



Environment & Society



White Horse Press

Full citation:

Marshall, Brent K., "Globalisation, Environmental Degradation and Ulrich Beck's Risk Society." *Environmental Values* 8, no. 2, (1999): 253-275.
<http://www.environmentandsociety.org/node/5775>

Rights:

All rights reserved. © The White Horse Press 1999. Except for the quotation of short passages for the purpose of criticism or review, no part of this article may be reprinted or reproduced or utilised in any form or by any electronic, mechanical or other means, including photocopying or recording, or in any information storage or retrieval system, without permission from the publisher. For further information please see <http://www.whpress.co.uk/>

Globalisation, Environmental Degradation and Ulrich Beck's Risk Society

BRENT K. MARSHALL

*Department of Sociology
University of Tennessee
901 McClung Tower, Knoxville, TN 37920, USA
Email: marshall@utkx.utcc.utk.edu*

ABSTRACT: This paper is organised in three interconnected parts. First, contemporary political economic approaches to understanding the structure of the global economic system are outlined and synthesised. Specifically, it is suggested that the current structural configuration of the globe is a transitional phase between the spatially-bounded configuration hypothesised by world-system theory and the configuration hypothesised by globalisation theorists. Second, the contemporary problem of environmental degradation is situated in a global structural context. Third, an outline and critique of Ulrich Beck's theory of the 'Risk Society' is presented to illustrate the increasing inadequacy of nation-state-centric theories in explaining the dynamic linkage between global capitalism and local environmental degradation.

KEYWORDS: Globalisation, environmental degradation, nation-state, world-system

In classical theoretical frameworks, the environment was typically presented as a peripheral rather than a core concept in theorising about social context or social interaction. The way in which sociology historically was defined as a discipline, relative to competing disciplines such as biology and psychology, effectively relegated questions on the environment to the margins (Benton 1994). If sociology were to stand as a separate discipline with distinctive subject matter, it would have to be cordoned off from biology and the natural realm. Analytically extracting the 'social' from its environmental context was buttressed by the empirical transformations of the day. Classical theorists were witnessing the relative escape of modern societies from ecological constraints and beginning to realise the human capacity to transform the biophysical world (Goldblatt 1996). At the time of classical theory construction, technological advancements were thought to have only positive effects on society, stimulating progress, wealth

accumulation, and enlightenment. The biophysical environment presumably could absorb any maladies associated with modernisation and thus have no impact on social phenomena. Yet, the historical context that inspired classical theorists has now been radically altered.

One of the most complex and significant dilemmas of modern society is the emergence and proliferation of anthropogenically induced environmental risks and hazards of an ilk that Kai Erikson refers to as a 'new species of trouble' (Erikson 1992). In other words, 'far from transcending ecological constraints, modern societies were rapidly acquiring new ones of their own making.' (Goldblatt 1996, 5). Many contemporary social scientists are beginning to examine the complex relationships between (late) modern societies, anthropogenic environmental risks and institutions. This paper outlines and synthesises research drawn from the sociological subfields of political economy and environmental sociology.

A paradox exists among contemporary social scientific approaches to the study of political economy and the environment. Most researchers who focus on the relationship between the environment and society tend to construct theoretical models abstracted out of the structural configuration of the world in which their subject matter is ultimately embedded. Few attempts are made to link the environment-society relationship to broader structural change. Conversely, most political economists acknowledge the profound effect that environmental degradation has on people, yet systematic treatment of the environment is omitted from mainstream models of political economy. *Post hoc* efforts to bring the environment into well-developed political economic models are illustrative of this oversight in theory construction. For example, Wallerstein (1990) emphasises the importance that ecological issues should play in the second phase of world-systems analysis, yet offers no meaningful treatment of the environment in his original formulation (Wallerstein 1976). Another example, Sklair (1995a, 2nd edition) in his initial theoretical framework, specified three categories of transnational practices – economic, political and culture-ideological. Expanding on this framework, Sklair (1994) added a fourth category – environmental transnational practices. Treatment of the environment as a theoretical afterthought is better than continued omission, yet the increased salience of the environment calls for its inclusion at the onset of theory construction.

This paper is organised in four parts. First, I outline contemporary political economic approaches to understanding the structural configuration of the globe in which all social and environmental change is embedded. I argue that the current configuration is a transitional phase between the spatially-bounded structural configuration hypothesised by world-system theory and the structural configuration hypothesised by globalisation theorists. The former configuration is in descendance; the latter configuration is in ascendance. Second, I situate the contemporary problem of environmental degradation in the global structural

GLOBALISATION...

context presented in part I, arguing that to do otherwise underspecifies the causal role of global capitalism. Third, I outline and critique Ulrich Beck's (1992a) theory of the 'Risk Society' to illustrate the increasing inadequacy of nation-state-centric theories in explaining the dynamic linkage between social phenomena and local environmental degradation. The cogency of my critique of Beck's Risk Society is contingent on the logical consistency and empirical import of arguments presented in parts I and II. Finally, I offer some concluding remarks.

I. THE STRUCTURAL CONFIGURATION OF THE GLOBE

World-System Theory

According to Wallerstein (1976), the three structural positions in today's world-economy – core, periphery, and semiperiphery – stabilised circa 1640. The structure of the world system is defined by the underlying organising principles of the world economy, and in particular of the international division of labour. The international division of labour consists of three spatially-bound economic roles – core, semiperiphery, periphery – which, in turn, are occupied by different nation-states. Thus, nation-states are differentiated by their structural position in the world-economy.

The core nation-states tend to specialise in manufacturing, have a high organic composition of capital (i.e., high capital/labour ratio), and relatively high wage levels. The core, by using the military, political, and trade power, extracts an economic surplus from the subordinated periphery. The periphery is relegated to the production of raw materials, has a low organic composition of capital (i.e., low capital/labour ratio), and low wage levels. Given the inherent polarising tendencies of capitalism, Wallerstein's specification of the semiperiphery is crucial in explaining the stability of the modern world-system since its genesis. The semiperiphery serves as a buffer between the core and periphery, by exploiting the periphery, yet being exploited by the core. Which nation-states occupy each of these roles is historically contingent, depending on the cyclical rhythms and secular trends of the world-economy. Capitalism involves not only appropriation of the surplus value from the labourer by the owner, but an appropriation of surplus from the whole world economy by core areas.

Three caveats together point to the inadequacy of world-system theory in explaining the current structural configuration of the globe. First, when Wallerstein argues that the world-system is the appropriate 'unit of analysis', he must mean 'object of analysis' because his thesis is centred on the structural relations of the core, semiperiphery and periphery operationalised by nation-states as discrete units. Therefore, social phenomena that do not fit readily into a nation-state framework are forced into the model *a priori*. Second, the specification of the

world-system as comprising three distinct structural positions is perhaps functional for the reproduction of capitalism, but this specification does not explain why the system developed that particular structure, nor does it guarantee that structure will endure. Put differently, world-system theory conflates 'the historicity (historically specific) of the nation-state system as the particular historic form which the birth of the world system took with a feature immanent to the system itself' (Robinson 1998,17). Third, world-system theorists often treat class and state agents as mere passive conduits of systemic imperatives (Wendt 1987). With these caveats in mind, I will now turn to the impact of globalisation, and different theoretical approaches that attend to such impacts. World-system theorists attempt to situate globalising processes in an existing nation-state framework; whereas globalisation theories emerged precisely to explain globalising processes and to move beyond the nation-state.

Globalisation Theories

Most generally, the main point of departure that distinguishes globalisation theories from earlier theories of development (i.e., dependency, modernisation, and world-system theories) is the focus on the globe 'as a legitimate object of knowledge' (Sklair 1995a).¹ Theorists note the inherent limitations of nation-state frameworks of analysis because nation-state derived concepts and categories constrain our ability to analyse nascent global and transnational dynamics (Ruggie 1993; Ohmae 1995; Sklair 1995a; Robinson 1996a; 1998). Yet, those prognosticating the 'end of the nation-state' are rebutted most directly by Hirst and Thompson (1996a; 1996b) who argue that the transition from an international to a global economic system did not occur. Support for nation-state autonomy also comes from research examining enduring varieties of national institutions that promote innovation and learning (Lundvall 1992; Archibugi and Michie 1995; Zysman 1996). This debate aside, one would be hard pressed to deny the recent rise and power of transnational corporations and the relative attenuation of nation-state power (Amin 1997).

Theoretical approaches addressing different aspects of globalisation are quite varied. For instance, Waters (1995) identifies three structurally independent dimensions of globalisation – economic, political, and cultural. Others deny the structural independence of various dimensions, assigning determinacy to the globalisation of the economy and global capitalism (Robinson 1996a; 1996b; 1998; Sklair 1995a; Gill and Law 1989; MacEwan and Tabb 1989; Kolko 1988; Barnett and Muller 1974), or to global culture (Featherstone 1990; Giddens 1990; Robertson 1992; 1990; Robertson and Lechner 1985). Other theorists focus on transnational and global politics (Anderson, Brook, and Cochrane 1995).

This essay draws on literature that focuses on global capitalism, which is most directly and forcibly linked to environmental degradation. Although many theorists link environmental degradation to capitalism, few address the qualita-

tively new environmental problems that arise with a shift from national economies linked via trade networks to a truly global economy. The focus on environmental problems that are thought to have global implications (ozone depletion, acid rain, nuclear catastrophe, and rainforest deforestation) have diverted attention from localised environmental problems that stem most directly from global capitalism.

A defining feature of globalisation – the emergence of a truly global economy – is a function of two interrelated processes. First, the pervasiveness of the capitalist mode of production undermines and supplants all pre-capitalist relations across the globe. Second, we are witnessing a transition from national and regional economies structurally linked on a global scale via commodity exchange and capital flow to the globalisation of the process of production itself (Robinson 1996a; 1998). The new global structure of accumulation is being superimposed on, and is transforming, all existing national social structures of accumulation. The agent of the global economy is transnational capital, organised institutionally in global corporations, supranational economic planning agencies, and political forums, and managed by a class-conscious transnational elite concentrated in the core of the world system (Robinson 1996a).

The seeds of this global transformation date to the early post-WWII years with the appearance of multinational corporations (MNCs) as the principal agents of international economic activity, and to two consecutive waves in the scientific and technological revolution (STR). The first STR began during WWII and was a shift from labour-intensive industrial production to capital-intensive production with a focus on high-energy, raw-materials based, capital-intensive technologies (e.g., nuclear energy, automation techniques, synthetics, computers and electronics). The second STR, started in the late 1960s, involved a shift from capital-intensive to technological-intensive production (e.g., a second generation of computerisation, electronics, synthetics, and mass communications technologies). The second STR allowed for the centralisation of decision making and management of global production, the complete separation of the site of management from the site of production, and the geographic fragmentation of production and of capital (Frobel et al. 1980).

The fundamental objective of core nation-states, often operating as surrogates for the transnational elite, is to stabilise the global economic system, thereby guaranteeing relations of domination. Neo-liberalism is conceived as the hegemonic ideology of core nation-states and of the transnational elite, the means by which the subordinated are consensually dominated. The neo-liberal agenda seeks to achieve the total mobility of capital by advocating the elimination of state intervention in the economy and regulation by individual nation-states of the activity of capital in their territories. On a structural level, the neo-liberal agenda has been fairly successful. As a result, the nation-state, although not obsolete, gradually lost power relative to the power gained by transnational corporations (Ruggie 1993; Sklair 1995a; Robinson 1996a).

Under global capitalism, for instance, the threats of trade sanctions and the erection of tariffs by nation-states are losing their power as political tools for two reasons. First, given that global corporations operate numerous branches and subsidiaries across the globe, when a nation-state threatens to terminate trade with another nation-state, transnational corporations are essentially severing trade with themselves. For instance, 'intra-firm trade' accounts for roughly 60% of what are called 'U.S. imports' (Gilpin 1987, 254; Robinson 1998); 40% of global trade, beginning in the early 1980s, is intra-firm trade within the largest 350 transnational corporations (World Bank 1992, p. 33; as cited in Robinson 1998). Second, with the penetration of transnational elites into all nation-states and the transnationalisation of local elites, pressure is applied internally and externally for the elimination of state and protectionist economic barriers. Neo-liberalism attenuates the ability of individual nation-states (or any spatially-defined political institution) to regulate economic activity within national boundaries, to capture and redistribute surpluses, to harmonise conflicting social interests, and to impose regulations on polluting firms. Due to the tremendous increase in intra-firm trade over the years, many of the economic constructs of the past, those derived from nation-state categories, are now antiquated. Continued nation-state reification thwarts an understanding of the nation-state as a 'historically-constituted structure' whose structural form is not static (Robinson 1998). Although it is apparent that the political theory of the sovereign nation-state increasingly lacks empirical import (Casanova 1996; Held 1989), Mann (1997) cautions that there is a tendency among theorists to exaggerate both the former strength of nation-states and their current decline.

With the transition from a capitalist world economy to the globalisation of capitalism itself, Wallerstein's core-periphery model, conceived as a spatial metaphor, is reconceived as a relational metaphor with a focus on the global capitalist mode of production (Robinson 1996a). Wallerstein, in recent research, hints at such a reconceptualisation when he suggests that 'polarisation is not theoretically between states but between economic zones, and between classes and people' (Wallerstein 1990, 290). A methodological advantage accrues from this reconceptualisation. The United States is the most powerful core nation-state, yet the inequality gap between peripheral and core populations in the US is greater than in any other 'core' nation-state. Examining this paradox requires moving beyond a spatially-bound structural analysis to an analysis of social relations.

In sum, it is my contention that the current configuration of the international division of labour is a combination of a spatially-bound division of labour as configured by world-system theory and a spatially-liberated division of labour based on one's relationship to the global capitalist mode of production. Thus, the core-periphery metaphor has a dual specification: it may refer to one's geographic location in the world-system (the nation-state in which one lives), or it may refer to one's relationship to the global capitalist mode of production. On

GLOBALISATION...

a structural level, the spatial configuration is being supplanted by the relational configuration. This transition is most observable at the extremes of the global division of labour. Put differently, where the spatial configuration acceding to the relational configuration is most notable is among the transnational elite and the lower classes. The middle strata of the continuum, which are disappearing as the polarising tendency of global capitalism deepens, are more structurally linked to spatial configurations. Due to many facets of globalisation (not addressed in this paper) the transnational elites on a subjective level are conscious of their structural position in the global system. The degree to which the lower classes come to recognise, transnationally and globally, the structural roots of their plight will determine the viability of a transnational social movement (Sklair 1995b; Robinson 1996a).

An outcome of globalisation and the structural reconfiguration of the globe is the intensification of social inequalities between core and peripheral nation-states, and between dominant and subordinate classes of the globe. This dual intensification of social inequalities stems from the maturation of capitalism at the global level and the inherent contradictions therein. Related to the intensification of social inequalities, global capitalism has a direct and profound impact on the environment. Stemming from globalisation, two related trends exist, not yet fully realised, that are of particular relevance to resource extraction, pollution and regulation. First, the power of the state is diminishing, yet the power of transnational corporations is increasing. Second, transnational capital is increasingly more mobile – that is, disembedded from spatial constraints. In part II, I will discuss the impact of these trends, providing insight into the differential environmental impact that global capitalism has on core and peripheral nation-states, and core and peripheral populations.

II. ENVIRONMENTAL DEGRADATION AND GLOBAL CAPITALISM

Environmental Degradation in Core Nation-States

Virtually every nation-state in the world has conceded, willingly or unwillingly, to the axial principle of transnational capital – neo-liberalism. Yet, capitalist countries that adhere to democratic principles face an inherent contradiction. The neo-liberal process of capital accumulation, allowed to operate unfettered, generates both wealth and social polarity. In turn, systemic socioeconomic inequalities generate political demands and resistance that can rarely be contained without stringent social control. When authority becomes repressive, violates laws and undercuts individuality, then the legitimising ideology of democracy is challenged. With the maturation of global capitalism, the likelihood of social conflict increases because no ‘new frontiers’ are available for colonisation and incorporation into the world system which, in the past, had

offset or at least delayed the social and political consequences of global polarisation (Robinson 1996a).

The inherent contradictions of capitalism and democracy reveal themselves in the contradictory dual roles that governments are expected to fulfil in modern democracies. The 'fiscal crisis of the state' thesis contends that 'the capitalist state must fulfil two basic and often conflicting functions – accumulation and legitimisation' (O'Connor 1973, 6). The accumulation function of the state dictates that conditions conducive to capital accumulation are maintained because failure to do so undermines 'the source of its own power, the taxes drawn from the economy's surplus production' (O'Connor 1973, 6). Conversely, overt use of coercive force to assist one class accumulate capital at the expense of the other classes threatens the legitimacy of the state, thereby undermining the basis of its political support. The state's fulfilment of its accumulation function is critical, especially considering Schnaiberg's (1980) argument that society is on a 'treadmill of production', involving an ever-growing need for capital investment and profitability that require an ever-increasing inputs of energy and material.

Since O'Connor offered his thesis in the early 1970s, the globalising structural processes that highlighted the inherent contradiction between capitalism and democracy also intensified the fiscal crisis of the state. Faced with greater financial constraints and a populace unwilling to pay more in taxes, the state fulfils its accumulation function by promoting economic growth through corporate subsidies, corporate tax breaks, and the deregulation of industry. The 1990s version of O'Connor's thesis suggests that the government is simultaneously employing a two-prong strategy: it creates conditions favourable for capital accumulation and economic growth, yet it maintains legitimacy by symbolically tending to the needs of the exploited.

The outcome of deregulation (or, at best, symbolic regulation) is that industries are more easily able to externalise the costs of pollution. The costs of production's negative impact on the environment and potentially the health of communities are excluded from the price of the product. Not even the consumer of the product pays the environmental costs of production directly. Rather, the public at large essentially subsidises the company, by either paying for the cleanup of the environment or enduring the travails of living in an extreme environment (Cable and Cable 1995). An environment is 'extreme' when the range of what people know about their physical world is narrowed while their need to protect themselves by acting on that world with imperfect knowledge is simultaneously intensified (Kroll-Smith, Couch, and Marshall 1997).

When the industrial drive for profit collides with public demands for protection from production-generated harms to health, safety and the environment, the government's failure to fulfil its legitimacy function is exposed. Freudenburg (1993) refers to this institutional malfeasance as 'recreancy'—the failure of an expert, or specialised organisation, to complete efficaciously the job

that is expected. With the proliferation of extreme environments and governmental failure to protect the needs of its citizens, we are witnessing the emergence of effective grassroots environmental movements, especially in the United States (Cable and Benson 1993). Not only have these grassroots groups mobilised to redress victims of environmental pollution, but they also mobilise to prevent 'dirty' industries from locating in their community, a trend referred to as NIMBY (not in my backyard) movements (Freudenberg 1984).

In many core nation-states and populations, conditions for 'dirty' industries are politically unfavourable partially because of the challenge of grassroots movements and higher pollution control standards (or at least, higher levels of enforcement). For instance, in the United States over the last few decades, industries have externalised environmental costs by locating in rural areas where local officials assure discretionary enforcement of environmental regulations (Schnaiberg 1986). Additionally, Cohen (1997a) found that industrially generated toxic chemical emissions are greater in rural counties of Indiana compared to metropolitan counties. The same forces underlying the concentration of dirty industries in peripheral locations in core nation-states, such as the United States, are also driving the concentration of dirty industries in peripheral nation-states.

The impetus for industrial relocation based on availability of cheap labour, the inexpensiveness of resources and the degree to which costs of production can be externalised has not changed: it is inherent in the logic of capitalism; the profitability of such relocation is a recent phenomenon. The technical ability for industrial relocation is a function of globalisation – the historical emergence of transnational capital liberated from spatial constraints. As discussed earlier, the second STR involved a transition from capital-intensive to technological-intensive production, fundamentally transforming the international division of labour. With the centralisation of management and decision-making, and with the site of management delinked from the site of production, the mobility of transnational capital increased. The mobility of transnational capital maintains consensual relations of subordination (between peripheral and core nation-states, and between peripheral populations and the transnational elite) by deferring the impact of environmental degradation and social inequalities in core nation-states (Sklair 1994). I will now briefly discuss the emergence and environmental impact of neo-liberal pressures on peripheral nation-states.

Environmental Degradation in Peripheral Countries

In response to the economic depression of the 1930s and two world wars, the post-1945 world order until 1970 was politically constructed to stimulate production over finance, and to strengthen the political centre against right- and left-wing forces, a struggle that intensified with the onset of the Cold War. During this period, a system of 'embedded liberalism' (Ruggie 1982) constrained capital mobility and shackled self-regulating markets. Social structures

of accumulation in the main capitalist countries rested on Fordist production and consumption structures, corporatism, Keynesian macroeconomic management and a period of unprecedented economic growth and prosperity in the West and Japan (Gill 1994).

The start of the 1970s saw the onset of a period of slower growth, higher inflation, higher unemployment, and the recurrence and increasing severity of recessions. As the twin processes of globalisation and economic liberalisation quickened in the 1970s, financial capital became increasingly mobile, attenuating capital and exchange controls imposed in the Bretton Woods era (Gill 1994). Also, in this interim, it was appealing for core commercial banks to lend to peripheral nation-states, especially Latin America, for three reasons. First, the periphery was a relatively neglected area for loans with few regulations imposed on foreign lenders. Second, peripheral nation-state economies (for example, Mexico and Brazil) were expected to grow quickly, thus yielding a good return on the loan. Third, core bankers believed that nation-states are low-risk borrowers: unlike individuals or corporations, 'countries simply could not go bankrupt' (Yearley 1996).

According to Gill (1994), Reaganomics had the effect of draining the world's surplus savings into the U.S. economy, forcing other countries to deflate their currencies. As a result, interest rates rose to high levels preventing even greater capital outflows to the United States. These monetary deflations in the 1980s meant that globalisation coincided with slower growth, recession, and growing indebtedness. The imperatives of economic competition accelerated restructuring in a neo-liberal direction. A hyper-liberal form of capitalism characterised by the liberation of the private sector from state intervention gained ascendancy, spreading from the United States and the United Kingdom over much of the world (Cox 1995).

In the 1980s, many debt-ridden nation-states (especially in Africa and Latin America) started to go bankrupt, using all their export earnings merely to service their debts. In response to this unstable situation, two international finance institutions – the World Bank and the International Monetary Fund (IMF) – increasingly assumed a powerful advisory and brokerage role, with a commitment to safeguarding the international monetary system. The World Bank and the IMF strongly advocated that debtor countries increase export earnings by attracting investment to meet repayment schedules, thus setting the stage for transnational policies of structural adjustment. Structural adjustment required debtor governments to liberalise their economies, deregulate financial sectors, privatise and denationalise natural resources, banks and industries, and dismantle public services (Casanova 1996). Certainly, the impact of structural adjustment policies was (and is) not monolithic, much variation exists across regions and nation-states through time (Mann 1997).² An outcome of structural adjustment policy is that it forces debt-ridden countries to accept polluting industries (Yearley 1996; Frey 1994-95; Hilz 1992). Even those governments wishing to

preserve basic natural resources for domestic use are stymied because of the need to increase export earnings (Cobb 1996; Bello, Cunningham, and Rau 1994). Once relocated from core to peripheral nation-states, transnational corporations are able to externalise pollution costs legally at levels no longer accepted in core nation-states (Yearley 1996; Michalowski and Kramer 1987).

Structural adjustment pressure also accelerated the change in agricultural production in some peripheral nation-states toward commercial farming for the world market. The penetration of the peripheral nation-states by new agricultural production technologies, especially in parts of Latin America and Africa, shifted agricultural production away from traditional, environmentally sustainable farming practices toward greater specialisation (monocropping) and increased dependence on core nation-states (Redclift 1987). Specifically, pressure to repay debts forced debtor nation-states to increase the production and export of cash crops (such as forest products, coffee, sugar, and bananas) and decrease the production of foodstuffs for domestic consumption. Cash crop production has the further disadvantage of requiring an intensification of chemical fertilisers and pesticides, thereby exhausting the soil of nutrients.

In sum, the disproportionate environmental degradation in peripheral locations in core nation-states and peripheral nation-states is linked to structural reconfiguration of the globe and the neo-liberal agenda of transnational capital. Thus, the argument presented in this paper is incompatible with the contention by some that overpopulation is the principal cause of environmental degradation in peripheral nation-states (Ehrlich 1968) and is congruent with perspectives that link environmental degradation to capitalism, such as Commoner's (1991) research on inappropriate production technologies and Schnaiberg's (1980) focus on the historical expansion of production.

In the next section, I will outline and critique Ulrich Beck's (1992a) theory of the 'Risk Society', to illustrate the increasing inadequacy of nation-state-centric theories for explaining the impact of capitalism on environmental degradation. To reiterate, the cogency of my critique of the 'risk society' centres on the logical consistency and empirical import of arguments presented thus far.

III. GLOBAL CAPITALISM AND ULRICH BECK'S 'RISK SOCIETY'

Ulrich Beck offers a provocative theory that elevates technology and environmental risk as the twin structuring pillars of an advanced stage of modernity. Beck argues that 'we are eyewitnesses – as subjects and objects – of a break within modernity, which is freeing itself from the contours of the classical industrial society and forging a new form – the (industrial) 'risk society'' (Beck 1992a, 9). The crux of Beck's theory and the contours of the risk society are developed by two interrelated themes. One is associated with the concomitant processes of 'wealth distribution' and 'risk distribution' (risk avoidance). The

other theme concerns the unbinding of science and politics through 'reflexive modernisation'.

Wealth Distribution and Risk Distribution

Industrial (modern) society supposes 'the dominance of the "logic of wealth" and asserts the compatibility of risk distributions within it, while the risk society asserts the incompatibility of distributions of wealth and risk, and the competition of their "logics"' (Beck 1992a, 154). The purpose of wealth distribution is to meet the material needs of society which, in turn, serves as the rationale for the unrestrained production of goods. The logic of wealth distribution goes unquestioned until general material needs are reduced by increased productivity and/or through redistributive policies of a welfare state.

Once material needs are met, the logic of wealth distribution loses its relevance, acceding to the logic of risk distribution. The risk society becomes gripped by the hazards and potential threats unleashed by the exponentially growing productive forces in the modernisation process. The thoughts and actions of individuals are organised around avoiding risks rather than accumulating wealth. The goal of affluence yields to that of safety. In sum, for risk avoidance to supplant wealth distribution as the axial principle organising society, two conditions, both a function of the modernisation process, must be met: 1) material needs must be appeased; and 2) insecurities due to the growth of risks must increase. For the transformation of organising principles to occur, risks of late modernity must have the capacity to restructure society. So what are the qualities of late modern risks?

Humans have proven relatively effective at controlling the natural environment, anticipating natural hazards and allaying the impact of such hazards. The increased salience of present-day risks is linked to the transition from natural hazards, deemed 'acts of God', to technological hazards stemming from anthropogenic forces (Cutter 1993; Lidskog 1996). Cohen identifies three characteristics that distinguish contemporary technological risk from those that existed in earlier eras: '1) they are undetectable by direct human sensory perception; 2) they are capable of transcending generations; and 3) they exceed the capacity of current mechanisms for compensating victims' (1997b, 107). It is not the objective damage or destructive potential of technological hazards that is so devastating; rather, it is their source.

Pre-industrial hazards, no matter how large and devastating, were 'strokes of fate' raining down on mankind from 'outside' and attributable to an 'other' – gods, demons or Nature... For with the origin of industrial risks in decision-making the problem of social accountability and responsibility irrevocable arises.... it is not the number of dead and wounded, but rather a social feature, their industrial self-generation, which makes the hazards of mega-technology a political issue (Beck 1992b, 98).

GLOBALISATION...

As the dawn of the twenty-first century approaches, according to Beck (1992b), two incongruous strands of development converge. The first is false security based on the institutionalisation of techno-bureaucratic norms and regulations, and the second is the spread and challenge of unprecedented hazards in the face of unenforceable regulations. This contradiction will continue so long as the old industrial patterns of rationality and control last; it will cease only when incomprehensible catastrophes become commonplace. ‘The institutions of developed industrial society – politics, law, engineering sciences, industrial concerns – accordingly command a broad arsenal for “normalising” non-calculable hazards. They are underestimated, compared out of existence or made anonymous causally and legally’ (Beck 1992b, 105). In sum, ‘Instrumental rationality, market mechanisms, bureaucratic divisions of labour, and class conflict no longer define the dynamics of the risk society. A totally new logic of inadvertent consequences informs the risk society and its process of “reflexive modernisation”’ (Bronner 1995, 71).

The Unbinding of Science and Politics

With the production of what Beck calls ‘mega-hazards’ – nuclear, chemical, and genetic technologies – science has abolished the boundary between laboratory and society. In a period of reflexive modernisation, the consequences of scientific advancement are no longer going unnoticed. Society is becoming increasingly cognisant of the risks created by modernisation. Environmental crises are projected into our lives via the evening news. Consumer goods are replete with warning labels. Corporations are symbolically painting themselves green. Environmental degradation no longer occurs outside our realm of vision. Concomitant to the growing consciousness and social recognition of risks is the demystification of the sciences. As Beck contends:

Science’s rationality claim to be able to investigate objectively the hazardousness of risk permanently refutes itself. It is based, on a house of cards of speculative assumptions, and moves exclusively within a framework of probability statements, whose prognosis of safety cannot even be refuted by actual accidents (Beck 1992a, 29).

Reflexive modernisation means that the hazards of scientific endeavours and the institution of science are no longer protected from scepticism. Beck asserts that when reflexive modernisation ‘encounters the conditions of a highly developed democracy and established scientisation’, this leads to the ‘unbinding of science and politics’ (1992a: 154). By the unbinding of science, Beck is suggesting that the method of science and scientific terminology are being divorced from the institution itself. Inherent in the institution of science are standards of its own critique. Paradoxically, we have become critical of expert opinion while simultaneously becoming increasingly aware of the need for

expertise. Essentially, expert opinions are being extracted from expert systems; people themselves have become lay experts in risk areas that are pertinent to them. In the risk society, 'monopolies on knowledge and political action are becoming differentiated, moving away from their prescribed places and ... becoming more generally available' (Beck 1992a, 154).

Inherent in the process of democratisation is the decentralisation of political institutions and the authority to make decisions. Sub-politics represent an alternative means of influencing and participating in a once exclusionary political arena controlled by orthodox political institutions. The new vehicles of political action in the risk society are media publicity, judiciary, citizens' initiative groups, and the new social movements. Accordingly, new political battlefields emerge less in the institutions of the state than in the initiatives undertaken by the new social movements. Opening up the political system increases the individualisation of politics and the political system begins to lose its function. The notion of sub-politics is crucial for Beck's theory, as it represents the mechanism by which society structures itself around risks. Sub-politics often take the shape of a social movement whose power is derived from within the movement and from the quality and scope of the risks that spurred organisation. It is the sheer enormity of industrial hazards that gives the new social movements power and legitimacy. Beck argues that the threat of late modern risks cuts across class lines, and thus new social movements form independent of class divisions.

Social Stratification and Class Structure

Beck contends, extrapolating from the (West) German experience, that social inequality has disappeared almost completely from the agendas of daily life, of politics, and of scholarship. With the 'successes of the welfare state in reducing economic scarcity, social class and wealth accumulation are dissolving as the defining parameters of social stratification' (Cohen 1997b, 107). Beck's argument is not that inequality ceases to exist, but rather that class-based inequality is being superseded by inequality stemming from the distribution of technological risks. Historical developments led to an individualisation of inequality. When modernisation reaches an advanced level, agents tend to become more individualised, that is, decreasingly constrained by structures. The historical developments leading to the individualisation of the populace, according to Beck, are changes in three dimensions of the labour market: education, mobility and competition. Specifically, formal *education* in schools and universities provides individual credentials leading to individualised career opportunities in the labour market. By becoming independent from traditional ties (*mobility*), people's lives take on an independent quality which, for the first time, makes possible the experience of a personal destiny. *Competition* rests on the interchangeability of qualifications and thereby compels individuals to advertise the individuality and uniqueness of their work and their own accomplishments. As

GLOBALISATION...

a result of these changes in the labour market and an overall increase in the standard of living, subcultural class identities have dissipated, class distinctions based on status have lost their traditional support, and processes for the diversification and individualisation of lifestyles have been set in motion. The hierarchical model of social classes and stratification has increasingly been undermined.

Beck poses the question, 'What political dynamics, what social structure, what conflict scenarios arise from the legalisation and normalisation of global and uncontrollable systematic threats?' (Beck 1992b, 109). The systematic environmental threats to which Beck refers are global warming, the greenhouse effect, nuclear technology, depletion of the ozone layer, and acid rain. Objectively, these risks display an equalising effect within their scope and among those affected by them. 'Nuclear contamination is egalitarian and in a sense "democratic." Nitrates in the ground water do not stop at the general director's water tap' (Beck 1992b, 109). In the risk society, even the rich and powerful are not safe from the side-effects of the modernisation process; perpetrator and victim sooner or later become identical.

Major differences exist between the dynamics of conflict in industrial class-based society and late modern society. In the former, 'wealth production produced antagonisms between capital and labour'; in the latter, 'chemical, nuclear and genetic threats bring about polarisations between capital and capital – and thus also between labour and labour' (Beck 1992b, 111). 'The dream of class society is that everyone wants and ought to have a share of the pie. The utopia of the risk society is that everyone should be spared from poisoning' (Beck 1992a, 49). In the risk society, friction occurs between those who profit from risks and those who are afflicted by risks. Social inequality and structural imbalances in the risk society are not reflective of the industrial class social order. Beck projects that the continued growth of hazards will override any associated advantages of risks resulting in a classless society of risk losers.

Critique

The explanatory power of the risk society is strongest when applied to 'welfare states' where the material needs of most of its citizens are met via wealth redistribution through taxation and social security. The relative successes of advanced welfare states have moved issues of material distribution and income inequality to the political margins. The generalisability of the risk society is contingent on the specific structural conditions of an advanced social welfare system that Beck assumes will emerge in other nation-states and will be sustained in (West) Germany and Scandinavia. In other words, following modernisation theory (Rostow 1990, 3rd edition; Huntington 1968) in development studies, presumably an end-state of social change obtains, an advanced stage of modernity which is reached via reflexive modernisation. Every nation-state presumably follows this trajectory.

As the following critique delineates, the risk society is not generalisable because the nation-state and national society are treated as self-evident units of analysis; the nation-state is abstracted out of the structural configuration of the world. I will provide a critique of Beck's theory on two fronts. The first critique relates to the preconditions for the transition from a modern society to the risk society and the second critique questions whether a society increasingly organised around the distribution of technological risk is classless, as argued by Beck.

The purpose of wealth distribution (or welfare policies) is to meet the material needs of society which, in turn, serves a legitimising function of techno-scientific development. This condition is crucial to Beck's theory because it is the initial step in the process of reflexive modernisation from which the risk society emerges. Material needs must be met before the logic of risk distribution supplants the logic of wealth distribution and thus restructures society. Beck is equivocal when it comes to this initial condition; 'material needs' are not defined, the sufficient and necessary level of needs that must be met are not identified, and what portion of society must have its needs met is not mentioned.

What is more, with pressure from transnational capital on nation-states to adopt neo-liberal policies, the logic of wealth distribution (advanced welfare systems) is quickly being eliminated in those few core countries that were relatively successful in meeting the material needs of its citizens. In the 1980s, the administrations of Reagan in the U.S. and Thatcher in Britain reversed prior efforts to meet the material needs of all citizens through welfare provision, making the transition to the risk society highly unlikely. As discussed earlier, structural adjustment policies driven by a neo-liberal agenda have had a devastating effects on peripheral countries and populations. The percentage of the world's population living in absolute poverty is increasing at an alarming rate. These trends suggest that Beck's risk society is temporally bound to the post-WWII period and spatially bound to (West) Germany and Scandinavia. The risk society appears to be an anomaly rather than an end-state of social change.

Assuming that risk societies do exist, my second critique relates to whether or not such societies are classless, as argued by Beck. The validity of a classless risk society is contingent on the hypothesised structuring capacity of *global* risks which is generally not supported empirically. Many of the global hazards Beck focuses on – such as, the greenhouse effect, ozone depletion, acid rain —do not obey juridically defined borders or class divisions, and thus these hazards are thought to affect all members equally. As a result, social movements organising around global hazards also transcend class divisions. It is likely that many people are cognisant of global environmental threats, and for some, this awareness may have altered their world view. The emergence and strength of Green Parties in some western European countries seem to support this contention. The issue, though, is not so much whether global hazards transcend class divisions – they do; rather, the issue is whether or not global hazards have the capacity to restructure society at the level that Beck's argument requires.

To date, the environmental risks that have demonstrated the capacity to organise sectors of society have been micro-level technological hazards such as toxic contamination, oil spills, and radioactive waste storage (Couch, Kroll-Smith, and Marshall 1997; Picou, Gill, and Cohen 1997; Cable and Cable 1995; Erikson 1994; Cable and Benson 1993; Couch and Kroll-Smith 1991; Reich 1991; Kroll-Smith and Couch 1990; Edelstein 1988). Yet, any meaningful discussion of localised hazards and risks – which have a tendency to reinforce class divisions, not transcend them – is missing from Beck's thesis. Economically-sound reasons exist for corporations to locate hazardous industries in communities of low socioeconomic status, for historically it has been the path of least resistance. The social sciences are replete with studies that find evidence of environmental injustice and racism.³ People of low socioeconomic status are systematically and disproportionately exposed to the hazardous byproducts of modernisation while receiving only a fraction of the benefits. Beck omits theoretical treatment of these class-specific differences. In addition, even global risks can produce differential impacts 'due to class-specific distribution of coping resources' (Engel and Strasser 1998: 94).

IV. CONCLUSION

In this essay, I argue that the current structural configuration of globe is a combination of a spatially-bound division of labour as configured by world-system theory and a spatially-liberated division of labour based on one's relationship to the global capitalist mode of production. An outcome of the structural reconfiguration of the globe is the intensification of social inequalities, which benefit core nation-states and the transnational elite while peripheral nation-states and subordinated classes increasingly face material deprivation and environmental degradation. To better understand why certain segments of societies are disproportionately impacted by localised environmental degradation, we must move beyond strictly nation-state frameworks by linking environmental sociological issues to macro-structural dynamics that operate on a global level. I have assessed Ulrich Beck's theory of the risk society to illustrate the inadequacies of theoretical approaches that fail to transcend nation-state levels of analysis and thus cannot account for the impact of economic globalisation.

Beck's theory, while grand in scope, is of limited generalisability precisely because it fails to address social change at the global structural level. The transition from an industrial or class-based society to the risk society appears to have been a snapshot of reality characterising post-WWII (West) Germany and Scandinavia, rather than a homogenising path that all modern societies follow. The hypothesised classlessness of the risk society is contingent on the organising capacity of global environmental risks in organising late modern societies which

is not supported empirically; rather, local technological hazards have a profound impact on communities and have a tendency to reinforce class divisions.

It is important to note that, by his own admission, Beck's work is intended to be provocative. In this respect, he is a resounding success, the discourse that Beck's research has generated is vast in breadth and depth.⁴ In addition, there are many middle-range theories and extended hypotheses that can be derived from Beck's work which appear to have empirical import in some core nation-states or perhaps among core populations. How might we reconceptualise Beck's theoretical framework such that it informs and takes into account the structural configuration of the globe as outlined in this essay?

Perhaps if Beck's framework is unshackled from its spatial constraints, moving beyond nation-state centrism, we can shift the analytical focus from 'risk societies' to 'risk populations'. Such an analytical shift permits an examination of globalising processes that transcend nation-states and of the differential impact that late modern risks have on populations within nation-states. I am not suggesting that nation-states no longer have explanatory power: I am suggesting that we should not treat the nation-state as a self-evident unit of analysis but, rather, nation-state variables should be specified in a global level of analysis. The task becomes assessing to what degree core and peripheral populations within both core and peripheral nation-states are characterised by the tenets of the risk society. What interwoven tapestries of relational and spatial factors serve as a catalyst underpinning the shift from modern to late modern populations, from industrial to risk populations?

This reconceptualisation of Beck's framework effectively undermines much of my macro-structural critique with one exception – the suggestion that the 'risk society' (or 'risk populations' in my reformulation) is classless. To date, it is precisely those class reinforcing, local environmental risks, addressed only tangentially by Beck, that are most pervasive in their capacity to organise segments of society into 'risk populations'. Beck's focus on the equalising effect of global risks, while provocative and supportive of a classless risk society, misdirects our attention from the more acutely damaging impacts of technological hazards. It is also, in the aftermath of these hazards, that we find the most support for many of Beck's ideas; such as (but not limited to), the unbinding of science and politics, the emergence of subpolitics, and lay appropriation of expert knowledge from expert systems. It is Beck's focus on the classlessness of the risk society that seems most incompatible with the arguments I offer here; that is, incompatible with the impact of global capitalism and its link to class-specific local environmental degradation.

This paper sounds a clarion call for political economists to include the environment at the point of theory construction, and for environmental sociologists to embed theories explicitly within broader structural frameworks. Both theoretical traditions will gain from this cross-fertilisation. Three areas in particular require much theoretical and empirical attention. First, we must

GLOBALISATION...

examine the relationship between global capitalism and environmental degradation as it differentially impacts core and peripheral nation-states and core and peripheral populations. Second, we need to examine the degree to which local environmental hazards are exacerbating preexisting social inequalities. Finally, we must better understand the short- and long-term impacts that neo-liberal restructuring has on the persistence and effectiveness of environmental regulation.

NOTES

¹ Globalisation theorists, implicitly and explicitly, ascribe ontological status to the globe. This philosophical position is important and deserves attention, but is beyond the scope of this paper. For the purposes of this paper, I am more concerned with the empirical aspects of globalising processes and trends that globalisation theorists highlight.

² For a detailed review of the impact of structural adjustment policies on specific regions and nation-states, see Mann (1997:482-489).

³ For an excellent overview of many controversial issues that are central to research examining environmental justice and racism, see Been with Gupta (1997). See also, Heiman (1996); Pulido (1996); Been (1995); Hamilton (1995); Adeola (1994); Anderton et al. (1994); Collin (1994); Bullard (1993); Foster (1993); Bryant and Mohai (1992); Bullard (1990);

⁴ For a discussion of Ulrich Beck's intellectual contribution refer to Scott Lash and Brian Wynne's introduction in Beck's *Risk Society: Towards a New Modernity* (1992). For other English language articles and books that draw on Beck's work (critically or uncritically) see: Cohen (1997b); Engel and Strasser (1998); Hollway and Jefferson (1997); Alexander (1996); Lash, Szerszynski, and Wynne (1996); Bronner (1995); Hajer (1995); Mol and Spaargaren (1993).

REFERENCES

- Adeola, Francis 1994. 'Environmental Hazards, Health, and Racial Inequity in Hazardous Waste Distribution', *Environment and Behavior* **26**(1):99-126.
- Alexander, Jeffrey 1996. 'Critical Reflections on 'Reflexive Modernization'', *Theory, Culture & Society* **13**(4): 133-138.
- Amin, Ash 1997. 'Placing Globalization', *Theory, Culture & Society* **14**(2):123-137.
- Anderson, James, Chris Brook, and Allan Cochrane (eds) 1995. *A Global World? Re-ordering Political Space*. Oxford: Oxford University Press.
- Anderton, Douglas L., Andy B. Anderson, John Michael Oates, and Michael R. Fraser 1994. 'Environmental Equity: The Demographics of Dumping', *Demography* **31**(2): 229-248.
- Archbugi, D. and J. Michie 1995. 'The Globalisation of Technology: A New Taxonomy', *Cambridge Journal of Economics* **19**:121-140.
- Barnet, Richard J. and Ronald E. Muller 1974. *Global Reach: The Power of the Multinational Corporation*. New York: Simon and Schuster.

- Beck, Ulrich 1992a. *Risk Society: Towards A New Modernity*. London: Sage Publications (Translated by Mark Ritter).
- Beck, Ulrich 1992b. 'From Industrial Society to the Risk Society: Questions of Survival, Social Structure and Ecological Enlightenment', *Theory, Culture & Society* **9**:97-123.
- Been, Vicki 1995. 'Analyzing Evidence of Environmental Justice', *Journal of Land Use & Environmental Law* **11**(1):1-36.
- Been, Vicki with Francis Gupta 1997. 'Coming to the Nuisance or Going to the Barrios? A Longitudinal Analysis of Environmental Justice Claims', *Ecology Law Quarterly* **XXIV**(1):1-56.
- Bello, Walden, with Shea Cunningham, and Bill Rau 1994. *Dark Victory: The United States, Structural Adjustment and Global Poverty*. London: Pluto Press.
- Benton, Ted 1994. 'Biology and Social Theory in the Environmental Debate', in M. Redclift and T. Benton (eds) *Social Theory and the Global Environment*, pp. 28-50. London: Routledge.
- Bronner, Stephen E. 1995. 'Ecology, Politics, and Risk: The Social Theory of Ulrich Beck', *Capitalism, Nature, Socialism* **6**:67-86.
- Bryant, Bunyan and Paul Mohai (eds) 1992. *Race and the Incidence of Environmental Hazards*. Boulder, CO: Westview Press.
- Bullard, Robert 1993. *Confronting Environmental Racism: Voices from the Grassroots Movement*. Boston: South End Press.
- Bullard, Robert D. 1990. *Dumping in Dixie: Race, Class, and Environmental Quality*. Boulder: Westview Press.
- Cable, Sherry and Michael Benson 1993. 'Acting Locally: Environmental Injustice and the Emergence of Grassroots Environmental Organizations', *Social Problems* **40**:464-476.
- Cable, Sherry and Charlie Cable 1995. *Environmental Problems, Grassroots Solutions: The Politics of Grassroots Environmental Conflict*. New York: St. Martin's Press.
- Casanova, Gonzales 1996. 'Globalism, Neoliberalism, and Democracy', *Social Justice* **23**(1-2):39-48.
- Cobb, John B. 1996. 'Toward a Just and Sustainable Economic Order', *Journal of Social Issues* **51**(4):83-100.
- Cohen, Maurie J. 1997a. 'The Spatial Distribution of Toxic Chemical Emissions: Implications for Nonmetropolitan Areas', *Society & Natural Resources* **10**:17-41.
- Cohen, Maurie J. 1997b. 'Risk Society and Ecological Modernisation: Alternative Visions for Post-Industrial Nations', *Futures* **29**(2):105-119.
- Collin, Robert W. 1994. 'Review of the Legal Literature on Environmental Racism, Environmental Equity, and Environmental Justice', *Journal of Environmental Law and Litigation* **9**:121-171.
- Commoner, Barry 1991. 'Rapid Population Growth and Environmental Stress', *International Journal of Health Services* **21**(2):199-227.
- Couch, Stephen R. and J. Stephen Kroll-Smith (eds) 1991. *Communities at Risk: Collective Responses to Technological Hazards*. New York: Peter Lang.
- Couch, Stephen R., J. Stephen Kroll-Smith, and Brent Marshall (eds) 1997. 'Environmental Disruption and Social Change', *Current Sociology* **45**(3).
- Cox, Robert 1995. 'Critical Political Economy', in Bjorn Hettne (ed) *International Political Economy: Understanding Global Disorder*, pp. 31-45. Halifax: Fernwood Publishing.

GLOBALISATION...

- Cutter, Susan L. 1993. *Living with Risk: The Geography of Technological Hazards*. London: Edward Arnold.
- Edelestein, Michael R. 1988. *Contaminated Communities: The Social and Psychological Impacts of Residential Toxic Exposure*. Boulder, CO: Westview Press.
- Ehrlich, Paul 1968. *The Population Bomb*. New York: Ballantine Press.
- Engel, Uwe and Hermann Strasser 1998. 'Global Risks and Social Inequality: Critical Remarks on the Risk-Society Hypothesis', *Canadian Journal of Sociology* **23**(1):91-103.
- Erikson, Kai 1994. *A New Species of Trouble: Explorations in Disaster, Trauma, and Community*. New York: W.W. Norton & Company.
- Featherstone, Mike (ed) 1990. *Global Culture*. London: Sage.
- Foster, Sheila 1993. 'Race(ial) Matters: The Quest for Environmental Justice', *Ecology Law Quarterly* **20**:721-753.
- Frey, Scott R. 1995-95. 'The International Traffic in Hazardous Wastes', *Journal of Environmental Systems* **23**:165-177.
- Freudenberg, Nicholas 1984. *Not in Our Backyards! Community Action for Health and the Environment*. New York: Monthly Review Press.
- Freudenburg, William R. 1993. 'Risk and Recreancy: Weber, the Division of Labor, and the Rationality of Risk Perceptions', *Social Forces* **71**:909-932.
- Fröbel, Folker, Jürgen Heinrichs, and Otto Kreye 1980. *The New International Division of Labour: Structural Unemployment in Industrialized Countries and Industrialization in Developing Countries*. Cambridge: Cambridge University Press.
- Giddens, Anthony 1990. *The Consequences of Modernity*. Cambridge, MA: Polity Press.
- Gill, Stephen 1994. 'Structural Change and Global Political Economy: Globalizing Elites and the Emerging World Order', in Y. Sakamoto (ed) *Global Transformation: Challenges to the State System*, pp. 169-99. Tokyo: United Nations Press.
- Gill, Stephen and David Law 1989. 'Global Hegemony and the Structural Power of Capital', *International Studies Quarterly* **33**(4): 475-499.
- Gilpin, Robert 1987. *The Political Economy of International Relations*. Princeton: Princeton University Press.
- Goldblatt, David 1996. *Social Theory and the Environment*. Boulder, CO: Westview Press.
- Hajer, Maarten 1995. *The Politics of Environmental Discourse: Ecological Modernisation and the Policy Process*. Oxford: Clarendon Press.
- Hamilton, James T. 1995. 'Testing for Environmental Racism: Prejudice, Profits, Political Power?' *Journal of Policy Analysis and Management* **14**(1): 107-132.
- Heiman, Michael K. 1996. 'Race, Waste and Class: New Perspectives on Environmental Justice', *Antipode* **22**(2): 111-121.
- Held, David 1989. *Political Theory and the Modern State*. Stanford: Stanford University Press.
- Hilz, Christoph 1992. *The International Toxic Waste Trade*. New York: Van Nostrand Reinhold.
- Hirst, Paul and Grahame Thompson 1996a. 'Globalisation: Ten Frequently Asked Questions and Some Surprising Answers', *Soundings* **4**(Autumn):47-66.
- Hirst, Paul and Grahame Thompson 1996b. *Globalization in Question*. Cambridge: Polity.
- Hollway, Wendy and Tony Jefferson 1997. 'The Risk Society in an Age of Anxiety: Situating Fear of Crime', *British Journal of Sociology* **48**(2): 255-266.

- Huntington, Samuel 1968. *Political Order in Changing Societies*. New Haven, CT: Yale University Press.
- Kolko, Joyce 1988. *Restructuring the World Economy*. New York: Pantheon.
- Kroll-Smith, J. Stephen and Stephen R. Couch 1990. *The Real Disaster is Above Ground: A Mine Fire and Social Conflict*. Lexington: University Press of Kentucky.
- Kroll-Smith, J. Stephen, Stephen R. Couch, and Brent K. Marshall 1997. 'Sociology, Extreme Environments, and Social Change', *Current Sociology* **45**(3):1-18.
- Lash, Scott, Bronislaw Szerszynski, and Brynne Wynne (eds) 1996. *Risk, Environment and Modernity*. Sage Publications: London.
- Lidskog, Rolf 1996. 'In Science We Trust? On the Religion Between Scientific Knowledge, Risk Consciousness and Public Trust', *Acta Sociologica* **39**:31-51.
- Lundvall, Bengt-Ake (ed) 1992. *National Systems of Innovation*. London: Pinter.
- MacEwan, Arthur and William K. Tabb 1989. *Instability and Change in the World Economy*. New York: Monthly Review.
- Mann, Michael 1997. 'Has Globalization Ended the Rise and Rise of the Nation-State?', *Review of International Political Economy* **4**(3):472-496.
- Michalowski, Raymond J. and Ronald C. Kramer 1987. 'The Space Between Laws: The Problem of Corporate Crime in a Transnational Context', *Social Problems* **34**(1):34-53.
- Mol, Arthur P.J. and Gert Spaargaren 1993. 'Environment, Modernity and the Risk Society: The Apocalyptic Horizon of Environmental Reform', *International Sociology* **8**(4):431-459.
- O'Connor, James 1973. *The Fiscal Crisis of the State*. New York: St. Martin's Press.
- Ohmae, Kenichi 1995. *The End of the Nation State*. New York: Free Press.
- Picou, J. Steven, Duane A. Gill, and Maurie J. Cohen (eds) 1997. *The Exxon Valdez Disaster: Reading on a Modern Social Problem*. Dubuque, Iowa: Kendall-Hunt Publishers.
- Pulido, Laura 1996. 'A Critical Review of the Methodology of Environmental Racism Research', *Antipode* **28**(2): 142-159.
- Redclift, Michael 1987. *Sustainable Development: Exploring the Contradiction*. New York: Methuen and Co.
- Reich, Michael R. 1991. *Toxic Politics: Responding to Chemical Disasters*. Ithaca, NY: Cornell University Press.
- Robertson, Roland 1992. *Globalization: Social Theory and Global Culture*. London: Sage.
- Robertson, Roland 1990. 'Mapping the Global Condition: Globalization as the Central Concept', in M. Featherstone (ed) *Global Culture: Nationalism, Globalization and Modernity*, pp. 15-30. London: Sage.
- Robertson, Roland and Frank Lechner 1985. 'Modernization, Globalization and the Problem of Culture in World-Systems Theory', *Theory, Culture and Society* **2**(3):103-117.
- Robinson, William I. 1998. 'Beyond Nation-State Paradigms: Globalization, Sociology and the Challenge of Transnational Studies', *Sociological Forum* **13**(4): 561-594.
- Robinson, William I. 1996a. *Promoting Polyarchy: Globalization, US Intervention, and Hegemony*. New York: Cambridge University Press.
- Robinson, William I. 1996b. 'Globalization, the World System, and 'Democracy Promotion' in U.S. Foreign Policy', *Theory and Society* **25**(5):615-665.

GLOBALISATION...

- Rostow, Walt W. 1990. *The Stages of Economic Growth: A Non-Communist Manifesto*, Third Edition. New York: Cambridge University Press.
- Ruggie, John G. 1993. 'Territoriality and Beyond: Problematizing Modernity in International Relations', *International Organization* **47** (Winter): 139-174.
- Ruggie, John G. 1982. 'International Regimes, Transactions and Change – Embedded Liberalism in the Post-War Order', *International Organisation* **36**:379-415.
- Schnaiberg, Allan 1986. 'Reflections on Resistance to Rural Industrialization: Newcomers' Culture of Environmentalism', in P. Elkind-Savatsky (ed) *Differential Social Impacts of Rural Resource Development*, pp. 229-258. Boulder, CO: Westview Press.
- Schnaiberg, Allan 1980. *The Environment: From Surplus to Scarcity*. New York: Oxford University Press.
- Sklair, Leslie 1995a. *Sociology of the Global System*, 2nd edition. Baltimore, MD: The John Hopkins University Press.
- Sklair, Leslie 1995b. 'Social Movements and Global Capitalism', *Sociology* **29**(3):495-512.
- Sklair, Leslie 1994. 'Global Sociology and Global Environmental Change', in M. Redclift and T. Benton (eds) *Social Theory and the Global Environment*, pp. 205-227. London: Routledge.
- So, Alvin 1990. *Social Change and Development: Modernization, Dependency, and World-System Theories*. London: Sage Publications.
- Wallerstein, Immanuel 1990. 'World-Systems Analysis: The Second Phase', *Review* **8**: 287-93.
- Wallerstein, Immanuel 1976. *The Modern World-System: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century*. New York: Academic Press.
- Waters, Malcom 1995. *Globalization*. London: Routledge.
- Wendt, Alexander E. 1987. 'The Agent-Structure Problem in International Relations Theory', *International Organizations* **41**:335-70.
- World Bank 1992. *Global Economic Prospects and the Developing Countries* (Annual Report, April). Washington, DC: World Bank.
- Yearly, Steven 1996. *Sociology, Environmentalism, Globalization*. London: SAGE Publications.
- Zysman, John 1996. 'The Myth of a 'Global Economy': Enduring National Foundations and Emerging Regional Realities', *New Political Economy* **1**(2):157-184.