributed by showing that in the late twentieth century transnational forces gain much leverage while workers and state lose it. Still, as Jozsef Borocz and David A. Smith have remarked in the Introduction of the volume, researchers may wonder whether "global capital mobility" or corporate "colonization" of states are entirely new phenomena, although the forms they take may be.

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Second, what are the regional ramifications of the global transformations in the late twentieth century? How are they related to simultaneous changes in states and geopolitics? In the Middle East, the end of the Cold War was quickly followed by the Gulf War. Cynthia Siemsen Mak and Walter L. Goldfrank deploy the concepts of hegemonic cycles and semiperipheral mobility to explore some of the causes and consequences of the Gulf War. Their chapter points to the ambiguous, tenuous nature of U.S. hegemonic decline, Iraqi semiperipheral mobility, as well as the demise of the stabilizing Soviet counterbalance in the Middle East as critical triggers to war. The oil-based "rentier state" in Iraq provided Saddam Hussein with the political maneuverability to attempt military conquest as a means of ascent, but led to disastrous consequences.

In Europe, the European Union (EU) since the 1980s has promoted a hegemonic project to compete with the U.S. and Japan for global domination. However, Denis O'Hearn's chapter shows that the EU's central aim of increasing the competitiveness of the largest and most technologically advanced firms, sectors, and regions threatens to exacerbate uneven development among its regions. The EU's hegemonic project, in particular, is pushing the countries of "the European periphery" (Spain, Portugal, Greece, and Ireland) toward continued economic marginality, poverty, and unemployment.

While the hegemonic project has intensified regional peripheralization in the EU, Richard C. Hill and Kuniko Fujita's chapter argues that the Japanese project has led to a pattern of "flying geese" in East Asia. In this framework, the technologically advanced nation of Japan is the head goose which leads the way with continuous industrial upgrading and new product development, while the East Asian NIEs and Southeast Asian states follow along as recipients of industries that are no longer profitable in Japan itself. Subsequently, Japanese foreign investment complements and strengthens the comparative advantage in investing and receiving countries alike.

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This benign view of Japanese investment is implicitly challenged in Frederic Deyo's study of state and labor in Thailand's industrial restructuring. In the Thai context, the Japanese/East Asian investments and neoliberal reforms have not led to industrial upgrading of the enterprises. Instead, they have encouraged a "market-despotic" labor regime to develop, increasing hardships on labor, and undercutting the capacity of organized labor to contest new managerial strategies. In addition, Stephen Bunker and Paul S. Ciechantelli explain Japan's bid for hegemony, not by the flying goose framework, but by the critical role of transport and raw materials supply. Thus, Japanese economic success owes much to Japan's ability to secure a stable supply of raw materials via Japanese shipping and shipbuilding which made possible the development of both the Japanese steel industry and a diversified industrial economy based on low-cost-imported raw materials.

The final theme of the volume centers on people's responses to global transformation. Have "anti-systemic" forces risen up to counter the restructuring processes? What is the prospect that new social movements can resist and transform the capitalist world-economy? There are several chapters on ethnic mobilization and labor, urban struggles, and environmental movements. Timothy J. Srasa maintains that the "culturalist" approach to globalization has encouraged the commodification of the causes of indigenous people (via the selling of "native" products) and obfuscates the political-economic underpinnings of "new social movements." For instance, many Indian insurgent groups that seem to be based on religious fervor or ethnic chauvinism are responding to material deprivation and inequities generated by capitalist restructuring. In her ethnographic study of Indian leather workers, Ruchira Gangoity-Srasa examines how the transnationalization of the footwear industry had destroyed the livelihoods of traditional artisans, leading to the emergence of fundamentalist ideologies and the reinforcement of gender hierarchies. In the chapter on Zurich, Switzerland, Stefan Kipfer traces the urban struggles between a corporate "growth coalition" (that pushed for development and internationalization of the central business district) and popular forces (that wanted to preserve neighborhoods). In the chapter on global ecological movements, Sing Chew shows how environmental degradation during the course of capital accumulation consistently engenders social movements across the globe that resist the destruction of nature. Subsequently, Chew argues that ecological movements have the potential to be transnational and transformative.

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In the last chapter, Andre C. Drainville traces the transformation of "left internationalism" from the "socialists, Marxists, and anarchists" in the nineteenth century to various "international solidarity" movements of the present. These contemporary "Left international" movements are based on a variety of issues that connect concerns about global capitalism with struggles for labor rights, gender equality, environmental protection, racial/ethnic equality, and so forth. The "Left international" movements are united, not by shared allegiances to political programs and ideologies, but by a shared
experience of marginality during the present global restructuring. These movements are radical because they reveal the increasing social fragility of the new world order and because they attempt to gain social control over production in the particular setting of the world-economy where it is most fragile.

My only complaint about this volume is that it has not included one or more chapters on the downfall of Soviet communism, the transformation in East Europe, or the transition from state socialism to capitalism. Other than that, I enjoyed reading this excellent volume. It is highly informative and full of insightful analysis. Thus, this volume is indispensable for any researcher who would like to know more the nature and ramifications of the global transformations in the late twentieth century. In addition, since the chapters are so well-written, this volume could be used as a text in upper-level courses on development, political economy, and world history as well.

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