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Carleton University

**Beyond Marxian Nature Theory: Understanding and Contesting Japanese
Social-Environmental Relations (1955-1985)**

**A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfilment of the requirements for the degree of
Master of Arts.**

Institute of Political Economy

**by
Al Scobie-Vachon**

Ottawa, Ontario

April 2002

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Thesis Supervisor

Director, Institute of Political Economy

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Abstract

Asking how we might best understand and contest dominant social-environmental relations, this thesis looks to the insights and limitations of Marxian Nature Theory (MNT), as revealed in an investigation of Japanese social-environmental relations (1955-1985). It asserts that MNT is a useful but insufficient tool, as it highlights the productivist underpinnings of dominant relations while ignoring the insights and importance of social-environmental movements (SEMs). The Japanese case demonstrates that diverse SEMs are integral to and must be considered in understanding and contesting dominant relations: productive, political, social and environmental. It is concluded that taken together, the critical political-economic insights of MNT, with the experiences, insights and importance of SEMs offers a rigorous and effective tool in understanding and contesting social-environmental relations. This has important implications for our understanding of social-environmental relations, the dynamic between techno-industrial change and the environment, and the possibilities and challenges of citizen-based social contestations.

Acknowledgements

While I sincerely wish I had someone to share the blame with for this thesis being twice as long and confused as it should be, alas, I do not. For its many faults I am solely responsible and sorry; sorry mostly to myself for the extra year and hundred pages or so that it, and I, could have done better without. All that being said, it is done, and whatever merit it might have, and sanity I may have let, owes much to the inspiration, encouragement and support of many people. In particular I wish to thank Wally Clement, who from his first “Konnichiwa” was an inspiring *provocateur*, Janet Siltanen, who supported me with unfaltering kindness in an exploration of technological change and its impact on communities, Laura Macdonald, who inspired me with her intelligence and kindness as she encouraged my interests in civil society and social movements, and Simon Dalby, who with openness, patience and a good laugh now and again, supervised the completion of this project. I also wish to thank Donna Coghill: always ready to help, and an indomitable source of encouragement and friendship. She holds us all together.

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Chapter One: Introduction

By the mid-1980s, the land and cityscapes of Japan were being rapidly transformed into the building blocks of an environmentally and communally sustainable and vibrant future. In this eco-utopian vision sponsored by government plans and corporate projects, the advances of light and information technologies were being called upon to smooth over the wounds of heavy-industry pollution and bitter social struggles, promising environmental and social harmony. Central to this vision, was an understanding and relationship with the environment that looked back to Japan's mythical past of forest-dwelling hunter-gathers, and forward to a future of advanced technopolises located in Japan's pristine regions, surrounded by consumer-friendly resorts and theme parks, and connected by airports, high-ways, bullet-trains and high-speed computer links. The degradations of heavy-industry were to be left behind as 'traditional' notions of indigenous social-environmental harmony were transposed on futuristic landscapes dominated by high-technology industry and lifestyles. Technological and industrial development promised to preserve and advance the unique and superior cultural characteristics of the Japanese people, the preservation of their environment and their harmonious links with it. But, in order to realise this eco-utopia, it was first necessary to (re)construct the landscape, and the social relationship with it, according to the exigencies of technological advance, production and consumption.

By 1985 the Japanese public had embraced the futuristic vision of light industrial identity, harmony and affluence, and the (re)constructed understandings of the environment as a social artefact, constructed and (re)constructed to further techno-

industrial demands. Accordingly, the peripheral regions were being transformed into the (re)constructed 'pure' nature of technopolises, resorts and theme parks, as the core urban and industrial areas were being further developed into 'post-modern' megalopolises. However, social and environmental degradation lurked behind Japan's resurgent sense of historical and cultural harmony with its environment, and confidence in the achievements and promises of technological development: forests and hills were flattened, parks encroached upon and despoiled, the air contaminated with industrial and municipal emissions, aquifers depleted, waterways (re)constructed, and polluted with silt, sewage, and industrial wastes. Looking back from the eco-utopian promises and social-environmental realities of 1985, this study traces shifting understandings and relations with the environment from the post-war period of high-growth productivism to the launch of light industry and information society. It reveals the pivotal role of social-environmental movements in shaping dominant understandings and relations with the environment, and with it, the political-economy of techno-industrial change.

Drawing upon the Japanese case, this thesis asks how we can best understand and contest the dominant relations between society and the environment? While the seemingly objective demands of market-driven technological advance appear increasingly intractable and hegemonic at the same time as environmental and community sustainability more questionable, what are our best tools in understanding the environmental conditions we face, our connections with it, and our hopes for a more sustainable and just future?

This thesis looks to the insights of Marxian Nature Theory (MNT) as the starting point of this investigation. Drawing most heavily upon the works of James O'Connor, Neil Smith and Steven Vogel, it is suggested that Marxian Nature Theory is a necessary

but insufficient tool. An examination of the Japanese case suggests that diverse social-environmental movements (SEMs)¹ are integral to and must be considered in understanding and contesting dominant relations. It is concluded that taken together, the critical political-economic insights of MNT, with the experiences, insights and importance of SEMs offers a rigorous and effective tool in understanding and contesting social-environmental relations.

Marxian Nature Theory is revealed as useful in accounting for the intrinsic relations between the social and the environmental, revealing how social understandings and relations with the environment must be considered within a social totality dominated by the demands of capitalist production and political control. The physical environment, and our understandings of and relations with it, are revealed as socially constructed, expressing the political-economic demands for the unceasing production and centralisation of wealth, authority and status. In this understanding, dominant environmental relations are recognised as inherently unsustainable and fraught with crises, spurring ever greater feats of political and economic control, exploitation and degradation. While MNT is acknowledged for its valuable insights into the unsustainable and contested productive underpinnings of environmental relations, it is critiqued for its inability to see beyond production, and with it, the privileged role of organised labour within an unified socialist project.

¹ SEMs were known in Japanese as *shimin undō* – citizen movements; or *kōgai undō* – industrial pollution movements. SEM refers to both the separate organisations and their shared efforts in seeking redress and prevention of environmental degradation and its social consequences. They were independently formed, non-partisan, largely local based and focused groups reacting politically to experiences and fear of social-environmental degradation, seeking immediate and tangible goals at odds with established corporate-governing interests.

The case of Japanese social-environmental crisis and change, suggests that the insights and promise of MNT would be strengthened by a shift in focus away from privileged actors and pre-determined teleologies, to the individuals and communities that directly experience, suffer from and contest dominant relations. An examination of Japanese social-environmental relations, from the launch of the post-war high-growth era in 1955, to the solidification of light industry and information society in 1985, suggests that social-environmental movements play an integral role in understanding and shaping relations with the environment. Rooted within their immediate experiences of social and environmental degradation, and their desires for a more sustainable and just future, SEMs highlight the social and environmental consequences of dominant relations and the possibilities for political action. Further, in any attempt to understand and contest social-environmental relations, SEMs must be acknowledged for the essential role they play in shaping popular understandings and physical relations with the environment.

It is concluded that taken together, MNT and SEMs offer a broader, more complete and organic understanding of social-environmental relations, combining the productive and political attention of MNT, with the social and environmental concerns and potential of diverse social movements. As demonstrated in the Japanese case, this offers useful insights into social-environmental conditions, the relationships between techno-industrial change and the environment, and the possibilities for political action. It suggests that diverse social struggles are integral to and must be considered in understanding and contesting environmental relations, political processes, techno-industrial change and (re)constructions of the environment. It concludes that the political, economic and social exist in intimate, un-dichotomous relations with the environmental. It further, and most

importantly maintains that social contestations hold important promise for a more democratic and sustainable future, while nevertheless remaining vulnerable to uneven relations of production, power and exploitation.

Chapter Summaries

In attempting to understand and contest Japanese social-environmental relations, this thesis is informed by Ernesto Laclau and Chantal Mouffe's advice that: "The surpassing of a great intellectual tradition never takes place in the sudden form of a collapse, but in the way that river waters, having originated at a common source, spread in various directions and mingle with currents flowing down from other sources."² The central streams flowing through this study remain the insights and sensitivities of Marxian Nature Theory, essential for their understanding of un-dichotomous social and environmental relations, and the centrality of productive and political relations in giving shape to environmental conditions, and social understandings and relations to them. For this reason, the study begins with a summary of Marx's environmental legacy as revealed within MNT.

Yet, as we shift our focus to the limitations of Marxian Nature Theory, we see that like any great river, the Marxian tradition is deeply set in its course. Favouring privileged actors and pre-determined teleologies, MNT threatens to ignore the diverse and non-reducible conditions, cultures and contestations it seeks to represent and carry. In order to maintain the force and depth of MNT, while gaining a more thorough and nuanced understanding of the varied terrain and communities through which it flows, it is argued

² Ernesto Laclau and Chantal Mouffe. *Hegemony and Socialist Strategy: Towards a Radical*

that attention must be given to the individuals and communities that experienced, contested, and importantly, were integral in shaping Japanese social-environmental relations.

Before examining the social contestations that shook Japan's ruling elite and helped shape the political, economic, social and environmental turn to light industry and information society, it is first necessary to look back at the '1955 System' of heavy-industry productivism. As suggested by MNT, and revealed by SEMs, it is in the productive, political and social relations of heavy-industry that the roots of contemporary environmental relations are revealed. As such, in the first chapter of the Japanese case (Chapter Three), the political-economic relations that benefited from and maintained the '1955 System' are examined: the corporate-government collusion that united the ruling political, bureaucratic and corporate interests and elites, the channelling of national resources behind perpetual technological innovation and production, and the dominant ideologies of nation-building productivism and popular consumption that realised Japan's incredible gains in heavy-industry production.

Having examined the political, economic and social underpinnings of post-war productivism, in Chapter Four attention is shifted to the necessary environmental (re)constructions and degradations upon which it depended and called forth. Consistent with MNT, Japan's landscape and environment reflected the uneven political-economic relations of the '1955 System.' Serving the concentration of productive and political control within core urban centres, Japan was (re)constructed through centralisation, exploitation and degradation. Japan's core Tōkaidō Belt, connecting the key cities of

Tokyo, Nagoya and Osaka, was transformed through the massive concentration of productive might and urbanisation, resulting in sprawling megalopolises. At the same time, rural areas were de-vested of population and traditional livelihoods, transformed into the raw materials and pollution sink of centralised(ing) industrial demands. In urban cores and exploited regions, the result was unsustainable pollution and degradation.

Responding to the dire social and environmental consequences of high-growth productivism, social-environmental movements formed to articulate their experiences while struggling for meaningful compensation and change. Chapter Five begins with a brief overview of the social fabric of stability, cohesion and acquiescence from which SEMs emerged, the most significant movements are accounted for, with particular attention to the case of Minamata. From Minamata discussion turns to the growing proliferation of SEMs that connected core urban centres and regional peripheries in a popular ground swell against the '1955 System.'

Reflecting the dire social and environmental consequences of heavy-industry pollution, SEMs channelled popular outrage against the '1955 System' of centralised and exploitative productive and political power. The specific challenges SEMs posed to Japan's ruling tripartite of big business, elite bureaucracies and the reigning Liberal Democratic Party are discussed in Chapter Six.

Having argued that SEMs posed a profound threat to the established political-economic interests of the '1955 System,' in Chapter Seven we briefly examine the tripartite's failed attempts to regain centralised control and production. Pursuing cynical and ad hoc measures to channel popular unrest through the deadening hand of the state,

followed by an ineffective flurry of environmental legislation, Japan's ruling elite proved unwilling to address the root causes of pollution. Popular unrest continued to grow.

In Chapter Eight, it is shown how after a decade of obfuscation and unrest, Japan's ruling elite seized upon light industry and an information society as the convergent solution, promising to solve all of Japan's political, economic, social and environmental problems. Reflecting the profound challenge posed by SEMs, the shift to light industry was designed to placate unrest while ushering in a new age of social-environmental harmony, affluence, and shared cultural characteristics beneficial to Japan's corporate-governing elites. It is shown how the shift to an information society depended upon a (re)constructed understanding of nature as the pre-condition and product of light industry. Pure nature and social-environmental harmony were found in Japan's re-discovered peripheries, where the neo-traditional characteristics essential for light industry intelligence and ascendance were located. Relying on a resurgent sense of 'Japanese-ness' to re-establish social cohesion and control, the shift to light industry was secured with middle-class identification and consumption.

Having discussed the social underpinnings of light industry, in Chapter Nine attention is shifted to the necessary political-economic transformations. While recognising the wider global economic environment in which light industry was pursued, it is argued that the shift to light industries and an information society was a government-led effort to placate growing unrest while supporting renewed corporate production and profit. Dressing tripartite interests with a green patina of social and environmental respectability, national resources were once more channelled behind perpetual technological innovation

and production, dominated by the inter-related strategies of industrial rationalisation and technological research and development.

Finally, in Chapter Ten our attention is brought full-circle to the social-environmental relations of light industry and information society. Consistent with MNT's attention to the productive determination of total social relations, and reflecting the importance of SEMs in shaping the direction and scope of change, the commensurate (re)construction of Japan's landscape and environment is examined. Placating popular demands while re-establishing centralised production and control, Japan's peripheries were (re)constructed into 'sustainable' and 'democratic' technopolises of empowered and cohesive communities located in the 'pure' nature of resorts and theme parks interconnected with extensive infrastructure projects that furthered centralised control and social-environmental degradation.

Having traced the interconnections between Japan's political, economic, social and environmental relations from the launching of the '1955 System' to the solidification of light industry and information society, we gain a broad understanding of Japan's social-environmental relations, the strengths and limitations of Marxian Nature Theory, and the essential role played by social-environmental movements in shaping total social relations. It is concluded that MNT is a necessary tool in understanding the political-economic underpinnings of total social relations, including our understandings and relations with the environment. Yet, MNT's pre-occupation with production, as it forwards a narrow understanding of social-environmental relations, and the privileged role of organised labour in a unified project of socialist emancipation must be abandoned in favour of the experiences, understandings and importance of diverse social movements. In combining

the insights and importance of MNT and SEMs we gain a fuller understanding of social-environmental relations and the possibilities and challenges of political action.

A Note on Methodology

Consistent with the demands of critical social research, this thesis is an attempt “to dig beneath the surface of historically specific, oppressive social [-environmental] structures,” and “provide knowledge which engages the prevailing social [-environmental] structures.”³ This is achieved in both the theoretical lens adopted, and the historical case interrogated. It is hoped that taken together, the theoretical insights of Marxian Nature Theory and the case of Japanese social-environmental relations and contestations, contributes to our theoretical and empirical understandings of social-environmental relations, social movements, and the relations between techno-industrial change and the environment. Importantly, it extends the theoretical and historical discussion to the question of praxis, and the possibilities and limitations of citizen-based environmental movements.

With attention to the case of Japanese social-environmental relations and the analytical usefulness and limitations of MNT, there is no attempt to offer a comprehensive or comparative investigation of the various theoretical approaches to the environment. It is sufficient to limit this work to an investigation of the Japanese case, and the strengths and limitations of MNT; hopefully building upon our understandings of both, while revealing the linkages and disconnects between the two. As such, no attempt is made to offer an exhaustive summary of MNT, or to account for its many contributors or

³ Lee Harvey. *Critical Social Research* (London: Unwin Hyman, 1990) 1, 2.

challengers. Rather, it is hoped that in concentrating upon the works of James O'Connor, Neil Smith and Steven Vogel, a fairly representative account, that covers the main, and widely shared sensitivities and insights, might be offered. Vogel is chosen for the succinct connections he makes between MNT and classic Marxist thought, confirming and informing the main points argued here. Neil Smith is highlighted in recognition of his pivotal role in grounding MNT in the socio-spatial concerns of geography, and representing an important hub around which Marxian thought on geographical and environmental issues revolve. His success in revealing the processes and interconnections of political-economic and socio-spatial uneven development is central to MNT, and of great value to this study. James O'Connor, perhaps more than any other scholar, is recognised as a leading contributor to Marxian understandings of the environment. Reflecting the attention given to environmental issues in the wake of the global environmental crises of the 1980s and 1990s, O'Connor has positioned himself as perhaps *the* leading figure in MNT. Particular to this study, O'Connor is useful for his attention to the ecological contradictions at the heart of capitalist relations, the ensuing contestations, and the need for Marxian scholars to better account for environmental social movements. Together, Vogel, Smith and O'Connor, while little more than a snapshot of a deep and diverse body of thought, represent the strengths and weaknesses of MNT as revealed in the case of Japanese social-environmental relations.⁴

Challenging MNT with an historical case takes to heart Lee Harvey's claim that "a theoretical analysis that fails to engage the material world through empirical material is

⁴ These choices are confirmed by similar exercises, notably that of Noel Castree. Noel Castree.

itself limited. Such analysis is prone to detachment from historically specific social processes. It fails to bridge the gap between theory and praxis.”⁵ It is in this attempt to integrate actually existing experiences/conditions with attention to the theoretical analysis of MNT and the possibilities for praxis, that I look to the Japanese case. The case of Japanese social-environmental relations (1955-1985) is notable for its wide-reaching, and still pertinent reverberations across social, political, economic and environmental spaces, and its value in identifying potentially emancipatory spaces within social-environmental conditions and contestations. It is hoped that in exposing MNT’s insights to the experiences and struggles associated with Japanese social-environmental degradations and contestations, that its strengths and limitations might be revealed.

The Japanese case reflects MNT’s attention to total social relations, and the ‘primary goal’ of (‘New Canadian’) political economy “[to] know how societies are, and can be, transformed” through an investigation of “the economic, political, and cultural/ideological moments of social life.”⁶ As such, while focused specifically on the role of social movements in contributing to processes of environmental change, due consideration is given to the necessary and commensurate social, political and economic relations.

The temporal scope of this case, 1955 to 1985, reflects the methodological advantages of examining issues of contemporary importance within their full historical setting and with the advantage of hindsight. As generally recognised, 1955 marks the

“Marxism and the Production of Nature.” *Capital and Class* 72 (Autumn 2000): 5-36.

⁵ Harvey 7.

⁶ Wallace Clement. “Introduction: Whither the New Canadian Political Economy?” *Understanding Canada: Building on the New Canadian Political Economy*. ed. Wallace Clement (Montreal and Kingston: McGill-Queen’s UP, 1997) 6, 3.

solidification of the social, political and economic relations that dominated Japan's period of heavy-industry high-growth productivism, and laid the social and material foundations of contemporary Japan. As such, it is an appropriate starting point for this investigation. Reacting to the social and environmental degradations of the '1955 System,' SEMs challenged Japan's ruling corporate-governing elite, and helped shape the shift to a light and information economy/society. 1985 is an appropriate end-point as it marks both the re-solidification of centralised production and control behind light industry, and a further shift from light to information technologies and industry. By the mid-1980s, the light industry emphasis on the greater computerisation of the methods of production and the greater production of info-content products discussed here, began to give way to the production of information as an end to itself. This was furthered by the 1985 Plaza Accord that saw the revaluation of the yen, and further encouraged the shift away from resource-based production. And importantly, by the mid-1980s, the challenge posed by SEMs had been by and large contained by the political, economic, social and environmental relations of light industry.

Because the Japanese case stretches over a thirty-year period and is informed by relations at the local, regional, national and international levels, I have been able to draw upon a rich field of sources ranging from personal testimonies, photo books, government surveys and reports, magazine and periodical articles, scholarly and popular books, documentaries and webpages. Reflecting the international interests and significance of this case, there are many scholarly and popular sources of information, and I have drawn on the riches of political science, international political economy, environmental studies, sociology and history. However, because this is a Japanese case, and most of the primary

accounts and government documents remain unavailable in English, I have had to rely largely on secondary accounts, and the selective translations offered therein. Further, although I have drawn on the translated work of Japanese scholars when possible, most of the secondary works are written by and for an English-language audience. This poses certain limitations, as the great majority of 'Western' work on Japan tends to reflect an uncritical admiration or fear of Japan's economic success, or posit threadbare adages of cultural harmony, cohesion, hard work and the like.⁷ As much as possible I have sought out and relied on critical interpretations, to which I am sympathetic.

Lastly, while the conditions, relations and changes examined here occurred most noticeably between 1955 and 1985, individuals, communities and eco-systems continue to deal with the consequences. As observed by Gramsci, "all of history bears witness to the present."⁸ Accepting that the present then too bears witness to our past, the experiences and understandings I gained living and working in Japan from 1995 to 1998 have helped inform my interrogation of the material, and the conclusions reached.

Combining the insights of Marxian Nature Theory with the case of Japanese social-environmental relations and contestations offers an original and significant study. Scholarly (Western) attention to the environment, economic and technological development, social struggles and new social movements, have tended to focus on the histories and experiences of European and European-settled ex-colonies.⁹ Inasmuch as

⁷ Tessa Morris-Suzuki, *Beyond Computopia: Information, Automation and Democracy in Japan* (London: Kegan Paul International, 1988) 3.

⁸ Antonio Gramsci, *Selections from the Prison Notebooks of Antonio Gramsci*, ed. and trans. Quintin Hoare and Geoffrey Nowell Smith (New York: International Publishers, 1971) 267.

⁹ For the claim that the literature on social movements and 'new politics' focuses upon 'western post-industrial democracies', particularly European, see Lam Peng-Er, *Green Politics in Japan* (New

the experiences and conditions of Japan have been considered at all, it has been to further 'Orientalising' understandings of a distinctive Japanese culture in comparison to seemingly objective models of (Euro-Anglo) 'development.' 'Western' experiences and thought have been adopted as the objective marker with which to judge Japan. The ways in which Japan diverges from (Western) norms are then attributed to seemingly inherent Japanese cultural characteristics. Even then, Western scholarship on Japan tends to focus upon the 'secrets' or 'threats' of its incredible productive growth, again in relation to European or American models/developments.¹⁰

The lack of attention given Japan, the constant comparisons to 'Western' development as the model of analysis, and the positing of static and romanticising ideologies belies the importance of Japan within global relations. As the world's second largest economy, the leading source of global credit, a leading figure in the pace and direction of technological and industrial knowledge and relations, and the dominant player within Asia, perhaps still the world's most dynamic and growing region, the experiences and lessons of Japan are of global importance. Greater academic attention needs to be focused upon Japan in order to give broader theoretical and empirical weight to the Western-centric debates on industrial development, environmental politics and social movements, and in recognition of Japan's importance within global economics, politics,

York: Routledge, 1999) 6. On the modernistic and/or Orientalising approach used by Western scholars in investigating Japanese scientific, technological and economic conditions, see Tessa Morris-Suzuki, "Fuzzy Logic: Science, Technology and Postmodernity in Japan" *Japanese Encounters with Postmodernity* ed. Johann P. Arnason and Yoshio Sugimoto (London: Kegan Paul International, 1995) 114-132. As an example of the positing of a distinctive Japanese cultural-historical relationship with their environment, see John Clammer, *Social Theory and Contemporary Japanese Society* (London: Kegan Paul International, 1995).

¹⁰ As lamented by Morris-Suzuki: "In this [the conventional] reading of history, Japan's experience is a mere postscript to a European (or, at most, a North Atlantic) narrative." Tessa Morris-Suzuki, *The Technological Transformation of Japan: From the Seventeenth to the Twenty-First Century*

culture and the environment. This thesis hopes to contribute to such a project, providing insights into Japanese social-environmental relations while challenging both the usefulness of Euro-Anglo tools in understanding Japanese conditions, and the Orientalising of Japan favoured by Japanese and foreign scholars and governments.

These critiques are equally valid for MNT, and further highlight the potential contribution of this research. Within MNT, there has been scant attention given to non-Western relations. By and large, MNT is advanced by Euro-Anglo scholars engaging with Euro-Anglo relations. A quick glance at the past half-decade of MNT scholarship as carried within its flag journal, *Capitalism Nature Socialism (CNS)*, confirms the negligible attention given Japan in spite of its major influence in shaping global political-economic and social-environmental relations. Since 1995 *CNS* has carried two articles on Japan, and two others on Asia more broadly.¹¹

Further, and particular to the arguments made here, centring this study upon the experiences and insights of actually-existing social movements is of particular importance to MNT. MNT has come into its own in reaction to, and reflective of, the widespread attention and opposition to the global environmental crises of the 1980s and 1990s. It would thus seem well positioned to speak of and to these movements. However, in spite of this shared foundation, MNT has found it difficult to build bridges with these movements, to address their concerns, or inform their understandings. While MNT aspires to speak for and inform growing social-environmental concern and action, there has been a noted difficulty in connecting with social movements. Worse, there is a brooding tradition of antagonism between MNT and actually-existing movements.

(Cambridge: Cambridge UP, 1994) 2.

Responding to immediate experiences of exploitation, degradation and struggle, environmental movements tend to criticise MNT as elitist, anthropocentric, productivist, reductionist, etc.¹²

In challenging MNT with the insights and importance of actually-existing struggles, the strengths and limitations of both are revealed, and the case for an analytically rich and political significant rapprochement advanced. So although the conditions, relations and transformations examined here occurred primarily between 1955 and 1985, as individuals, communities and eco-systems continue to experience and contest the consequences, the value of this exercise remains valid. It is hoped that combining the critical theoretical perspective of MNT with an historical case that centres upon the experiences and challenges of diverse social forces, the socially and environmentally exploitative and degrading relations embedded within dominant relations will be revealed, at the same time as the possibilities for diverse interests and organisations to promote more sustainable and just options advanced. I contend that the rapprochement between MNT and diverse social movements remains theoretically meaningful and social-environmentally important.

¹¹ *Capitalism, Nature, Socialism: A Journal of Socialist Ecology*.

¹² As recognised by Noel Castree in *Capital and Class's* overview of MNT. Noel Castree, "Marxism and the Production of Nature," *Capital and Class* 72 (Autumn 2000): 5-36.

Chapter Two: The Promises and Limitations of Marxian Nature Theory (MNT)

Within the Marxian tradition, there is a recognition of social totality, in which the grand fabric of social, economic and political conditions are understood as interwoven and inseparable.¹ Rejecting rigid disciplinary strictures, Marxian scholarship has acted to reveal the 'invisible threads' that bind the *total* social relations. This broad scope of analysis and understanding prepared Marxian analysis for the (at first reluctant) recognition and inclusion of the environment as essential to capitalist relations and worthy of study. Reflecting the breadth of Marxian analysis, there is significant diversity within these efforts to understand the role and significance of the environment. However, some commonalities are apparent, linking the investigation of the environment to the larger (though varied) body of Marxian thought, and allowing us to speak of a 'school' of Marxian Nature Theory (MNT).² Within this school, James O'Connor, Neil Smith and Steven Vogel, amongst others, have maintained many of the insights and priorities of Marxist political economy, while making great strides in extending understandings and sympathies to the environment. Together, they help provide a snapshot of Marxian analysis and sensitivities, as they attempt to include and account for the environment within capitalist relations. Their project extends both back through the accumulated depth

¹ Within traditional Marxist theory there has been an attempt to foreground the interaction of social, economic and political relations in determining historically specific social-material conditions. As highlighted by Neil Smith, "Marxist theory attempts to explain the specific economic, political and social structure of society in a given period as the result not of supposedly universal forces (for example human nature), but as the result of historically specific and contingent processes." Neil Smith, *Uneven Development: Nature, Capital and the Production of Space* (Oxford: Basil Blackwell, 1990) xii.

² Or, what Castree refers to as EcoMarxism: "the growing corpus of work" responding to the emergent 'global environmental crisis' of the 80s and 90s, "which seeks to read Marx as an actual or potential critic of capitalism's environmental consequences." Castree 18.

of Marxian analysis to identify latent environmental sensitivities, and forward, in sponsoring politically motivated analysis and action.

As highlighted within MNT, the bedrock of Marxian analysis remains a commitment to revealing and understanding the primacy of production as the key determinant of interwoven social relations. From within this tradition, Marxian Nature Theorists have highlighted how social understandings and relations with the environment are dominated by the demands of production and the social-political forces and institutions they constitute and in turn depend upon. Through its analytical lens we gain a glimpse of the environment, both as popular understanding and material expression, as the socially constructed raw material for production and the maintenance of uneven relations of wealth, authority and status. We thus come to understand the environment as the necessary corollary of political-economic relations mapped out across social-spatial scales of uneven development and degradation. The consequence is seen to be the steadily intensifying degradation and crisis that threaten the very conditions of production, and necessitate progressively greater political interventions to maintain unequal and unsustainable relations. Integrated within total social relations, and a site of both contradictions and contestations, the environment becomes a necessary study in better understanding productive relations, and a gateway into exploring the invisible threads that bind such seemingly diverse aspects as political institutions and norms, bureaucratic governance, technological and industrial processes, ideology, popular culture and consumption. Further, the environment is revealed as a necessary terrain in the political struggle for a more sustainable and just future.

MNT is a useful tool in understanding and contesting social-environmental relations, as it attempts to reveal the unsustainable and contested construction of the environment as an integrated part of total social relations dominated by the political-economic demands of production. Yet, in keeping with its foundations in Marxian political economy, MNT remains hampered by its adherence to a pre-determined 'Way' of understanding and political advocacy premised upon privileged actors and struggles. Accordingly, while the Marxian 'lens' reveals much, it also threatens to obscure the agency and importance of individuals and communities as they emerge from and express diverse experiences and motivations.

The strengths and limitations of MNT are revealed in an investigation of Japanese social-environmental relations. With attention to the political-economic underpinnings of dominant understandings and relations, MNT directs our attention to the interests and relations of Japan's corporate, political and bureaucratic elite, as they channelled total social resources behind a project of high-growth productivism fuelled by corporate-governing collusion, a nation-building ideology of rapid productivism and technological innovation, and popular acquiescence and consumption. The rallying of political, economic and social forces behind an insatiable quest for production was made possible only with a largely un-problematized, and a-political understanding and relationship with the environment as the raw materials for and pollution sink of industry. Reflecting the national preoccupation with production, Japan's environment was unevenly developed and exploited, resulting in massive core-urban areas of hyper-concentrated wealth, authority and status, and grossly exploited and degraded peripheries. The result was severe environmental degradation and a ground-swell of popular contestations that threatened the

continued norms and rule of Japan's post-war system. Responding to the threat posed by SEMs, Japan's ruling elite orchestrated the shift from heavy industry to light industry and information technologies, and with it, the (re)construction of popular understandings and relations with the environment. In this way, the insights and actions of SEMs emerge as necessary objects of study as they were integral in revealing the extent and relations of social-environmental degradation, and central to the direction and scope of social, political, economic and environmental change. If we are to understand Japan's social-environmental relations as it perched on the threshold of an information economy and society, MNT's attention to the political economy of productivism must be expanded to include the insights and importance of individuals and their communities as they acted to contest and shape the conditions of their own survival. The focus must be shifted from the political projects of *future* emancipation, to the role and importance of popular contestations in shaping contemporary social-material relations.

This chapter begins with the promises of MNT in understanding and contesting social-environmental relations. MNT's attention to the environment as a social construction within total social relations dominated by the political-economic demands of production is discussed. This is followed by an account of MNT's concept of 'uneven development,' revealing the social and spatial distribution of the costs and benefits of production. Reflecting a critical sensitivity to exploitation and crisis, MNT is shown to be valuable in uncovering the inherent contradictions within capitalist relations: environmental degradation, social and environmental crisis, and the role of the state in mediating conflicts. From these important insights, the limitations of MNT, as it posits a singular 'Way' of privileged understandings, actors and emancipation is discussed.

Attempting to build upon the strengths of MNT, the limitations of MNT's pre-occupation, and ultimate faith in techno-productivism and organised-labour within a unified socialist political project are highlighted. It is concluded that MNT is valuable and necessary in understanding and contesting dominant social-environmental relations. However, for its promise to be realised, MNT must be opened to the insights and importance of actually-existing social-environmental movements as they struggle to understand and contest the multiple threads that bind them within unsustainable and unjust relations.

The Promise of Marxian Nature Theory

Marxian analysis has advocated a broad understanding of social totality that encompasses the productive, political and social spheres, each dialectically embedded within the others. The role of MNT has been to extend this understanding to include and appreciate the environment as central to, and informed by the social, political and economic relations. As pointed to by Marxian Nature Theorists, the hints of an understanding that encompasses both society and nature as mutually constitutive and unalienated exists within Marx's own writings. Neil Smith declares that "Marx insisted vigorously upon the unity of nature and history."³ And O'Connor echoes that there always was and continues to be a latent ecological sensitivity within Marxism. Building upon this fragmented sensitivity, Marxian Nature Theorists have called for an expansion of historical materialism to include the intrinsic relationships between natural and human history. In so doing, they have attempted to create space within Marxian discourse for the environment, and within environmental discourse for Marxism.

³ Smith. *Uneven Development* 17.

For some, the attempt to locate environmental sensitivities within traditional Marxism is strained at best; an unconvincing attempt to cover Marxist anthropocentrism and productivism with a green patina of respectability.⁴ Although Marxism has advocated a rooted, 'material' focus that foregrounds the links between society and its material conditions and relations, it is seen to have done so from an extremely anthropocentric position that argues against any checks on society's ability to produce and consume as reactionary, repressive, and anti-modern. Within Marxist thought, any attempt to limit society's ability to further exploit nature, was seen as holding back the necessary evolutionary progress to a post-scarcity, post-capitalist world. Rather than critiquing the deepening domination or degradation of nature by society, traditional Marxism is seen to celebrate the gains of technology and production. Marxism criticised capitalism not so much for its environmental destruction, as for the way it held back the further development of productive forces and the further exploitation of nature. Rather than an environmentally sensitive path forward, Marxism, rooted in the anthropocentric and productivist agenda of the Enlightenment, is seen to mirror the unsustainable and unjust understandings and relations that must be challenged.⁵

O'Connor acknowledges these critiques, and that attempts to 'green' Marxism have tended to concentrate on the exploitation of labour within an ecologically destructive regime rather than addressing the exploitation of the environment itself. Yet, O'Connor

⁴ As noted by James O'Connor, and generally recognised throughout the works collected in *Capital and Class's* special issue on 'Environmental Politics: Analyses and Alternatives.' James O'Connor, *Natural Causes: Essays in Ecological Marxism* (NY: Guilford P. 1998); Bettina Lange and Gerard Strange, "Introduction: Environmental Politics: Analyses and Alternatives." *Capital and Class* 72 (Autumn 2000): 2-5.

⁵ For a brief overview of the environment within traditional Marxism, and criticisms of, see John Barry, *Environment and Social Theory* (London: Routledge, 1999): 65-72.

insists that Marxism is capable of an ecological analysis and agenda, asserting that for it to be true to itself, Marxism must go green.⁶ Fundamental to this rapprochement has been the concept of social totality in which the environment and society are understood as dialectically integrated, each informing and integral to the other. This is posited as the primary distinction between hegemonic and Marxian understandings of the environment.

Social Totality

The Marxian understanding suggests that while society engages with a seemingly 'external' nature as the materials of labour, society does so as inherently part of nature, expressing nature, natural needs, natural functions and natural processes. Thus we are nature, in social form, acting upon nature in the form of materials. In all cases the processes is natural, and the relationship is organic and dialectic. Within MNT, this is distinguished from bourgeois attempts to posit an ideologically constructed vision of nature and humanity as distinct. For bourgeois writers, nature is universal, external to the social and available for exploitation. Nature, in this view, is constructed according to scientific laws, absolute, value-free, ahistorical. Countering this, Marxists maintain that the claim of a universal nature is an ideology that justifies the social, political, economic projects of capitalism, giving the exploitative capitalist relationship 'naturalness.' Within the dominant discourse, capitalist development is portrayed as social adherence to natural laws that necessitate the exploitation of natural material. However, Marxists insist, this hides both the historical construction of this ideology and the class relations upon which these 'natural' processes are dependent, providing society with "an inverted, truncated,

⁶ O'Connor 6.

distorted reflection of reality.”⁷ Rather than distinct from society, Marxian theorists maintain that ‘nature’ is an integral part of total social relations.

Building upon this sensitivity, MNT has attempted to articulate the emergent contradictions of an undifferentiated social-environment trapped within capitalist relations that favour an exploitative universalism based on the demands of capital. Contrary to dominant ideology, MNT insists that the environment cannot be conveniently sectioned off as an unproblematic sphere upon itself. Recognising the inherent links between the social, environmental, political and productive spheres, the environment becomes a necessary area of study in any attempt to understand the dominant relations of society, and the totality of social relations becomes a necessary field of study in understanding the environment.

Social Construction of Nature

Through the lens of MNT, the environment is understood as a physical and ideological canvas, upon which the political-economic relations that dominate social relations are brought to life. As such, the environment is understood to be both inseparable from, and further, the product of, social relations. While the social and environmental are understood as integrated, the environment is ultimately recognised as the historically accumulated expression of social relations. Neil Smith explains that “when th[e] immediate appearance of nature is placed in historical context, the development of the material landscape presents itself as a process of the production of nature. ... it is in the production of nature that use-value and exchange-value, and space and society, are fused

⁷ For a summary of the bourgeois ‘ideology of nature’ as seen from the vantage of MNT, see

together.”⁸ The environment, as the dialectic meeting-place of the social, the environmental, the political and the productive, is a social construct called into being by dominant relations, and an entry-way into understanding and contestation.

According to MNT, in attempting to understand the environment, we first must understand the social relations of which it is a part, and come to accept it not as a ‘universalised’ repository of moral or scientific ‘truths,’ but as a product of social action. Any attempt to understand the environment apart from its construction according to social needs and actions risks artificially dichotomising dominant relations from their material conditions, and eliding the intermeshing and degradations of capitalist relations. As asserted by Vogel, “The ‘environment’ we inhabit... is an environment of objects built by human – not ‘nature,’ ... but nature transformed, reworked, reshaped, humanized.”⁹ This produced ‘second nature,’ is distinguishable from ‘first nature,’ which is the nature unmediated by human production, and today largely irrelevant. Accordingly, as hinted by Marx, and brought out by Vogel, it is more appropriate, when considering the relations between society and the conditions of its (re)production, to refer to the ‘environment.’ Inasmuch as ‘nature’ suggests an independent, a-historical subject, it is completely at odds with the true state of our material surroundings, which are, largely socially determined. As captured succinctly by Vogel, and suggestive of traditional Marxian sensitivities, “Marx’s account points us toward a recognition of the sociality of the

Smith. *Uneven Development* 15.

⁸ Smith. *Uneven Development* 32.

⁹ Steven Vogel. “Marx and Alienation from Nature.” *Social Theory and Practice* 14 (Fall 1988): 374-5.

environment, of its character as 'built,' consisting almost entirely of products of human labor designed to fulfill human needs."¹⁰

Within MNT, the environment is that which we as society make it, and understand it to be. This is not to suggest, as Marx made pains to assert, that the environment, or any material conditions are simply conjured up from our imaginations.¹¹ But, our understanding and relationships with the abstractions and material conditions, of which we are a part, are socially constructed according to the needs of "real, active men [*sic*]."¹² 'Nature', as it exists in mythology, or in the unconscious history of humanity, has long since been banished from the Earth.¹³ Through the efforts of society, *that* nature has been transformed, humanised into the environment. Rather than romanticising mythical 'nature,' MNT suggests we accept our *environment* as we have constructed it, and get on with criticising not so much environmental degradation, but the exploitation within society that calls it forth. As noted by Vogel,

if we find ourselves living in an environment of ugly shopping malls and endless superhighways, of dangerous nuclear power plants and toxic waste dumps, of rotting slums and polluted rivers, it is not because we have violated nature but because our own acts remain powers over and against us: because we have not yet exerted conscious social control over our own activity, and so that activity remains under the sway of *Naturwuchsigkeit*, of alienation.¹⁴

¹⁰ Vogel 375.

¹¹ "The premises from which we begin are not arbitrary ones, not dogmas, but real premises from which abstraction can only be made in the imagination." Karl Marx and Frederick Engels. *The German Ideology, Feuerbach: Opposition of the Materialistic and Idealistic Outlook* (Moscow: Progress, 1968): 31.

¹² "Men are the producers of their conceptions, ideas, etc. – real.. active men, as they are conditioned by a definite development of their productive forces and of the intercourse corresponding to these, up to its furthest forms." Marx, *German Ideology* 37.

¹³ As noted by Marx, "nature, the nature that preceded human history, is not by any means the nature in which Feuerbach lives, it is nature which today no longer exists anywhere... and which therefore, does not exist for Feuerbach." Nor us. Marx, *German Ideology* 59.

¹⁴ Vogel 378.

Production

In coming to understand the exploitative social relations that dominate and give form to the environment, MNT suggests that we must first come to understand the ideologies and relations that dominate society; from this the environment takes shape. In this endeavour, and consistent with traditional Marxist thought, priority is given to the analysis and explanatory weight of production. MNT suggests that it is from the technical and social relations of production that the social, political and environmental are understood and shaped. In attempting to understand dominant social-environmental relations, it is then necessary to first understand the productive relations that give it form. And, in Marxian analysis, this is first and foremost predicated upon the steady march of technological development and the class relations upon which it depends. Together, the technical and social relations of production emerge as the key underpinnings of both society, and, necessarily, the environment. As explained by Vogel, “Marx’s materialism, by emphasizing labor, asks us to look not at nature but at the transformation of nature by humans as the clue to understanding society.”¹⁵ And as more and more of nature bears the signs of human intervention, this becomes a more accurate reflection: “History then is a natural process, the process of nature becoming humanized; and this applies above all to the history of ‘industry’ – that is, of technology.”¹⁶

Rather than the Romantic sensitivity that would set nature apart from society as an unaltered, pre-historical entity, Marx understood the material world as a social construction reflecting the progress of technology and production. As stated by Marx, “the sensuous world... is not a thing given direct from all eternity... but the product of

industry and of the state and of society...Even the objects of the simplest 'sensuous certainty' are only given [us] through social development, industry and commercial intercourse."¹⁷ It is from the technical processes of production that the social, and thus the environmental, and all else, are understood to be formed.

According to Marx, technical processes are derived from particular productive relations determined by the cumulative technological mediation of social needs, mapped across productive conditions. In short, society has needs and desires, leading to the development of technologies to satisfy these needs from the environment, changing both the environment and society, in turn creating new needs, and new technologies. Marx explained that "the first premise of all human existence and, therefore, of all history, ...[is] that men must be in a position to live in order to be able to 'make history.'" He continues, that "[t]he first historical act is thus the production of the means to satisfy these needs, the production of material life itself."¹⁸ Satisfying the basic needs dictated by nature (sustenance), society is forced to enter into a relationship with nature through the mediating use of technology, which in turn changes nature, and necessarily society itself. In the satisfaction of primary and subsequent needs, humanity embarks on a process of technological advance: each step in the satisfaction of needs an act of production, resulting in new needs, and the production of new technologies to satisfy them. The result is a dialectical advancement in which the social and the environmental are constructed. This process sets forth the fundamental dynamic of capitalism towards the unceasing technological transformations and advance fundamental to contemporary social-

¹⁵ Vogel 370.

¹⁶ Vogel 371.

¹⁷ Marx, *German Ideology* 39.

environmental relations. As spelled out by Neil Smith, the "main function" of scientific development "is to facilitate the production of nature in the form of productive forces."¹⁹ The progressive development of production, in turn calls forth the historical construction of the environment, in progressively profound ways: "[f]rom production in general to production for exchange to capitalist production, the logical and historical arms of the argument imply and lead to the same concretely observable conclusion: the production of nature."²⁰ It is from this cumulative technological mediation of the relationship between society and the environment, that the explanation for contemporary social-environmental understandings and relations are revealed.

As suggested above, the Marxian preoccupation with the linear advance of technology as the key determining explanation of all social and natural conditions and relations remains, to some, problematic and unconvincing. Yet, as the Japanese case reveals, the relationship between technological change, production and the social-environment remains an essential focus of investigation in understanding contemporary social-environmental relations. As suggested by Marx, and developed within MNT, technology is the means devised by society in general, and capitalism specifically, to interact, understand, appropriate and manipulate nature for the productive process. An examination of changing technological processes thus offers an avenue into investigating total social relations: political, economic, social and environmental. As put succinctly by Neil Smith, the role of technology (science) is simply "to facilitate the production of

¹⁸ Marx. *German Ideology* 39.

¹⁹ Smith. *Uneven Development* 50.

²⁰ Smith. *Uneven Development* 35.

nature in the form of productive forces.”²¹ As techno-industrial processes deepen their impact on the material world to the point of manipulating the very building blocs of life, this attention is essential.

Uneven Development

MNT’s attention to the techno-productive underpinnings of total social relations helps us understand both the history of social-environmental relations, and the promises of future technological fixes. However, we must be wary of positing an almost independent and abstracted quality to technology as an a-social force driving the pace and direction of social change. As insisted by Marx, social-material relations, as they are rooted in the real, material conditions of production, must be examined and understood accordingly.²² In attempting to understand and contest unsustainable conditions, attention must be given to the specific social-environmental conditions, allowing the empirical to challenge and inform the analysis. Investigating the concrete material expression of productive relations, MNT points our attention to a dynamic of ‘uneven development,’ in which production is expressed across social and environmental terrains in uneven relations of development, degradation and crisis. As articulated by MNT, uneven development is the expression of the deepening technological mediation of society and the environment according to the demands of capitalist production. The result is the intensifying accumulation of social wealth, power and status within core ‘urban’ scapes, actively drawing in, developing and degrading the ‘rural’ peripheries, resulting in crisis and contestations.

²¹ Smith. *Uneven Development* 50.

²² As insisted by Marx, “this transformation of history into world history is not indeed a mere abstract act on the part of the ‘self-consciousness’, the world spirit, or of any other metaphysical spectre,

MNT's understanding of uneven development furthers Marx's comments on the relationship between town and country, and brings together the social, environmental, productive and political in an integrated and concrete fashion. Marx explained that productive relations dictated the construction and relations between town and country, with the town serving as the centre of valued social relations, representing the separation of mental labour from physical, commerce from agriculture, civilisation from barbarity.²³ This is the basis of the physical and cultural construction of differentiated spheres, and ultimately the ensuing conflict between the (meta)physical 'urban' and 'rural.' For although co-dependent, the social and productive relations of town and country are different and unequal, with the aggrandisement of the urban dependent upon the deepening exploitation of the rural.

MNT has developed Marx's account of the urban-rural divide as a necessary condition of capitalist relations. Championed by social geographers, such as Neil Smith, MNT has directed its gaze to how productive and political relations are manifested across socio-spatial scales in which the costs and benefits of production are unevenly mapped across class and geography. The identifiable patterns that Smith uncovers are consistent with Marx's observations, and connect the broad theoretical attention to production with emergent social-material conditions. Smith explains that "[u]neven development is the

but a quite material, empirically verifiable act, an act the proof of which every individual furnishes as he comes and goes, eats, drinks and clothes himself." Marx, *German Ideology* 61.

²³ "The greatest division of material and mental labour is the separation of town and country. The antagonism between town and country begins with the transition from barbarism to civilisation... and runs through the whole history of civilisation to the present day. ...The town already is in actual fact the concentration of the population, of the instruments of production, of capital, of pleasures, of needs, while the country demonstrates just the opposite fact, isolation and separation." Marx, *German Ideology* 65.

concrete process and pattern of the production of nature under capitalism.”²⁴ He continues that capitalism is inherently dependent upon constant expansion, and that historically, this was realised through its spatial expansion in absolute space. To ameliorate the contradictions of its own ‘success,’ realising new markets and converting the conditions of production (labour and nature) into the fluid means of production and profit, capitalism expanded from its western, urban strongholds into relatively, less developed socio-spatial spheres. Thus the push towards colonisation can be seen as the extension of the inherent tensions first realised between town and country. However, by the 19th century, absolute space had been covered; capital had extended its reach across the entire face of the globe, bringing the resources of the world under the control of capitalist production. In a sense, the world, or at least that part which was of interest to Anglo-European interests, had been urbanised. The need for constant productive expansion had come across the limits of finite geography, after which, repartitions, or relative differentiation [“the internal differentiation of global space”²⁵] became necessary. Rather than expanding across space, capitalism was forced to expand *within* space: new ‘rural’ scapes had to be formed and colonised. *Space* was succeeded as the sphere of differentiation and expansion, by *place*, in which newly constructed ‘spaces’ of power, wealth and status could be concentrated and further developed.²⁶ In this way, capitalism has sought to profit from geography, while actively creating new geography’s of sustained profit; it is the exploitation and production of space, of nature.²⁷

²⁴ Smith. *Uneven Development* xvi.

²⁵ Smith. *Uneven Development* 88.

²⁶ “the more that social development emancipates space from society, the more important does spatial fixity become.” Smith. *Uneven Development* 90.

²⁷ Smith. *Uneven Development* xiii.

Uneven development is thus understood as a spatial and social dynamic, involving the formation of privileged centres of geography, wealth, power, socio-cultural meaning, knowledge, fashion, identity, etc. As understood by Marx, and developed within MNT, the urban, while the physical expression of production, is also a metaphysical construction reflecting uneven social understandings and values. Mirroring Marx, Neil Smith explains that “[t]he production of space implies the production of the meaning, concepts and consciousness of space which are inseparably linked to its physical production.”²⁸ The urban is both concentrated industry and population, and the unevenly valued sensitivities and priorities of *civilised* society. The interests and institutions of political and economic elite, scientific and economic rationality, the exigencies of technological development, and the ideology of market-driven sustainable development constitute the ‘urban’ in relations of uneven development. The ‘rural,’ in contrast, is everything the city is not, but depends upon. It is the primitive, the backward, the ‘idiocy’ of inefficiency, myth and superstition that must be overcome and commodified.²⁹ This is a project of uneven development, in which the relations between people and the environment come to mirror those between town and country, citizens and the organisations, institutions and state structures that centralise power, decision-making and wealth.

Having conquered space, capital expresses its incessant need for expansion, and for differentiation through the development of new, and distinguishing scapes, most notably provided by technological change: first in the core ‘urban’ areas, filtering unevenly then through-out the ‘rural.’ But, this is not merely the dissemination of technique across

²⁸ Smith. *Uneven Development* 77.

²⁹ Referring to Marx’s infamous statement in the *Manifesto*, of “the idiocy of rural life.” Karl Marx and Frederick Engels. *Manifesto of the Communist Party* (Moscow: Progress, 1986): 38.

space, but the steady engagement with and manipulation of the social-environment in different (and deepening) ways.³⁰ Technology cannot exist apart from the social relations that inform it; thus the differentiated development and dissemination of technologies is also of social, political and environmental norms and relations of profit and control. Technology, and with it the promises of 'urbanisation' is the Trojan Horse of total[ising] social relations. The result is the transformation of the world "as a 'profit surface' produced by capital itself... synchronized with the rhythm of accumulation and crisis."³¹ Though the technologies and spatial arrangements might change, the dynamic is steady and constant. The result is an uneven seesaw in which the peripheries are 'developed' (exploited) based on their differentiation from core conditions, the profits realised in turn fuel greater development of the social and technical means of production concentrated at the core (differentiation), and thus the maintenance of relative difference – uneven development.³²

Degradation and Crisis

As highlighted within MNT, the need to constantly expand production across and within 'rural' scapes has important ramifications for the health and sustainability of both communities and their environments. As the mutually constitutive relationship of the social and the environmental suggests, society can only impact upon the environment while necessarily being impacted upon in return. Further, the particular productive

³⁰ As noted by Neil Smith, "The obsolescence of old technologies and the rise of new ones, so vital to capitalism, is simultaneously the transformation of old spatial structures into new ones." Smith, *Uneven Development* 128-9.

³¹ Smith. *Uneven Development* 148.

relations of capitalism not only change the environment, but do so in unsustainable ways; meaning that capitalist production impacts upon communities in necessarily unsustainable patterns. The relations and forces of production expand outwards and inwards from cores of concentrated wealth, power and status, destroying the very conditions upon which they rely, and demanding constant expansion into 'new' rural scapes of exploitation. The result is deepening terrains of social and environmental degradation, contestations and crisis. Unable to maintain the necessary conditions of production, and threatened by environmental and social crises and political contestations, the state is called forth to restore productive and political stability, while assisting in greater feats of uneven development. As such, within MNT, the state emerges as a privileged focus of analysis and political action.

Extended to the environment, Marxian insights provide an understanding of degradation and crisis as fundamental to capitalist relations and understandings. Social-environmental crisis becomes understood not as an unforeseen or unfortunate corollary, but as an inherent aspect of capitalist relations mapped across social-spatial scales. In the same way that the exploitation of labour is highlighted as fundamental to capitalist production and *surplus* accumulation, so too is the exploitation of the 'other' key condition of production: the environment. Socially and environmentally, the quest for unceasing expansion and surplus is borne out at the expense of the conditions and materials for production.³³ The result is the exploitation of resources beyond the capacity

³² "the tendencies toward differentiation and universalization, or equalization, emanate side by side in the belly of capitalism;" resulting in a specific pattern consistent with capitalism – 'uneven development.' Smith, *Uneven Development* 90.

³³ While there are some differences in how MNT approaches and understands the ecological degradation inherent to capitalist production, as spelled out by Strange, the dynamic of expansion and

to rejuvenate, leading to the degradation and death of communities and their environments.³⁴ This dynamic depends upon the dichotomised view of nature as the a-social, pool of raw materials, separate from society, and of little concern apart from its role in production.

Within dominant understandings, the degradation of the environment, however stark, can be neatly compartmentalised into a separate sphere, and addressed within the logic of further exploitation. The environment is understood first and foremost as the raw materials for production and profit, and insofar as environmental degradation is considered, it is to overcome the threat to increased uneven development. Rather than a brake on production, environmental degradation becomes a springboard for greater feats of techno-industrial 'progress' and the fuller, more 'efficient' exploitation of remaining resources.³⁵ This most often takes the form of technological fixes to the very conditions that capitalist technology induced. Yet, these are problems that economic laws and/or technology cannot address. New techno-fixes for the ills of previous technological innovations prove only to lead to the quicker, more environmentally damning depletion of increasingly marginal resources, and negative consequences for the communities that depend upon them.

As viewed through the lens of MNT, when capitalism is forced to address the unsustainability of its productive forces and relations, it can only respond in such a way as

exploitation causing crises that in turn spur greater development, appears consistent. Gerard Strange. "Capitalism, Valorization and the Political Economy of Ecological Crisis." *Capital and Class* 72 (Autumn 2000): 60.

³⁴ See O'Connor. Ch. 8 "The Second Contradiction of Capitalism." 158-177.

³⁵ "periods of crisis are also periods of dramatic restructuring. Capitalism is always transforming space in its own image, but in periods of expansion this amounts to the filling in of patterns more or less

to exacerbate the crisis or create new ones. Capitalism relies on the constant expansion of the relations and means of production, demanding both more (resulting in exploitation of rural scapes), and better (the further differentiation of the urban), yet, remains unable to enact and maintain the complicated social and material relations and conditions this demands. Capital neither maintains the conditions of production, nor is it willing to invest the resources into the social and material relations demanded for 'progress.' In short, the logic of capitalist production leads to crisis, and rather than being able to address these problems, depends on further crisis to spur change and growth. Economic crisis leads to the greater exploitation of the environment in search of sustained profits. Environmental crisis leads to changes in the means and relations of production to maintain profits and power, leading to even greater environmental degradation and new economic crisis, and so on.³⁶ The final result, as understood by MNT, is the eventual, and inescapable collapse of capitalism under the weight of its own contradictions as revealed in the production of nature.³⁷

This is realised both environmentally, and necessarily, socially. In the same way that capitalist production is premised upon the depletion and degradation of the environmental conditions of production, it impacts negatively on the communities dependent upon those environments. And, the further capitalism (re)constructs the environment, the more it will necessarily impact upon the health and quality of life of communities, and the more pressing the need for individuals and groups to consider and contest the economic relations dominating their lives. Within environmental crisis then, lie

set at an earlier period. Precisely during crisis are these new patterns set in an unprecedented restructuring of geographic space." Smith, *Uneven Development* 157.

³⁶ O'Connor 181.

the seeds of social-political crisis, challenging the dominant relations and institutions that production depends upon. As much as the social and the environmental cannot be disconnected, environmental crises have social consequences – a social (and political) crisis.³⁸ The further productive relations degrade the environmental conditions of life, the more pressing will be the need for communities to determine for themselves their relations and constructions of nature. According to MNT, therein lies the transition to a socialist society.³⁹

Traditional Marxian scholarship has highlighted the potential and pitfalls presented by social contestations, as a response and challenge to dominant relations.⁴⁰ Reflecting both this heritage, and the pivotal role social movements have played in foregrounding environmental issues, MNT gives attention to the role and importance of production-induced social conflict.⁴¹ Although James O'Connor, in particular, exhibits a sensitivity to the diversity and importance of broad social movements to the resolution of environmental crises,⁴² the general trend within MNT is to understand these contestations within the traditional Marxian quest for a grand mass movement rooted within the working class, and focused on the instruments and institutions of the state.⁴³ As articulated by Neil Smith,

³⁷ Smith, *Uneven Development* 60.

³⁸ Inasmuch as MNT extends the issue of ecological degradation to the social and political spheres, it appears owing to the attempts of James O'Connor.

³⁹ "The struggle for socialism is the struggle for social control to determine what is and is not socially necessary. Ultimately it is the struggle to control what is and is not value." Smith, *Uneven Development* 64.

⁴⁰ Almost exclusively as it relates to the working class, and organised labour.

⁴¹ Neil Smith recognises the importance of social movements in the 60s and 70s in laying the groundwork for MNT's understanding of space as a social product. Smith, *Uneven Development* 76.

⁴² As somewhat unevenly championed by O'Connor: "Above all, we need a theory that identifies ecological and other contradictions of capitalist development, in ways that illuminate and advance ecological and related social movements." "In similar ways that traditional Marxism illuminates the practices of traditional labor movements, ecological Marxism may throw light on the practices of new social movements." O'Connor 127, 158.

⁴³ Strange critiques O'Connor on this basis, claiming that O'Connor gives *too much* attention to

within the contradictions of capitalism, and the capitalist construction of nature, lie the seeds of necessary and inevitable revolt. And, in this struggle, “it is the working class that will win the chance truly to define human nature.”⁴⁴

The State

As capitalist relations require secure production of and access to the ever expanding and processed resources that environmental degradation and social contestations threaten, the state is called forth to ensure sufficient quantity, quality and access. MNT stresses that inasmuch as capitalist production remains dependent upon the commodification of non-commodities (O'Connor), or the propagation of an economy-society based on exchange-value rather than use-value (Smith), capital calls forth the state for both the provision of the necessary conditions of production, and to mediate the inherently harmful, crisis-ridden relations. In both cases, the state is seen as the necessary expression of capital as it struggles to maintain the conditions of production, and to mediate social claims while maintaining centralised profit and control.⁴⁵

Further, the role of the state is not purely static or reactive, but is called upon to assist capital in an active process of uneven development. As understood within MNT, this requires the ever expanding socialisation of the social and environmental conditions of production. Bringing traditional Marxian sensitivities to bear in understanding the socio-spatial expression of capitalist relations, Neil Smith explains:

social movements: this in spite of the argument here, that O'Connor doesn't give enough. Strange 72.

⁴⁴ Smith, *Uneven Development* 60.

⁴⁵ O'Connor 149. As explained by Neil Smith once surplus is extracted from nature, social institutions are formed to ensure its regular production, accumulation and distribution. Once created, the state then mediates the relationship between society and the environment in order to preserve the uneven development and distribution of profits. Smith, *Uneven Development* 39.

[the capitalist state's] central function is social control on behalf of the ruling class... By repressive, ideological, economic and an array of other social means, the state attempts... the repression of the working class... and at the same time attempts to ensure the economic conditions necessary for accumulation. In short, it expedites and arbitrates the stable expansion of capitalism.⁴⁶

To assure the proper exploitation of the expanded (urbanised) terrains requires planning and control, and thus leads to the tightening of ever-expanding circles of productive-political governance, dominated by profit and crisis.⁴⁷ As crisis necessarily spreads with development, so does the reach of the state to control and manage those terrains, facilitating greater exploitation, crisis, and so on. The state both provides and distributes resources at the same time as it provides a political forum to ameliorate the social demands responding to degradation. It acts as a necessary buffer and facilitator between production and its resources, and between production and contesting social forces.⁴⁸ Within MNT, the state is then singled out as a key meeting point of productive, political, environmental and social forces, and thus an essential terrain of investigation and contestation. The state, as the agent of capital, and acting to protect the means and methods of capitalist expansion and profit, serves as a window into the machinations of production and dominant social-environmental relations. Further, and importantly, the state, uniquely positioned to socialise total social resources while mediating the ensuing contradictions and contestations, emerges as a privileged site of praxis. As summarised

⁴⁶ Smith, *Uneven Development* 49-50.

⁴⁷ As asserted succinctly by O'Connor: "crisis forcibly causes capital and state to exercise more control or planning over production conditions." As the extent of global environmental crises expand, so too must the socialisation of social and material (re)construction. O'Connor 168-169.

⁴⁸ O'Connor 164-5.

by O'Connor: "more social forms of productive relations, productive forces, and conditions of production together contain within them possibilities of socialist forces."⁴⁹

Consistent with Marxian sensitivities, in order to address social-environmental concerns, MNT remains committed to the social control of the state, and the mediation of production according to the needs and desires of the working class. As asserted by Vogel, "[t]o overcome the alienation [between society and nature] would mean to reassert the sociality of the environment: to see it consciously as our own, and explicitly and consciously to exert the kind of control over it that we already implicitly possess – to raise it, that is, from the *naturwuchsig* to the truly social."⁵⁰ Within the Marxian tradition, this is possible only with the wresting of the state away from the interests and dictates of capital, and placing it in the hands of the working class. Inasmuch as social movements are considered within MNT, they are relegated to a minor role, in support of the working class in the quest for state control.

To summarise, Marxian Nature Theory is a useful tool in understanding and contesting dominant social-environmental relations, as it illuminates the links between productive-political regimes, social-totality, and social-environmental relations, degradation, crisis and contestations. In so doing, it posits a broad and fluid environment as an essential terrain of investigation within political, economic, technological, and social-cultural understandings, in which change in any one sphere is possible only with commensurate changes across all spheres. At the same time as the environment's constitutive role across social-material relations is highlighted, it is revealed to be

⁴⁹ O'Connor 171.

dominated by the logic and relations of production: a 'social hieroglyphic' communicating the need for constant expansion and profit, the uneven development of urban-universalisation and differentiation, centralisation and degradation. The dominant understanding of the environment as an ahistorical supply of raw resources, denies the inherent links between the social and environmental, resulting in the destruction of both: deepening degradation of the environment, and the health and sustainability of the communities that depend upon them. Responding to the destruction of their environments, and the negative impacts upon their health and quality of life, individuals and communities emerge to articulate and contest their experiences, threatening the continued expansion of production. This is seen to necessitate the role of the state, in order to ensure the necessary conditions of production while mediating the ensuing social contestations. Wrapping together the social, material, productive and political relations at the heart of uneven development, Marxian Nature Theory offers a complex and compelling understanding of dominant social-environmental relations, and the promise of progressive politics.

The Limitations Of Marxian Nature Theory

Taken together, the insights and sensitivities of Marxian Nature Theory, provide a useful tool in understanding the case of Japanese social-environmental crisis and contestations. MNT alerts us to the importance and challenges of total social relations in fostering productive relations at odds with environmental health and sustainability, of the role of social contestations in responding to and threatening those same relations, and the

⁵⁰ Vogel 376.

collusion of corporate and political interests in converting crisis into greater techno-industrial transformations and (re)constructions of nature. Yet, in spite of these strengths, as a tool for understanding social-environmental relations and contestations, and fostering a process of democratic and sustainable change, MNT remains hampered by its somewhat myopic and aggregating adherence to production, labour, and the transition to socialist rule.⁵¹

Maintaining a unifying teleological understanding centred upon the pre-eminence of production, and within production the role of organised labour in political contestations for socialist control, MNT fails to fully understand or support the importance of social-environmental movements (SEMs) in revealing the nature of social-environmental conditions, challenging dominant political-economic relations, and affecting the course of techno-industrial change and environmental (re)constructions. In order to realise MNT's ambition of critically engaging with social-environmental relations and supporting a politics of more sustainable and just change, the insights into the political economy of degradation and contestation within an uneven socio-spatial totality must be maintained, while the reductionist tendencies of traditional Marxism are abandoned. In favour of pre-determined forces, actors, and spheres of contestation, MNT must open up to the insights and experiences of non-reducible social-movements, as SEMs struggle to articulate their diverse and critical experiences, hopes and desires. Most of all, MNT must accept and support the integral role played by diverse social contestations in shaping the direction and scope of political-economic, and social-environmental change. As long as SEMs are

⁵¹ It should be noted that by and large, contemporary Marxian Nature Theorists have attempted to explicitly distance themselves, and MNT in general, from these 'traditional' pre-occupations. However, as discussed here, MNT has been unable to leave this legacy behind.

hidden by the privileged attention given productive forces, organised labour and state-centric political projects, MNT's understanding of social-environmental relations, and their ability to contribute to processes of sustainable and just change, remain limited.

In attempting to build upon the strengths of MNT as articulated above, this section engages critically with the privileged attention given production in understanding and contesting social and environmental relations. MNT is criticised as it maintains the obscuring Marxian pre-occupation with the means, relations, and sites of production, and the resultant focus upon an aggregated working-class as the favoured agent in a political project of socialist emancipation. MNT's pre-occupation with production, labour and the socialisation of the state, are seen to posit a singular 'Way' of understanding, and action, that limits MNT's ability to understand and contest dominant relations. It is concluded that the promise of MNT will depend upon its ability to maintain its critical analytical strengths while foregrounding the insights and desires of diverse social movements as they struggle to articulate and contest their social-material conditions. Together, the analytical insights of MNT, and attention to the experiences and importance of SEMs, holds much promise, and proves necessary in understanding Japanese social-environmental relations and contestations.

Productivism

While the Marxian emphasis on social totality offers an important springboard into understanding and contesting social-environmental relations, it must also be recognised as advocating a constricted, economically defined understanding of that totality, understood and evaluated according to relations of production. 'Social totality' as it is foregrounded

within MNT, primarily serves to highlight the relations of production realised across the social fabric, rather than the complex intermeshing of the social, political, economic and environmental. One is left with the uncomfortable impression that 'social totality,' as an analytical concept, has more to do with justifying a productivist investigation of any and all spheres of inquiry, than a true appreciation or interrogation of integrated social-material relations and conditions. As a result, the full breadth of social relations and the possibilities for praxis, are seen only from the perspective of productive techniques and relations, pointing to the further techno-productive advances assured by the socialist ambitions of an aggregated working-class.

Understanding the dominant role played by production is necessary, as is demonstrated in the Japanese case. Yet the productivist lens also threatens to obscure the role played by more diverse factors in shaping our understandings and relations with the environment, most notably popular contestations in the form of social-environmental movements. As demonstrated above, MNT points to the incessant urge towards techno-productivist change as fundamental to capitalist relations, and instrumental in the processes of uneven development, degradation and crises that mark contemporary social-environmental relations. In search of sustained profits, capitalist relations spur greater feats of scientific knowledge and technological capacity that steadily deepen the social construction and degradation of the environment. From the demands of constantly changing production, emerge uneven social, political and environmental conditions and relations. As evidenced in the Japanese case, this can take a variety of forms, including: particular political institutions and norms, popular ideologies and patterns of social stability, control and consumption. Constant techno-productivist change likewise

impresses itself upon the physical landscape through the concentration of wealth, status and power in core urban-scapes, and the exploitation and degradation of the 'rural.' The result is social and environmental crisis, spurring even greater feats of technological change and exploitation. It is a closed circle with production providing the spin.

Yet, while this appears true in its details, it seems at odds with the understanding of social-material totality upon which MNT claims to be built. Insisting that the incessant expansion of particular relations of production is the fountainhead from which all social and material relations are formed obscures the role social, political and environmental relations have in shaping our understandings and the unfolding of all social-material relations, including production itself. In understanding the integrated relations of social totality, as promised within MNT, we must recognise the role of production across all social relations at the same time as we recognise the impact of total relations, including environmental, upon production.⁵² This means that our understandings and relations with nature are more complex and diverse than a pre-occupation with production allows. As articulated by SEMs, our understandings and relations with 'nature' are embedded within a rich tapestry of social, cultural and biological bonds that a productivist perspective simply cannot account for.⁵³ Further, while productive relations help determine our understandings and relations with the environment, our understandings and relations with the environment, including social-environmental movements, determine production, and the direction and scope of change. As such, if we hope to understand the extent and

⁵² Castree unconvincingly argues that Neal Smith fulfils the analytical promise of 'social totality' in which the dualism between the social and the environmental are resolved. Castree 28.

⁵³ While Neil Smith, for example, can allude to the myriad understandings that bind society with nature, they are in the end reduced to the contradictory ideology of nature constructed by and for capitalist production. Smith, *Uneven Development* 1-2.

direction of social-environmental relations, we need to expand our focus beyond production, to the role, amongst others, of the social and political.⁵⁴

As the Japanese case illustrates, the direction and scope of productive change is an uncertain, contradictory and contested process that unfolds dialectically across all spheres. When, as done by MNT, the grand sweep of social, and environmental processes are reduced to the capitalism-driven march of technological and industrial processes, it diminishes the complexity of social relations, and importantly, denies the crucial role SEMs play in contesting and ultimately shaping the direction of techno-industrial transformations and (re)constructions of nature. The actually existing struggles, emerging out of diverse socio-spatial contexts must be seen for their specificity's and contributions, in shaping total social relations. In this way we gain a broader and fuller understanding of social-environmental understandings and relations. Further, we gain a fuller understanding of the social, political and economic spheres in which they are embedded. In the Japanese case, we see that SEMs, drawing upon diverse experiences and motivations, played an integral role in the direction and scope of political, economic and social change. Importantly, they were pivotal in processes of techno-productivist change, and (re)constructed environmental understandings and material relations. We cannot hope to understand Japanese social-environmental understandings and relations with nature, including the physical (re)constructions of 'nature' itself, without first understanding the role and importance of SEMS. In directing our attention to the experiences, successes

⁵⁴ Attempts to foreground the role of broader social and political forces, such as with the Frankfurt School, Smith dismisses as unduly fetishising the role of science and technology - a justifiable critique of MNT. While MNT can go so far as recognise the yet un-constructed future of social-environmental conditions "to be determined by political events and forces," in the end, those forces are inseparable from "the character and structure of the capitalist mode of production." Smith, *Uneven*

and failures of SEMs, we gain in understanding both the complex embeddedness of the environment within total social spheres, and conversely, of political and techno-productivist relations as integrated in and informed by the social-environmental. This is important in both understanding social-environmental relations, and supporting projects of social-environmental change.

While MNT remains committed (in theory) to political action towards more sustainable and just relations, the pre-occupation with production hampers their efforts, while potentially contributing to further feats of degradation and crisis. This is problematic in two ways. As noted above, the preoccupation with production serves to elide the myriad connections between society and the environment articulated by SEMs, and thus serves to diminish the possible terrains of contestation. While individuals and communities act in various ways and across socio-spatial spheres to affect the productive, political, social and environmental relations impacting upon them, MNT would narrow the focus to the means and relations of production. Inasmuch as MNT fails to recognise the fecundity of SEMs in their full diversity, the hopes of a shared, and empowered political project remain slim.

Secondly, although MNT remains critical of production, the stance is an uneven and problematic one. While MNT theorists recognise the pivotal role production plays within ecologically harmful relations, they also hold onto the promises of further productive developments to realise their project of post-scarcity socialism. Marx lauded capitalist achievements in scientific progress and production, and promised a workers' utopia in which even greater feats of techno-productivism, untethered from capitalist

contradictions might take place. He advised that “‘Liberation’... is brought about by historical conditions, the [development] of industry, commerce, [agri]culture, the [conditions of intercourse] [*sic*].”⁵⁵ Rather than a promise of more sustainable and respectful relations that reflect the social-environment’s importance to social, cultural and biological sustainability as articulated by SEMs, Marx sought the further development of industry through technological ‘advances’ and the greater subjugation of ‘nature’ to the satisfaction of social needs and desires. To this end, he promises that a communist state “for the first time consciously treats all natural premises as the creatures of hitherto existing men, strips them of all their natural character and subjugates them to the power of the united individuals.”⁵⁶ As the product of social relations, the environment can be (re)constructed without restraint.

This aversion to restraint before unchecked anthropocentric desires is sustained within MNT. Opposed to any understanding of ‘nature’ apart from its construction and exploitation by *us*, Vogel condemns any calls for ‘limits to growth’ or curbing of technology, as asserting an independent nature thrust against us and waiting to seek its revenge. Vogel counsels that “[o]vercoming alienation requires *increasing* humans’ faith in their own ability to change their own conditions, *not* criticizing it as hubris.”⁵⁷ This is echoed by O’Connor, who insists that ‘Greens’ must accept the promised gains in production afforded by technological change.⁵⁸ There is little room within MNT for those who counsel less ‘productive’ social-environmental relations as a possible strategy

⁵⁵ Marx, *German Ideology* 56.

⁵⁶ Marx, *German Ideology* 87-88.

⁵⁷ Vogel 380. *Italics added.*

⁵⁸ O’Connor 269.

towards greater sustainability and justice.⁵⁹ As such, 'Greens' are counselled to accept the current levels of production, and work towards the further gains afforded by the new, more efficient technologies promised by 'Reds.'⁶⁰ It is through the means and relations of production that we created the environment - it is through the development of further productive relations that we will 'fix' the environment.

As maintained by MNT, social-environmental crises emerge not from over-production, but by the under-production inherent to capitalist relations: the inefficient utilisation and provision of productive resources.⁶¹ The 'environmental' quest then becomes the fully unencumbered social control and construction of 'nature' afforded by yet unrealised productive capacities. As a socialist society would more readily realise full social control over and advance of the techno-productive utilisation of resources, we are promised a more social-environmentally sustainable construction of 'nature.' Of the severe myopia of this understanding, Neil Smith declares. "there can be no apology for the anthropomorphism of this perspective: with the development of capitalism, human society has put itself at the centre of nature, and we shall be able to deal with the problems this has created only if we first recognize the reality."⁶² While capitalist relations certainly dominate our understandings and relations with nature, and need to be properly recognised and addressed, to reduce 'nature' to this, and to seek sustainable and just

⁵⁹ As noted by Castree 6.

⁶⁰ O'Connor 269.

⁶¹ O'Connor 166.

⁶² Smith. *Uneven Development* xvi. This ignores the multitude of connections, cultural, spiritual and physical that humans have with nature, as well as the possibility of valuing nature apart from its materiality.

answers within the promises of further techno-productive 'advances,' is to mirror the very relations MNT critiques.⁶³

MNT's faith in future technological and productivist breakthroughs as the answer to contemporary social-environmental crises, ignores the limited carrying capacities of the environment, and is fundamentally at odds with an expanded and integrated understanding of social and environmental relations. In spite of MNT's claims to the contrary, techno-productivism, and the teleological promises it offers of ever advancing exploitation, are premised on a mechanised view of the natural world that contradicts MNT's stated understanding of social and environmental integration. As such, MNT's preoccupation with further techno-industrial advances, mirror the unsustainable social-environmental relations of modern capitalism. As illuminated by Bruno Latour, in both cases social production and power over nature are justified; on the one hand through the construction of an a-social nature free for exploitation, on the other, a supposedly holistic nature understood only in terms of social needs and desires.⁶⁴ MNT can be seen as sharing in a project of 'Modern' domination, in which the relations between people and the environment come to mirror those between individuals and the organisations, institutions and state structures that centralise power, decision-making and action through the claims of scientific-rationality, techno-productivism and unceasing progress. The result is a

⁶³ MNT would do well to remember Gramsci's advice that "in political struggle one should not ape the methods of the ruling classes, or one will fall into easy ambushes." Gramsci 232. For a sympathetic critique of MNT's constructivist hubris, in assuming that nature *could* be constructed according to the wishes of a future emancipated society, see Castree 13.

⁶⁴ For an excellent exploration of Marxism's inability to escape the same modernist foundations that prop-up capitalism, see Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter. (Cambridge, Mass.: Harvard UP, 1993). For an example of Latour being used in critique of MNT, see Castree 7-8.

utilised environment that destroys the historical/cultural, experiential and biological bonds between and within individuals, communities and nature.⁶⁵

MNT's preoccupation with production as the key explanatory and emancipatory hope for social-environmental relations, reifies a bracketed, mechanised nature forced within the narrow 'space' granted by unchecked social appetites. Attention to social-environmental degradations as articulated by SEMs, serves to highlight the unpredictable and harmful results of society trapped by its own hubris and productivist desires. Countering the shallow understanding of the environment as the seemingly dis-engaged product of industry, and contesting the 'environmental' promises of further technological advances, SEMs reveal that society is not reducible to the urge to produce and consume, and nor will the environment be neutered and reduced to such claims against it. As demonstrated in the Japanese case, while technological advances are heralded by both dominant elites and Marxian opposition as the answer to social, political, economic and environmental ills, the *further* technological mediation of the environment leads to greater (re)constructions and degradation. This remains a profound obstacle in any Red-Green rapprochement; one that MNT is unwilling to address in their blanket condemnation of SEMs as anti-modern 'Greens' attempting to turn back the clock to a pre-industrial society that might never have existed.⁶⁶ The study of Japanese SEMs suggests that communities, as they struggle for more sustainable and just social-environmental relations, take a far more pragmatic, and fluid approach that avoids the absolutes of Marxian or 'Green' abstractions. Inasmuch as MNT scholars refuse to critically question their own

⁶⁵ This point is generally attributed to the Frankfurt School critiques of traditional Marxism.

⁶⁶ For a brief account of MNT's understanding and criticism of the 'Green' approach, see Strange.

pre-occupations with 'production,' they are unable to 'see' the constituting role of SEMs in determining social-environmental relations, or the full scope of future possibilities.

Labour

While the experiences and insights of SEMs highlight the dire social and environmental implications of further technological 'progress,' we shouldn't forget the role SEMs play within these very processes. As stated above, SEMs play an integral role within processes of political, economic, social and environmental change. As such, greater attention should be given the experiences of SEMs in understanding and contesting dominant social-environmental conditions, at the same time as we acknowledge their role and importance within these relations. Yet, in their pre-occupation with production as the privileged lens of understanding and force of change, MNT fails on both counts. This is not because MNT is blind to the role of social contestations. In understanding both the material state of the environment, and the promises of future environmental health and political emancipation, MNT acknowledges the importance of social relations and contestations. However, consistent with their pre-occupation with the means, relations and sites of production, MNT overlooks the actual role of SEMs for the future promises of organised labour.

While SEMs use their own experiences and struggles to better understand, articulate and change social-environmental relations, MNT, with its productivist pre-occupations, continues to look to labour as the favoured social actors and agents of emancipation. As recognised by O'Connor, MNT tends to concentrate on the environment only as it relates to the working-class; that is, how environmentally harmful

practices reflect and impact upon the relations and goals of labour, and how emancipated labour is the precondition of environmentally-friendly social relations.⁶⁷ *The* central question that motivates MNT then, is “[w]hat is the dialectic of nature and culture in material life generally and in work relations specifically?”⁶⁸ As such, MNT has been delinquent in articulating the fuller relations between labour, the environment, and the larger society, or considering the value of the environment apart from its use as the raw materials of production.⁶⁹ Accordingly, MNT’s ‘revised’ Marxism is one that stretches to include nature, but where “social labor retains its status as the central category of historical materialism.”⁷⁰

Connecting labour to the social construction of the environment, Vogel explains that “[b]y making labor into the central category of both his epistemology and his social theory, Marx draws our attention to the fact that most of what we call the ‘objective world,’ the world of objects, is in fact a world of *human* objects, objects produced by humans through labor.” The goal then, according to Vogel, in recognising the world as a social construction, is to recognise it as the product of labour, as “*our* world, our product.”⁷¹ This is echoed by O’Connor who insists that the history of nature is the history of labour, in that “[insofar] as cultural and natural processes intermesh and interact, labor provides the animation.”⁷² And Neil Smith likewise insists that the construction of unevenly developed land and culture-scapes “is implied from the start in

⁶⁷ As articulated by Strange.

⁶⁸ O’Connor 46.

⁶⁹ As admitted by O’Connor 6.

⁷⁰ O’Connor 39.

⁷¹ Vogel 369.

⁷² O’Connor 26.

the concept of the division of labour.”⁷³ The collective focus then is not upon the environmentally unsustainable relations of contemporary society, but on the exploitation of labour within productive processes, and how this is reflected across socio-spatial scapes. The environment becomes simply one more terrain of investigation in highlighting the exploitation of labour.⁷⁴

It is an aggregated working-class that is focused upon as the key actor in a singular unfolding of history; thus the ability to ‘see’ the environment apart from its construction by and direct impact upon labour, or support contestations as they emerge from a breadth of experiences and needs, is severely limited. As MNT attempts to collapse the dichotomies between society and the environment, nature has been entirely banished as it is reduced to the expression of production, which in turn is dissected and critiqued primarily in relation to the exploitation of labour. Even when considering the massive (re)constructions and degradations of the environment, there is no discussion, or recognition of the value of nature apart from ever shifting productive needs. In fact, there is no space to consider ‘value’ at all apart from the value derived from the labour process, and whether or not full ‘value’ for the labour is realised by the labourer.⁷⁵ ‘Nature’ becomes the ‘environment,’ devoid of any extra-productive content, meaning or value, and all social experiences and contestations are reduced to those of labour.

⁷³ Smith, *Uneven Development* 99.

⁷⁴ Neil Smith locates the fundamental difference between bourgeois and Marxian understandings of nature (dialectic or dichotomised) as the Marxian recognition of the pivotal role of labour.

⁷⁵ As noted by Vogel, “It is central to Marx’s [and by association, Vogel’s] argument that ... labor is the only source of value.” Vogel 372. This is furthered by Neil Smith, who reduces the environment to a commodity, and thus the ‘value’ of the environment to the surplus exchange-value produced by labour. Smith, *Uneven Development* 48.

MNT's pre-occupation with the experiences of labour within social-environmental relations has important ramifications as it occludes the myriad connections between societies and their environments, limiting our ability to understand contemporary social-environmental relations at the same time as it curtails the possible scope and direction of social contestations. As Marxism focuses on labour as the revolutionary engine of history, all diversity in experiences, needs and wants are reduced in the broad brushstrokes of an aggregated class, thrown into being by the productivist dictates of economic-rationality. As noted by Marx: "For each new class which puts itself in the place of one ruling before it, is compelled, merely in order to carry through its aim, to represent its interest as the common interest of all the members of society... it has to give its ideas the form of universality, and represent them as the only rational, universally valid ones."⁷⁶ Accordingly, all contestations become 'labour,' and all relations productive. As this relates to the environment it reduces all social-material conditions to the needs and desires of an aggregated working-class, and counsels the greater exploitation of natural resources to fuel the productive gains of a labourist dictatorship. The task of social-environmental movements then, as they respond to the real conditions of degradation and crisis, is to contribute to a single, homogenised(ising) movement focused around the experiences and needs of labour.

In spite of the pivotal role of non-labour, non-partisan social movements in revealing and contesting the nature of social-environmental relations, and offering the most consistent and threatening challenge to capitalist relations of production and rule, MNT remains trapped behind a Marxian lens that has difficulty seeing beyond its own

⁷⁶ Marx, *German Ideology* 62.

theoretical musings;⁷⁷ and when it manages to do so, only as far as 'labour.' While O'Connor articulates how the inherently unequal and unsustainable relations of capitalist production results in degradation and social contestations, and would thus seem well positioned to recognise the breadth and power of SEMs, he ultimately falls back on traditional Marxian sensitivities, asserting that the success of any emancipatory project will depend upon the marshalling of critical social forces behind a single effort, and the assumption is, behind labour.⁷⁸ As advised by O'Connor, "[in] a multitude of forms, labor and feminists' movements, urban movements, environmental movements, and movements of oppressed minorities have organized themselves around the general issues of the conditions of life ... sooner or later, labor, feminists, urban, environmental, and other social movements need to combine into a single powerful, democratic force."⁷⁹ In the context of MNT, this "single powerful, democratic force" is first and foremost reflective of and motivated by the experiences and needs of 'labour.' This is reiterated by Neil Smith who diminishes broader social contestations while foregrounding the importance of class-struggle and the working-class in dethroning bourgeois natural history for a consciously social history.⁸⁰ While 'nature' is de-constructed as the ideology of capitalist social relations, the revolt of the working-classes alone retains the certainty of natural law.⁸¹ The historical struggle then is for the building of solidaristic unity within the conditions and goals of an aggregated class struggle to combat the exploitation of uneven

⁷⁷ As acknowledged, but unchallenged by Castree 32.

⁷⁸ O'Connor 170. Even this uneven attention to the role of SEMs has been criticised by others in MNT, maintaining that the struggles of labour and 'greens' are not opposed, as they are both addressed "in the inherent unity of this opposition in the struggles of the labour movement." Strange 73.

⁷⁹ O'Connor 250.

⁸⁰ Smith, *Uneven Development* 159.

⁸¹ As claimed by Neil Smith, "it is the working class that will win the chance truly to define

development.⁸²

In the end, the working-class maintains singular importance.⁸³ Real social struggles, as they demand and affect fundamental changes in the conditions of their own existence, are dismissed as lacking the economic logic that ushers in true revolution; this Smith applies equally to ethnic, environmental and other struggles.⁸⁴

Reducing the environment to its relations with 'labour' means that although O'Connor and others can direct attention to social contestations, in the end, social-movements are to contribute to a singular socialist becoming led by the working-class. As we see in the Japanese case, this denies the rich fecundity of diverse citizen-based social movements. While SEMs play a direct role contesting and shaping political-economic regimes, techno-industrial relations, and social understandings and relations with the environment, MNT can only 'see' the pre-eminence of production, an aggregated working-class, and a singular teleology of emancipation. While this denies the importance of SEMs, it further threatens efforts of socially and environmentally sustainable change in ignoring the impotence, and most often, acquiescence of organised labour, and their political parties, to further projects of exploitation and degradation.

human nature ... it is a law of nature that the human animal, deprived of the means to fulfil its natural needs, will react to this deprivation." Smith, *Uneven Development* 60.

⁸² As maintained by Neil Smith: "the abolition of uneven development is one of the first conditions of communal life. Class struggle is the means by which this is achieved: the economic rules of capital are suspended in favour of the direct political determination of history." Smith, *Uneven Development* 154.

⁸³ Smith, *Uneven Development* 172.

⁸⁴ Smith, *Uneven Development* 164.

The State

Dismissive of actually existing social movements as they articulate and contest the social-material conditions dominating their lives, MNT advise that true change is only possible behind the banner of unified class politics. All other efforts, as they fail to properly understand the productivist underpinnings of their own existence, and the singular emancipatory path of the working class, are in the end, so much sound and fury. MNT demands that true change comes through a working-class revolution; yet, the vision attributed to labour seems troublingly similar to those spurring social-environmental havoc to begin with. As noted above, MNT asserts that techno-productivism, or the social manipulation of 'nature,' is not the problem, rather it is the capitalist relations of production, premised on the exploitation of labour, that needs to be confronted. As such, the first task, before social-environmentally unsustainable practices and regimes can be corrected or abandoned, is the seizure of control. Vogel urges that "the solution thus is not to abolish technology, or the attempt to remake nature, but to establish democratic mechanisms of social decision-making based on rational discourse about norms."⁸⁵ 'Rational discourse' is the norms and values of dominant social forces, and in the context of the Marxist tradition, it speaks of the continued and heightened subjugation of the environment at the same time as it seeks to subjugate the diverse, complex, and experientially rooted movements to a single socialist project.⁸⁶ In this MNT echoes capitalist ideologies as they both restrict the totality of social, political, productive and

⁸⁵ Vogel 381.

⁸⁶ As continued by Vogel. the changes in our technological relations with the world. would require changes in the total social order in which technology is organised. Vogel 382.

environmental relations to the conditions of production and power. To this end, MNT sets its sights on the greater socialisation of the means and relations of production as the springboard of 'global class politics.'⁸⁷ To this end, MNT echoes traditional Marxian pre-occupations with the state as the preferred sphere of struggle and hopes for just and sustainable social-environmental relations.

If organised labour is the revolutionary vanguard of emancipatory politics, the nation-state is its goal. Mirroring mainstream pre-occupations, traditional Marxist scholars have concentrated their analysis and hopes for emancipation on the institutions and policies of state-bounded political territories. Highlighting political relations in forming and supporting productive projects, attention is concentrated on the contestations and opportunities for struggle within the concerns, institutions and territorial boundaries of the nation-state. Accordingly, the state becomes the central focus of struggle and emulation, to the point where the 'revolutionary party' takes the shape of "an embryonic state structure," relying on "statolatry" to suppress diversity and opposition as a necessary stage in the development of a "stateless" society.⁸⁸ In this traditional Marxism would seem to mirror the urge to centralisation-universalisation evidenced by Neil Smith in capitalist uneven development.

While the state-centric socialist project of traditional Marxism rests uneasily upon MNT, within MNT's quest for a unified emancipatory project dominated by the experiences and needs of an aggregated working-class can be traced similar pre-occupations. Highlighting the formation and role of the state in mediating capitalist contradictions, O'Connor falls back on traditional Marxist hopes, envisioning the

⁸⁷ O'Connor 267.

expanding politicisation and socialisation of state-bound relations (cultural, social, natural) of production as the way to a socialist (re)construction. Ignoring the social-political concerns and alternatives articulated by SEMs, O'Connor points to the state as the necessary agent in politicising the expanding terrains fundamental to maintaining relations and conditions of production. In this way, although the state is seen as the instrument of capital, it is also grasped after as the aspired agent of socialism. This diverts attention away from the social contestations that necessitate state intervention to begin with and ignores the history of degradation and crisis in which the expanded 'socialisation' of control leads only to greater domination and degradation. While MNT would insist that it is exactly in the expanding crises and contestations that true revolution is possible, this ignores the more immediate, and certain, damage done to communities and their environments as they struggle with the consequences. Only within the severe anthropocentrism (and *realpolitik*) of Marxian thought could the wholesale destruction of the environment in the hopes of greater state control, be considered a good thing.⁸⁹

The experiences and contestations of actually-existing social-movements are greatly at odds with the harsh, and aggregating teleologies of MNT in which social-environmental degradation can be rationalised along the road to socialist becoming. Yet MNT, in its blinkered adherence to the Marxian lens seems unable to see the dissonance with the very social forces it seeks to represent. O'Connor can state that "[w]e need a theory that gives due consideration to both systemic economic forces and social and political movements and that deploys ecological science, political economy, and

⁸⁸ As noted by Gramsci 226. 268.

⁸⁹ As noted by O'Connor. "The telos of crisis is thus to create the possibility of imagining more clearly a transition to socialism." O'Connor 167.

sociological theories of social movements and change as well as the everyday experiences of people.”⁹⁰ In practice, however, he maintains Marxian limitations in diminishing the importance of community-level contestations,⁹¹ and insisting that *all* social movements, implicitly or explicitly, are fighting for state control; “to make the state more responsive and accountable.”⁹² Yet, as demonstrated in the Japanese case, there are significant differences between contesting the conditions of one’s life as governed by the state, and actively pursuing state political power as with a party. Draping all social movements with the motivations of hidebound Marxist thinking diminishes the diversity and indigenous goals of the social movements themselves. Never mind that social movements emerge from diverse experiences rooted in the immediate local, regional, national and international relations that impact upon the social, political, cultural and biological fabric of their existence. MNT assures us that in the end, what they *really* want is state control; what they *really* need is a revolutionary labour party to seize it .

For those social movements that refuse to bend to the historically-sanctioned ‘truths’ of the Marxian ‘way,’ O’Connor accuses them of ‘localism’ as a catch-all for the very accusations that should be levelled against MNT: dismissive of issues of minorities, gender, alternative cultures etc.⁹³ MNT risks universalising all analysis and contestation to the level of production and the role of the working-class and its political party as the primary agents of emancipation, and the sole protector of social and ecological diversity. This remains problematic as it fails to address the issues of domination and alienation within and between states and state-centric political regimes, that help create and maintain

⁹⁰ O’Connor 127.

⁹¹ O’Connor 275.

⁹² O’Connor 310.

environmentally unsustainable practices while marginalising the experiences and interests of those most directly effected by environmental and other forms of oppression. One is left uncertain when the experiences and needs of the diverse individuals and groups within nation-states can be recognised and addressed.

This warning is borne out in the Japanese case, in which organised labour, and the national Communist and Socialist parties, were hostile to community and environment-based movements, and implicated in dominant political and productivist projects. While SEMs offered the strongest and clearest indictment of the post-war political-economic order and its dire social-environmental consequences, 'radical' opposition parties sought to exploit popular unrest, while organised labour sided with management against concerned and suffering communities.

Summary: The Way

As illustrated above, Marxian analysis is useful in understanding the social totality embedded within oppressive political-economic relations. Marxian nature theorists have drawn on this strength in their engagement with and critique of contemporary social-environmental relations. Attending to the dialectic relations in which the social, political, productive and environmental are brought together and understood as mutually constitutive, MNT draws attention to the political-economic underpinnings of social-environmental relations, the social construction of 'nature' consistent with these underpinnings, and the relationship between the efforts and institutions of the state and capital to shape and centralise the total national resources, wealth, status and authority.

⁹³ O'Connor 274.

Through MNT we gain an understanding of the uneven development of centralisation and degradation that results in hyper-concentrated urban-cores of wealth, status and authority, and the constantly (re)constructed 'rural' as the spheres of exploitation and degradation. MNT's attention to the social and material degradation of the 'rural' and the role of the state in ensuring access to and sufficient quantities and qualities of the necessary productive conditions realised there, is proven valuable in understanding the origin and significance of social-environmental crisis and contestations.

However, MNT's understanding of social-environmental conditions, and commitment to more sustainable and just political projects, is challenged by the actual experiences and importance of individuals and communities as they struggle for social-environmental redress and change. Adhering to traditional Marxian teleologies of production-driven emancipation, MNT prioritises seemingly absolute *laws* of political-economic development, concentrating analytical effort and emancipatory hopes on the 'rationally' dictated advance of productive techniques and relations, an aggregated working-class, and state-centric political projects and actors. In so doing, MNT diminishes the complex and diverse connections between the social and environmental, reducing the available scope of understanding and contestations to the pre-determined experiences and goals of an aggregated working-class, called into being by the very productive relations they rely upon for eventual state-control and emancipation. As such, MNT seeks to expand Marxian scholarship to include the environment, but without attention to the insights or receptivity of those working most closely on these issues. Ensnared behind well-established walls of traditional Marxian 'truths,' MNT fails to

escape the realm of intellectual inquiry, or to contribute significantly to actually existing political projects of change.⁹⁴

The traditional left's inadequacy in accounting for and contesting social-environmental relations, stems from their adherence to an all-encompassing teleology – the Marxian obsession with the transition from a bourgeois capitalist mode of production and society to a proletariat communist hegemony of post-scarcity freedom.⁹⁵ With a single, pre-determined understanding of emancipation, all social and material phenomena are defined and valued according to their contribution and/or obstruction to the rationally determined, historically sanctioned progression through the frontiers of bourgeois society, into the new territory, previously envisioned and defined. This can be seen at the heart of Marxian Nature Theory, as it unfolds in the prioritising of productive and political projects, centred upon the working-class, nation-state, technology and production. In this way, MNT fails to escape the hegemonic pull of the very social institutions and priorities responsible for the crisis, threatening to elide the actually-existing social-environmental conditions and contestations, in their breadth and diversity of needs and hopes.

As demonstrated by Japanese social-environmental movements, our understandings and relations with the environment are embedded within socially and spatially specific and diverse bonds, offering valuable spheres of understanding and avenues of change. To locate and encourage terrains of social-environmental contestation

⁹⁴ As recognised as late as 2000, in the Marxian journal *Capital and Class*. *Capital and Class* 72 (Autumn 2000).

⁹⁵ Gramsci tells us that the war of position is for the totality of society, which “once won, is decisive definitely.” “characterised by the passage from the reign of necessity to the reign of freedom.” Gramsci 238-9. 404. Neil Smith makes plain the pre-determined demise of capitalist relations stemming from the contradictions of production as manifested in the environment: “It is not just the relative recency of capitalism that points to it being temporary, but the production of its own internal contradictions which

as realised by actually existing SEMs, MNT must abandon the limited analytical preoccupation with the means, relations and sites of production, and with it, faith in a singular state-centric political project. Abandoning '*The Way*' for an examination and appreciation of an emancipatory '*process*,' the social-environmental struggles around experiential, sustainable and democratic social-environmental relations may be understood as they unfold organically from the needs and desires of the oppressed within the fluid transformations of actually existing conditions. Likewise, the *future* promises of emancipation, might give way to the *present* possibilities and challenges to more sustainable and just change. As noted by Magnusson and Walker, old conceptions must be abandoned, and "the new spaces that people are creating" must be discovered beyond state-centred analysis and action. "By listening to critical social movements, we can begin to overcome our metaphysical presuppositions ... and recognise that there is no overarching identity, no single struggle for human liberation, no moment of unity that overcomes all differences ... we can begin to accept difference."⁹⁶

We are forced to conclude that inasmuch as MNT's analysis of social-environmental relations and prescriptions for more sustainable and just change adheres to '*The Way*' of traditional Marxian teleologies, it remains hampered in its ability to analyse or assist individuals and communities as they struggle to understand and address social-environmental degradation. The attention to production, the working class and the nation-state, while necessary, threaten to divert attention away from the complex and contested ways in which the environment is reduced to the raw materials of profit and power, how

guarantee that temporary character. The production of nature is the means by which these contradictions are made concrete." Smith. *Uneven Development* 59.

this impacts upon communities and their environs, and the depths of total social relations (including the experiential, cultural-historical and biological) that society uses to understand and contest their particular circumstances. MNT, in its commitment to labour-driven political projects for state control, advocates an analytical focus and political-economic project that aggregates interests and goals while it threatens to replicate and unsustainable relations that alienates individuals and communities from the priorities and decisions that impact their own lives. Most importantly for this study, in their focus on future technological and political developments, MNT fails to notice or support the social movements that have been playing, and continue to play, important roles in shaping contemporary relations.

The strengths of MNT, as they flow from the attention to the political-economic underpinnings of total social relations, are demonstrated in the Japanese case, in which the productive-governing elite harnessed total national resources to fuel high-growth productivism. In so doing, political institutions and practices, natural resources and landscapes, workers, families and communities, popular ideologies and consumptive practices were interwoven into a dynamic of centralisation and exploitation, concentrating wealth, status and authority within a restricted urban core, while calling forth the wholesale (re)construction and degradation of the rural: Japanese communities and their environments.

Yet, consistent with the critiques offered above, in examining the Japanese case, the limitations of MNT also become clear. In particular, the Marxian preoccupation with production, colouring total social-material conditions with the broad brush-strokes of a

⁹⁶ Warren Magnusson and Rob Walker. "De-Centring the State: Political Theory and Canadian

labour-driven, state-centric techno-productivist project are proven problematic. Contrary to MNT's affection for the traditional darlings of the left, (organised labour, communist and socialist political parties and intellectual elites) this study suggests that the key struggles are taking place at the individual and community level in response to the actual experiences of social-environmental degradation; not at the production site, union hall or Parliament. In fact, the Japanese case suggests that organised labour, Marxian parties and 'radical' intellectuals might better be considered as sympathetic to hegemonic productive relations and understandings of nature, and antithetical to the struggle for greater social-environmental sustainability, and the de-centralisation of wealth and authority. Highlighting the experiences and contestations of SEMs demonstrates that the prioritising of productive relations can serve to cloud-over the social relations within which production plays out, and the importance of non-labour, non-partisan political forces in challenging and affecting techno-industrial processes. Most importantly, the Japanese case demonstrates that citizen-based struggles, and the threat they posed to established political-economic elites and relations, are important terrains of investigation in understanding and contesting contemporary social-environmental relations.

An investigation of Japanese social-environmental relations and contestations highlights the important role played by SEMs in uncovering and articulating the extent and causes of social-environmental degradation and change. Further, it demonstrates that SEMs, responding to the dire consequences of national productivism, posed the most significant threat to established political-economic interests. In so doing, SEMs threatened the base of productive-political relations, and were fundamental in shaping the

transition from heavy to light and information industries, and the commensurate (re)constructions of social understandings and material relations with nature. It is concluded that MNT, in its attempts to understand and contest social-environmental relations, must expand its analytical and political focus to include the experiences and desires of actually-existing social-environmental movements.

Working to construct a workable synthesis of the strengths and limitations of MNT, we are reminded of Laclau and Mouffe's advice: "[t]he surpassing of a great intellectual tradition never takes place in the sudden form of a collapse, but in the way that river waters, having originated at a common source, spread in various directions and mingle with currents flowing down from other sources."⁹⁷ Building upon the central current of Marxian Nature Theory, the Japanese case suggests that analytical attention and emancipatory efforts be diverted and expanded to reflect the experiences and contestations of individuals and communities as they struggle to understand and redress the social-material conditions in which they find themselves. Rather than hope to incorporate environmental degradation and community protest within a pre-determined leftist strategy, the left must follow struggles where they occur, allowing them to guide and inform. In so doing, we gain a fuller understanding of the total social relations hinted at within MNT, and the possibilities for more sustainable and just change.

⁹⁷ Laclau and Mouffe 4.

Chapter Three: The 1955 System

The premises from which we begin are not arbitrary ones, not dogmas, but real premises from which abstraction can only be made in the imagination.¹

In order to understand the social relations that gave rise to Japanese environmental degradation and contestations, and ultimately contributed to the shift to light-industry and the information society, it is necessary to look back to the launch of post-war Japan, and examine the political, economic and social underpinnings of high-growth, heavy-industry productivism. It is in grappling with the machinations of production and political control that Marxian political economy shines, uncovering the necessary links between the political, economic and social within a regime of inequitable surplus accumulation and exploitation. MNT, as it draws upon this tradition, directs our gaze to the mutual constitution and relations of the corporate and governing elite, in establishing the necessary social and material conditions to foster high-growth productivism, and the degradation of the social-environment. In the case of Japanese high-growth productivism (1955-1973), these relations were manifested in the ensnaring web of corporate-government collusion, the drive for perpetual technological innovation within a national regime of productivism, and the acquiescence of the general population to a nation-building ideology of production and the baubles and bells of mass consumption. The result was unprecedented productive expansion, and the centralisation of productive and political control within a narrow Tokyo-centred band of interests and elites. Marxian Nature Theory's preoccupation with and understanding of productive-

¹ Marx. *German Ideology* 31.

political relations and their dominance of social-totality, is proven essential in uncovering the productive dominance and degradation of the Japanese social-environment.

The aim of this chapter is to establish the underpinnings of Japan's environmental (re)constructions, degradations and citizen-based contestations. As such, and consistent with the insights of MNT, attention is given to the channelling of total national resources behind a project of high-growth productivism. The post-war convergence of political, economic and social relations and conditions behind the stable expansion of production has been labelled 'The 1955 System,' and serves as the necessary foundation for the investigation of Japanese social-environmental relations and contestations. The '1955 System' was the channelling of total national resources, supporting ever greater feats of hyper-production and control. It was in this single-minded pursuit that Japanese understandings and relations with the social-environment emerged, as well as the severe degradation and crises that threatened communities, and ultimately spurred the shift to light technologies and industry. From the launching of 'The 1955 System,' the corporate-governing collusion at the heart of Japanese political-economic stability is examined, followed by the orchestrated quest for perpetual technological innovation, and the popular ideology and consumptive gains of heavy-industry based high-growth productivism. After a quick summary of the massive productive gains realised under the inter-twined political, economic and social relations of high-growth productivism, the next chapter accounts for the social-environmental (re)constructions and degradations upon which it depended.

The '1955 System'

Following the devastation and defeat of WWII, Japan embarked on a project of heavy-industry productivism that in little more than 20 years, lifted it from the ashes of war, to one of the most important economies in the world. This transformation was by no means pre-determined, or suggested by 'traditional' Japanese or Asian attributes, but emerged from a social milieu of bitter post-war contestations, struggle, deceit, and ultimately, the cementing of a tripartite ruling coalition able to pursue national policies of heavily centralised production and power: conservative politicians in the form of the Liberal Democratic Party (LDP), the governing bureaucracy led by the Ministry of Finance (MOF) and Ministry of International Trade and Industry (MITI), and most importantly, the 'Big Six' of Japanese corporate power.²

The power struggles between competing political-economic actors and ideologies that marked the immediate post-war era were settled, by and large, with the open marriage of the newly-formed LDP³ and the remaining corporate giants of pre-war Japan, cementing Japanese political-economic relations and marking the launch of the '1955 System.'⁴ So labelled due to the pivotal developments that marked that year, the '1955 System' is notable for the consolidation of corporate production, wealth and power within the ranks of the 'Big Six,' the creation of the LDP and its ascension to political dominance, the steady and secure hand of elite financial bureaucracies, the surpassing of

²The Japanese economy was, and continues to be, dominated by six conglomerates known as *keiretsu*, that bring together and co-ordinate industrial, financial and trading businesses: Mitsui, Mitsubishi, Sumitomo, Daiichi Kangyo, Sanwa, and Fuji. For a brief overview of corporate Japan, see Duncan McCargo, *Contemporary Japan*. (NY: St. Martin's Press, 2000) 44-46.

³ The mis-named Liberal Democratic Party was established in 1955 by concerted industry efforts, and has enjoyed virtually uninterrupted rule to today.

⁴ For an overview of the '1955 System' see John W. Dower, "Peace and Democracy in Two Systems," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993): 14- 22.

pre-war production levels, and the widespread and heart-felt declaration that the 'post-war' period was over. As noted by Joe Moore, "[t]his was the classic period of peace and democracy, when the illusion prevailed that all-out economic growth would make Japan uniformly prosperous, peaceful, and democratic."⁵

The most significant aspect of this 'new' political-economic arrangement was the near-total marshalling of national resources and energies behind a system of heavy-industry productivism that had been building throughout the post-war period. Set into motion with the formation of the *Economic Reconstruction Council* as the organ of concerted corporate interests, the creation and political ascension of the LDP, and a flurry of policies focusing national resources corporate interests, the high-growth era was embarked upon with Japan's tripartite corporate-government elite firmly in control.⁶ Centred around the *jū-kō-chō-dai*⁷ industries of steel, coal, chemicals, ships and machinery, the era of 'heavy-industry' high-growth productivism was launched.

⁵ Joe Moore. "Democracy and Capitalism in Postwar Japan." *The Other Japan: Conflict, Compromise, and Resistance Since 1945*, ed. Joe Moore (Armonk, NY: M.E.Sharpe, 1997) 369. The conflation of economic growth and national success that dominated the nation-building ideologies of high-growth productivism, were enthusiastically accepted and echoed by Western audiences and academics, eager to witness in Japan and learn from a model of unbridled economic growth and strong political control and stability: see Laura E. Hein, "Growth Versus Success: Japan's Economic Policy in Historical Perspective," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: U of California P, 1993): 99-122. See also, Taira Koji, "Dialectics of Economic Growth, National Power, and Distributive Struggles," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: U of California Press, 1993) 169.

⁶ Once corporate efforts were co-ordinated with the establishment of the *Economic Reconstruction Council*, the '1955 System' was set into motion with the establishment of the LDP and a flurry of policies and proclamations, including admission to GATT, establishment of the *Economic Planning Agency*, and launching of the first 'Five-Year Plan', MITI's "citizen's car project," the *1956 Machine Industry Promotion Law* (*Kishinhō*), and the *1958 Electronics Industry Promotion Temporary Measures Law* (*Denshinhō*), the backbone of Japanese development policy throughout the heady 60s.

⁷ *jū-kō-chō-dai* - 'heavy, thick, long and big,' the slogan used to refer to high-growth era (1955-1973) regime of techno-industrialism concentrating primarily on the highly integrated production of chemicals, coal, steel, ships, heavy machinery.

The LDP

The formation and ascension of the LDP to near unchallenged political rule is the most widely noted and acclaimed feature of the '1955 System,' heralded as the stabilising and directing force behind Japan's remarkable productivist ascent. Making good on their promises of continuing productivist and consumptive gains, the LDP shone as the example and justification for a 'soft-authoritarian' development model, providing stability, long-term planning, and the marshalling of national resources behind productivist projects. Yet, despite the accolades, LDP rule was at best partial, a beneficiary and guardian of a productive system built-up over the preceding decade by corporate and conservative (including American) interests and maintained and strengthened over the next two decades. While the LDP presented the face of strong and stable democratic rule to Japan and the world, it is more properly understood as the political arm of the corporate interests that created and maintained it.

It is no exaggeration to state that the LDP's very formation, and its continued electoral success, were dependent upon the support of Japanese big business and a steady stream of corporate largesse. In a period of acute crisis and a very uncertain political-economic future for Japan, corporate Japan mobilised itself and took charge of Japan's political landscape. In 1955 Japan's four major corporate bodies established the *Economic Reconstruction Council (Keizai Saiken Kondankai)* explicitly to channel funds to the nascent LDP and assist in the focus and content of national policy.⁸ Reorganised as the *Kokumin Kyōkai* in 1961, this corporate agent continued to provide over 90% of

⁸ The *Economic Reconstruction Council*, in its role as banker to the LDP, was supported by Japan's four major business organisations: the Japan Federation of Employers' Associations (*Nikkeiren*), Federation of Economic Organisations (*Keidanren*), Japan Committee for Economic Development (*Keizai Dōyūkai*) and the Japan Chamber of Commerce (*Nisshō*).

LDP funding throughout the high-growth era.⁹ For all intents and purposes the LDP was established and maintained by corporate Japan to govern and mobilise national resources for the productive interests of corporations. In light of the bitter contestations and uncertainty that dominated the immediate post-war period, the formation of the LDP can be pointed to as the direct creation of the state by collective capital to quell social contestations and ensure the necessary conditions of production.

While the LDP was funded, and in turn, served corporate interests, it was also intimately interwoven with and dependent upon Japan's elite bureaucracy. While the LDP sat on a throne gilded with corporate riches, they depended upon the bureaucracy actually crafting and implementing the policies that kept them there. Many of the LDP's leading members and leaders were 'former' bureaucrats. And, the bureaucracy was feted and relied upon to implement pro-business policies, to guide politicians and business through transitions and projects, and to serve as an 'impartial' voice of authority promoting pro-business policies to the electorate.¹⁰

With a strangle-hold on national political power afforded by corporate largesse and bureaucratic guidance, the LDP was able to rule Japan with a powerful hand that bent socio-political and economic relations to the interests and demands of Tokyo. The centralisation of authority within core LDP ranks and Tokyo-bound institutions, can be contrasted to the limited powers of local authorities. Although local authorities were given extensive powers in the 1947 *Constitution*, in reality their powers were piecemeal, and their ability to raise funds to implement them extremely limited. As a result,

⁹ Fukutake Tadashi, *Japanese Society Today: Second Edition* (Tokyo: University of Tokyo Press, 1981) 141.

localities have always been dominated by centralised policies and objectives, and dependent upon the wishes of centralised political and economic interests for funding. In effect, local authorities, powerful on paper, became the hollow puppets acting out central demands.¹¹

Similarly, mid- and small-sized businesses, organised labour, communities and individuals operated on the extreme peripheries of LDP concern and action. While largely the result of centralised(ing) institutional and relational interests, this was also due in part to the strategies and relations of organised labour, prefectural and local politicians and opposition parties. This is of particular importance as we grapple with the legacy and usefulness of Marxian analysis and the priorities given to organised labour, and state-centric political projects. Already facing overwhelming disadvantages, oppositional parties were seen to be more interested in their own political fortunes than popular concerns; leftist elites, likewise, as disregarding and contemptuous of popular concerns and generally promoting 'pie-in-the-sky' proposals disconnected from popular concerns or wants. Organised labour, although extremely militant and successful in the immediate post-war era, were soon co-opted into management concerns and priorities.¹² As for the environment, as a political or economic concern, it simply did not exist.

Overwhelming systemic strength, coupled with the sterilising infighting and arrogance of the political and academic left, allowed the LDP to enjoy unbroken, and significantly unchallenged political control and stability throughout the high-growth

¹⁰ For a convincing account of LDP – bureaucratic relations, see Gary D. Allinson, "The Structure and Transformation of Conservative Rule," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993): 123-144.

¹¹ Beverly Smith, "Democracy Derailed: Citizens' Movements in Historical Perspective," *Democracy in Contemporary Japan*, ed. Gavan McCormack and Yoshio Sugimoto (Sydney, NSW: Hale and Iremonger Pty Limited, 1987) 160.

years. As noted by Fukutake, and discussed more later, LDP leaders were also able to rely on the successful development of a politically apathetic mass-society preoccupied with new consumer habits. This combination of near-absolute systemic strength, an eviscerated opposition and burgeoning mass consumer society, resulted in fortress-Tokyo, unassailable by its critics and foes. As suggested by Williams, and theorised in MNT's account of uneven development: "Modern Japan is not only a state, it is a unitary state.... As a capital, modern Tokyo is the twentieth-century answer to nineteenth-century Paris. It rules." ¹³

The Bureaucracy

Much has been made of the stability of LDP rule throughout the post-war era, and the links between LDP governance and productive success. However, as suggested above, that success must be understood in connection with the extremely powerful elite bureaucracy. While there is some debate over the extent of bureaucratic power and its importance to Japan's economic success, there is widespread agreement that Japan's bureaucratic elite played an indispensable role throughout the high-growth era, and constitute an essential and integrated third pillar in the Japanese corporate-governing order. The greatest reverence is reserved for the Ministry of International Trade and Industry (MITI), which has achieved near mythical status in the English-language

¹² See James W. White, "The Dynamics of Political Opposition," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993): 424-447.

¹³ David Williams, *Japan: Beyond the End of History* (New York: Routledge, 1994) 22.

literature and is recognised as providing the core around which the most influential bureaucrats and governing policies flowed.¹⁴

Although the Japanese system of parliamentary democracy suggests that the LDP, as chosen by popular vote, sits on the throne of national power and holds the reins of control, it is in fact the bureaucracy that walks the corridors of power and that has crafted much of Japanese post-war policy. As noted by Williams, “most political actors in Japan acknowledge that the central government, particularly the bureaucracy, remains the prime agent of innovation and reform within the system.”¹⁵ Nowhere is this more clear than in the defining policy of the high-growth era: Prime Minister Ikeda’s 1960 *Income Doubling Plan*. Building on the productive gains of the mid to late 50s, Ikeda’s *Plan* redoubled Japanese political, productive, and popular energies towards hyper-productivism. To this end, all national efforts and resources were channelled towards greater techno-industrial transformations that entrenched Tokyo’s absolute rule, while enriching and empowering the corporate-government elite. According to Allinson, “the *Income Doubling Plan* stands as an emblem of the authority of Bureaucratic elites,” as it dedicated national energies behind “paternalistic guardians of the commonwealth set...with a technocratic style... emphasiz[ing] planning and central guidance.”¹⁶ It served to cement bureaucratic control, LDP rule, popular quiescence and corporate support in initiating a strategy of export oriented productivism aimed at doubling the GDP within ten years. Although implemented with some scepticism, Ikeda’s *Plan* was unpredictably successful within seven years, and was replaced in 1969 with the *New*

¹⁴ Some, most notably Chalmers Johnson, have made a fetish out of the Japanese bureaucracy, endowing them with almost absolute power. For a more integrated view of the relationship between the bureaucracy and the rest of the triumvirate, and other interest groups, see Allinson.

¹⁵ Williams 22.

Comprehensive National Development Plan,¹⁷ which promised to expand Japan's GDP another five times over the next 20 years.

Consistent with the elite-driven centralisation epitomised by Ikeda's *Plan*, bureaucratic power was concentrated within key ministries concerned with promoting and regulating production and trade: most notably the Ministry of Finance (MOF) and the Ministry of International Trade and Industry (MITI).¹⁸ Benefiting from the American-led post-war restructuring that broke-up war-oriented fiefdoms, the economic bureaucracies acquired new powers and status within the ranks of the corporate-government elite. By 1955 this had coalesced into the long-standing ruling tripartite, with senior financial bureaucrats flowing amongst, and coming to dominate the upper echelons of the bureaucracy, the corporate elite and the LDP. In fact, the distinction between the LDP and the bureaucracy becomes almost redundant when considering that all three Prime Ministers assuming office during the high-growth era were 'former' high-ranking bureaucrats who continued to favour other former bureaucrats in key government posts.¹⁹ Likewise, senior bureaucrats dominated the upper ranks of key corporations, 'retiring' from their supervisory and legislative roles into the very industries they had 'supervised.' In this way, the bureaucratic elite can be understood as providing the stability and

¹⁶ Allinson 136, 135.

¹⁷ The 'New Comprehensive National Development Plan' is generally referred to as the *Shin-Zensō* – abbr. for *Shin-Zenkoku Sōgō Kaihatsu Keikaku*.

¹⁸ "Japanese industrial policy has been designed, implemented, and justified by the Ministry of International Trade and Industry (MITI)." Hugh Patrick, "Japanese High Technology Industrial Policy in Comparative Context" *Japan's High Technology Industries: Lessons and Limitations of Industrial Policy*, ed. Hugh Patrick (Seattle: University of Washington Press, 1986) 11. MITI dominated industrial policy and was in turn notably for its extensive service to corporate interests over the 'peripheral' interests of small and mid-sized companies, consumers, communal QOL, etc.

¹⁹ Kishi Nobusuke (1957-60), Ikeda Hayato (1960-64), and Satō Eisaku (1964-1972)

consistency within the ruling triumvirate, drafting policy, enacting legislation and directing industry.²⁰

The LDP was able to enjoy the prestige of power and the legitimacy of popular support as long as they continued to implement bureaucracy-drafted plans and legislation promising unending productive gains and consumptive pleasures. In effect, the LDP were able to maintain legitimacy as long as the bureaucracy retained power. This distinction, drawn-out by Williams, and echoed by Allinson, reveals the Diet (Parliament) as a ‘democratic’ cloak thrown over shadow power brokers. Williams explains that “[it] is in the interest of almost everyone... to exaggerate the influence of the Liberal Democratic Party.” Though in truth, while “[p]oliticians have often influenced policy,...bureaucrats have made the policies that have counted. And every Japanese politician knows it.” Politicians overstated the power of the LDP because it appealed to their vanity and influence to do so, the media, because it made good copy, the business elites, because it covered their own power, and the bureaucracy because it made it easier for them to continue creating policies ‘behind the throne.’ Even citizen actors maintained the façade because they had to believe that there were democratic channels of change.²¹

Big Business

As powerful, and pivotal as the elite bureaucracies were in orchestrating the ‘1955 system’ of heavy-industry high-growth productivism, it remained corporate interests that dominated the high-growth era and defined its direction and policies. Pivotal as the bureaucracy was in crafting productivist policy, and the LDP in legislating it, big

²⁰ Allinson 131-4.

²¹ Williams 36, 47, 37.

business remained at the heart of Japanese productive relations and centralisation of power; serving as the engine of wealth creation, political stability and elite integration. If elite bureaucrats and politicians donned various masks as they walked the halls of triumvirate power, it was big business that built and owned the palace.

Dominated by the six key *keiretsu* that survived the devastation of war and attention of post-war American reform, corporate Japan quickly focused on rebuilding productive capacities and ‘catching up with the West.’ Concentrating on the same *jū-kō-chō-dai* industries that fuelled the Japanese war machine, big business quickly mobilised concerted corporate, political and bureaucratic support behind their productivist agenda. As noted above, in 1955, big business came together to establish and maintain the LDP as *the* ruling political party through massive financial kick-backs for favourable government policies and funds. Similarly, corporate Japan was intimately tied with the bureaucracy, cultivating close relationships with policy makers and serving as a refuge of *amakudari*.²² Focused on constant technological innovation, production and profit, corporations bank-rolled the LDP and bureaucratic elites to enact policies that channelled national resources into high-growth productivism. With the ‘Big Six’ in the lead, this was a system of corporate-governing collusion that blurred the distinctions between corporate, political and bureaucratic interests. LDP and bureaucratic control was as dependent upon surplus accumulation and unending techno-industrial transformations as was big business. Both the LDP and bureaucracy depended upon the legitimacy born of sustained productive gains and consumptive choices, while the massive funds gleaned from profits were

²² *Amakudari* – ‘descent from heaven’, the common practice of top bureaucratic officials retiring and taking up lucrative posts in the companies they were previously responsible to administer.

necessary to bankroll the political process and ensured a comfortable 'retirement' for senior bureaucrats.

Perpetual Technological Innovation

Central to tripartite efforts to promote corporate-led high-growth productivism, was the channeling of national resources behind perpetual technological innovation. Observing the patterns of early capitalist industrialisation, Marx famously observed that

The bourgeoisie cannot exist without constantly revolutionising the instruments of production ... All fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned.²³

This has been borne out with great clarity in post-war Japan; with predictable consequences for Japanese society and environment. Then, as now, Japanese production is distinguished by the rapid and unceasing transformation of productive techniques and relations; turning the core of Japanese industry, the Tōkaidō Belt, into a virtual war-zone of systemic destruction-production. This pattern is fundamental to the '1955 System' as it served tripartite interests, and promoted the centralisation of productive-political control in order to orchestrate and implement the national embrace of the latest productive technologies.

Hein notes that in the immediate post-war period, Japan lacked consensus on the direction of national and economic development or the links between the two. Yet, by 1949 this had been resolved in favour of manufacturing high-quality goods for export.²⁴ With this decision, Japan prostrated itself to the promises of technology, first to wrest

²³ Marx, *Manifesto* 37.

²⁴ Hein 108.

itself from the residual social-political structures of Imperial Japan, and then, as the basis of corporate-government wealth and authority.²⁵ Relying initially on the import of technology, the rapid application of the latest technological advances was seized upon as the engine of economic growth pulling Japan from the devastation of war, and in turn ensuring social acquiescence through the façade of socio-economic justice.²⁶ Fuelled by the ideological flames of ‘production at all costs,’ rapid and unceasing technological innovation was embraced, and entrenched as a fundamental aspect of Japan’s post-war political-economic system.

The techno-industrial focus of the immediate post-war years concentrated on the ‘rationalisation’ of the same heavy industries that fuelled Japan’s war-time economy, such as steel, shipbuilding, chemicals, and machinery, utilising existing technologies and managerial practices to ensure maximum productivity. It embraced an almost religious faith in the future promises of growth and technology to rescue Japan from the devastation of defeat. This became a constant at the heart of Japanese production. Corporate Japan, with the solid backing of the government, acted to import and assimilate existing technology to mass-produce high-quality products for export as quickly and profitably as possible, and in turn to fuel further feats of technological prowess.²⁷ In this, they were incredibly successful.

With the *1956 Economic White Paper*, and the establishment of various technology-focused agencies and plans, the importation and application of existing

²⁵ Morris-Suzuki provides a thorough account of the shifting focus of technological ideology in *The Technological Transformation of Japan* (1994).

²⁶ Foreshadowing processes to come. “Elite Japanese took comfort from the widespread assumption that technology could enhance economic justice while avoiding redistribution of wealth.” Hein 109.

²⁷ Morris-Suzuki. *Technological Transformation* 204

technology began to share attention with home-grown rapid technological innovation. By 1960, perpetual technological innovation had become the holy grail for Japanese economic and social progress, and national policy gave way to the dominance of technocratic thought.²⁸ Total national resources, including education, training and labour, were brought under tighter, centralised control by corporate-government efforts to fuel the incessant quest for techniques of differentiation and profit.²⁹

Perpetual technological innovation is key in understanding the nature of Japanese high-growth productivism, the dominance of policy-makers that could claim to understand and direct the changes, and the pace and extent of social and environmental changes. Further, it helps account for the complex formation of social networks of control that include national education policy, labour relations and political culture. LDP leaders were further relegated to being national figure heads, passing the legislation and national plans consistent with the recommendations and requests of the corporate community and the bureaucracy. The bureaucracy, on the other hand, continued to grow in importance as they could claim to understand and orchestrate domestic and internationally-linked technological and industrial plans. The result was a flurry of government initiatives, plans and policies, which served to tighten national techno-industrial practices consistent with centrally orchestrated plans for corporate-led high-growth productivism. Validating the critical political-economic sensitivities that inspire MNT, techno-industrial transformations and political-economic power developed hand-in-hand within an overarching dynamic of centralisation and exploitation.

²⁸ Hein 114; Morris-Suzuki on MITI's involvement (*Technological Transformation*) 179.

²⁹ Morris-Suzuki. *Technological Transformation* 174.

Throughout the post-war era, Japan experienced the steady centralisation of productive and political power, and the commensurate transformation of productive relations in accordance with those interests. While this resulted in astounding technological and productive gains, it also involved the exploitation and degradation of 'external' concerns. With each step in the tightening of personal and institutional bonds within the increasingly centralised triumvirate, 'peripheral' ideologies, actors, and concerns became increasingly subjugated to centralised interests, and more precarious. Bringing to mind MNT's account of the urban-rural divide at the heart of uneven development, Williams explains,

The post-war tripartite alliance of the Japanese bureaucracy, the ruling Liberal Democratic Party and the best-established of large businesses embodies the 'centre' of Japanese politics, the pivot of the state and society... Outside this golden circle stands a variety of interests and groupings: the political opposition, the major trade unions, citizen protest groups, much of the progressive intelligentsia and a large number of firms in new industries... these are public actors on the periphery of political life.³⁰

The dynamic of centralisation and peripheralisation that distinguishes corporate-government relations, is at the heart of Japanese political-economy, productive 'success,' and the understandings and relations with the social-environment. While the 'environmental' dimensions of this will be discussed later, it is worth briefly examining the social bulwarks of tripartite rule that were integral to these relations as they contributed to heavy-industry productivism and the centralisation of wealth and authority: productive ideology and popular consumption.

³⁰ Williams 29.

Productive Ideology

Closely associated with the stranglehold on productive and political power, the triumvirate cultivated, and was able to draw on, a widely held ideology of production to secure popular social support. In the same way that the ruling triumvirate held the highly centralised reigns of productive and political power, they actively cultivated a centralised national consensus and culture consistent with their aims. Japan's productive-political masters embarked on a project and ideology of productivism in which GNP was adopted as the singular indicator of national health and the object of rapid economic development. Behind the rallying cries of "Productivism first", GNP first", and more prosaically, "High Economic Growth!", policies of massive industrialisation and export were implemented, transforming the Japanese landscape, productive relations and social institutions, while empowering and enriching corporate-government elites. Easily embraced pre-packaged socio-economic programs were essential in allowing and encouraging the intensification of production in spite of the dire social and material consequences. As such, 'the social' was an important and integrated aspect of heavy-industry high-growth productivism, and the continued and unbroken corporate-government rule it served.³¹

As long as national resources were channelled behind a productive ideology that maintained the circulation of wealth and authority through corporate-government elites, tripartite interests were preserved. The LDP was ensured of continued political rule paid for with the surpluses of unchecked productivism. Big Business was provided with

³¹ As noted by Morris-Suzuki, *Beyond Computopia* 26; John W Bennett and Solomon B. Levine, "Industrialization and Social Deprivation: Welfare, Environment, and the Postindustrial Society in Japan," *Japanese Industrialization and its Social Consequences*, ed. Hugh Patrick (Berkeley: University of California Press, 1976) 442.

secure national support behind corporate-serving productivism. The bureaucracy was assured of unchallenged power and prestige.

All other social projects were subsumed under the greater prosperity of Japan as assured by elite-driven economic development projects, and measured through expanding heavy-industrial production and ballooning GNP.³² The Japanese were admonished to keep their heads down and work diligently for the greater good of the nation, and assured that in time, a strong industrial base would enrich all. As noted by Bennett and Levine, 'Production First' was "a decision to permit the social system to bear the costs of readjustments to the new order with minimal help from the state, based on the theory that all capital has to be ploughed back in to production in order to achieve a high level of economic growth."³³ In this way, productive relations and social ideology were bound together in promoting dominant interests over wider social, political or environmental considerations: massive surpluses could be accumulated, circulated through the tripartite elite, and re-channelled into greater productive frenzies, while basic social welfare concerns were left largely unaddressed.

Perpetual innovation and the constant re-formation of Japanese production, social relations and landscape were only permissible with the urgent ideology of productivism overwhelming resistance and uncertainty, channelling total national resources behind the high-growth productivism epitomised by Ikeda's *Plan* and subsequent policies. Yet, as much as the rallying of national efforts behind an ideology of production might have helped to smooth over contestations and ensure diligent support and the formation of a

³² Taira notes that in many ways the GNP-first ideology of the high-growth years was like an extension of Japan's war-time economy and ideology within acceptable post-war scripts. Taira 171.

³³ Bennett and Levine 442.

mass-society, it can only be properly understood in conjunction with the incredible motivating power of popular consumption.

Popular Consumption

The idea of Japanese hyper-productivism, resting in part on the foundations of consumer desires that are more readily associated with the 'West,' seems at odds with conventional narratives of the Japanese production model and the importance of distinctive 'Asian' attributes. The more common social explanations of Japanese success suggests that the elites were able to project an urgency to the remaking of Japan's economy and the catching up with the 'West' by evoking traditional notions of hard work, servitude, social conformity and acquiescence to authority. More, many 'culturalists' insist that 'traditional' Japanese-ness was not so much an elite imposed ideology of control, but remains a fundamental and powerful base of contemporary Japanese culture.³⁴

While certainly the corporate-governing elite, and many Japanese in general, found it convenient to point to *Nihonjin-ron*³⁵ to explain post-war developments (and just about anything else), it is in itself insufficient in explaining the mass-culture of productivism and acquiescence that dominated the high-growth period. Japanese history is resplendent with examples of spirited and often violent social protestations entirely at odds with these 'Orientalising' notions. In fact, the myths of a consensual and homogenous culture elides a mixed, divergent and complex social milieu that includes

³⁴ For an overview of the pre-occupations of 'culturalist' scholarship, see McCargo.

³⁵ *Nihonjin-ron* – theory of inherent Japanese-ness positing homogeneous racial model of shared traits: groupism, hierarchy, hard-work, perseverance, etc. The extent to which Japanese national characteristics are homogeneous or 'traditional' enough to justify such claims, is heavily debated, at times drifting dangerously into the terrain of racism and xenophobia.

multiple ethnicities, histories and motivations.³⁶ Yet, by the launching of the '1955 System,' relative social stability and calm had been achieved, and was maintained, by and large, for the next two decades. While this was explosively disrupted by the 1960 ANPO riots, and other isolated eruptions, it is clear that the corporate-government elite had brought together a package of exhortations and rewards sufficient for general social peace and acquiescence. The 'culturalist' attachment to Japanese-ness to the contrary, 'Western' mass-consumption was critical in ensuring popular acquiescence, while contributing to political-economic projects of hyper-production, with predictable social-environmental results.

While Japan's rulers actively promoted and exploited notions of *Nihonjin-ron*, they relied even more on the buying of popular support through the promises and (uneven) deliverance of ever expanding affluence and consumption tied to perpetual techno-industrial innovation and production. While a productivist ideology wrapped in the flags of national distinctiveness was necessary in marshalling support for elite projects, still more was needed to ensure popular support and sacrifice. As suggested by Fukutake, the elites were able to enjoy relative political stability in the high-growth years because of the development of a mass-society along with new consumptive habits and political apathy.³⁷ After the deprivations and devastation of war, and the tremendous sacrifices being asked in support of productivist 'nation-building,' the contradictions and hardships were smoothed over in a celebration of mass-consumerism.

³⁶ For an excellent collection challenging easy Japanese stereotypes, see Andrew Gordon ed. *Postwar Japan as History* (Berkeley: University of California Press, 1993).

³⁷ Fukutake notes that although mass society began to take shape in Japan in the 20s, it was the conditions of modern urbanism that greatly promoted a mass culture of alienation, anomie and consumption. Fukutake 96-7.

Inspired by American-models of consumptive lifestyles,³⁸ the 1950s and 60s were dominated by popular desires for consumer durables, electronics and automobiles. As noted by Ivy, "it is almost as if one could write a postwar history of Japan according to electric appliances. Electric appliances fuelled the consumer revolution ... they became the objects of desire, the signs of middle-class inclusion, the unparalleled commodity fetishes for the Japanese in the 1950s and 1960s."³⁹ This was more than the mass public 'turning-on' to western consumptive patterns, but was part of an elite-driven effort to further incorporate citizens into the productive process.⁴⁰ This suggests a shift in government policy to include Japanese consumers, not solely producers, in discourse and measurements of Japanese economic growth. This in turn became a precondition of continued economic growth: increasing consumption necessary for high-speed growth – a 'consumption boom.'

Ownership of Principal Durable Consumer Goods (%)⁴¹

	Electronic Washing Machine	Refrigerator	B&W TV	Vacuum Cleaner	Camera	Colour TV	Car
1960	40.6	10.1	44.7	7.7	45.8	---	---
1965	68.5	51.4	90.0	32.2	49.4	---	---
1970	91.4	89.1	90.2	68.3	64.1	26.3	22.1
1975	97.6	96.1	48.7	92.7	77.4	90.3	41.2

From the launch of the high growth era in 1955 until its collapse in social crisis in 1973, disposable household income grew 9.5% annually, followed closely by per capita

³⁸ What Horioka refers to as the "westernisation of consumption." Charles Yuji Horioka. "Consuming and Saving." *Postwar Japan as History*. ed. Andrew Gordon (Berkeley: University of California Press. 1993) 273.

³⁹ Marilyn Ivy. "Formations of Mass Culture." *Postwar Japan as History*. ed. Andrew Gordon (Berkeley: University of California Press. 1993) 249.

⁴⁰ As explained by Hein. "[a]fter decades (even centuries) of government exhortations to Japanese citizens to be thrifty and avoid ostentation, the invitation to spend meant an enormous shift in the ethics of economic behaviour." Hein 114.

⁴¹ Fukutake 104.

consumption at 7.5% per year.⁴² Perhaps the most significant consumer goods in modifying and defining mass-consciousness, were the automobile and the television. By 1965 the number of automobiles per area of flatland exceeded all other industrialised countries, and continued to increase dramatically from there.⁴³ As for televisions, from 1% of households owning a television in 1956, to 45-50% in 1960, televisions both defined and encouraged mass communications and consciousness.⁴⁴ This led Fukutake to accuse the mass media of “foster[ing] political apathy, thus multiplying the negative aspects of mass society.” Observing the effects of TV and the mass media on Japanese political consciousness, he feared that Japan might soon become a nation of “a hundred million idiots.”⁴⁵

As suggested, the shift to a mass-consumerist society cannot be separated from larger social (and productive) relations. The immediate post-war era, and the demands of new productive relations (re)created the social landscape consistent with a mass, urban, high consumption identity, in which familial and community affiliations, cultural-historical continuities and political awareness gave way. As 1955 marked the birth of the high-growth era, it could also be said to mark the birth of the post-war mass consciousness, of apathy, productivism and consumption. This is the opinion of Fukutake, who sees a clear link between the mass-consumption advocated during the ‘1955 System’ and the deterioration of political and social culture as “epitomis[ing] the

⁴² Horioka 261, 265. Ken'ichi Tominaga, “An Approach to the Measurement of the Levels of Welfare in Tokyo.” *Prologue to the Future: The United States and Japan in the Postindustrial Age*, ed. James W. Morley (Lexington, Mass: Lexington Books, 1974) 155.

⁴³ Jinushi Shigemi, “Welfare: Social Security, Social Overhead Capital, and Pollution,” *Japanese Economic Studies* 4 (Winter 1975-76) 79.

⁴⁴ While Fukutake (104) states 44.7%, Ivy (248) claims closer to 50%.

⁴⁵ Fukutake 102, 101.

average situation in modern Japanese society.”⁴⁶ A production-first society of mass-consumption promised a continually enhanced lifestyle, while delivering steadily deteriorating social-cultural bonds, and the further centralisation of political-economic control.

Japanese workers and families were exhorted to dedicate themselves and all national energies with catching up with the West as soon as possible through massive productivism and perpetual innovation. If successful, they were assured of ever expanding consumer largesse. This served to solidify the separation of the privatised sphere of household consumption from the increasingly separate sphere of political control and contestation, and help ensure continued corporate-government control.⁴⁷ Japanese were assured that if they worked diligently for the common good, they would be able to enjoy the many consumer goods assured through benign corporate-conservative leadership and stability. It was the manufactured separation of the political and the popular, industrial and environmental, that was later challenged and brought together through social-environmental protest movements. Until then, and most likely since, popular mass-consumption served as an effective and powerful (though ultimately dissatisfying⁴⁸) support of high-growth productivism and corporate-conservative rule.

Productive Gains

The orgy of new consumer delights suggested that Japanese techno-industrial transformations were successful in their claims of both dramatic productive gains and

⁴⁶ Fukutake 11.

⁴⁷ Ivy 250.

⁴⁸ Mass-consumerism in no way ensured actually increased levels of popular satisfaction. As much as citizens were exhorted to buy and consume to overcome the shortfalls of hyper-productivism, the

benefits to society. There is little doubt that the high-growth era of heavy-industry productivism was astonishingly 'successful.' Drawing on the political, economic and social relations and resources of corporate-government cohesion, perpetual technological innovations spurred by an ideology of unchecked productivism and mass-consumption, Japan quickly achieved new levels of techno-industrial strength.

The feats of Japanese growth are well-known. With perpetually innovating technologies and 'rationalised' labour relations, Japanese productive growth rates exploded with the launch of the '1955 System' and retained unparalleled rates throughout the high-growth era.⁴⁹ Between 1960-1970, general industrial output tripled, machinery manufacturing expanded five times, steel production more than four times, followed closely by the chemical industry.⁵⁰ From there, steel and chemical industries continued growth rates of over 30% yearly even after 1970, accounting for 70% of total national industrial production throughout the decade.⁵¹ Increasingly integrated into the global economy, these dramatic gains in productive capacity spurred exports, with an average annual growth rate of 17% from 1953 to 1965, and a jump in the dollar value of exports by 25 times between the launching of the '1955 System' to its collapse in 1974.⁵² Incredibly, the surge in domestic consumption was even greater, with 90% of Japan's

majority of those polled during the 'miraculous' years of high-growth, indicated that life was no better, or even progressively getting worse. Tominaga 156.

⁴⁹ Japanese annual average growth of industrial productivity, 1953-72 was a staggering 8.9%, compared to 2.7% for the U.S., 3% -U.K., 5% - W. Germany etc. Morris-Suzuki, *Beyond Computopia* 43. Manufacturing output grew twice as fast as the American, at 14-16% per annum until 1969. Bennett and Levine 456.

⁵⁰ Steel production grew from 10 million metric tons – 1955, to 120 in 1973. Closely related ship manufacturing grew from 829,000 tonnes to 15.7 million tonnes over the same period. Philip Shapiro, "Steel Town to Space Town: Restructuring and Adjustment in Kitakyushu City," *Japanese Cities in the World Economy*, ed. Fujita Kuniko and Richard Child Hill (Philadelphia: Temple University Press, 1993) 224.

⁵¹ Morris-Suzuki, *Beyond Computopia* 42; Fukutake 82. As a percentage of total manufacturing, Japan's concentration in heavy and chemical industries exceeded all other industrialised nations. Jinushi 78.

total production during the same period, consumed domestically.⁵³ In total, Japan's GNP rose from the equivalent of US\$ 24.6 billion in 1955, nearly doubling to US\$ 45.5 billion in 1960, and exploding to US\$ 203.3 billion in 1970.⁵⁴

It would seem that Japan had achieved everything it had set out for in the post-war era: national reconstruction, 'catching up' with the 'West' in technological know-how and productive capacities, political stability and mass-consumption. However, as suggested by MNT, and revealed by social-environmental movements, this growth was only possible with commensurate (re)constructions of nature to fuel and contain the demands of production. In the case of Japanese heavy-industry productivism, this required the wholesale (re)construction of the Japanese social-environment, resulting in the massive centralisation of political, productive and social resources within core-urban scapes, and the exploitation and degradation of the peripheries. The result was growing social and environmental degradation, contestations, and crisis for Japan's corporate-governing elite.

⁵² McCargo 39.

⁵³ McCargo 39.

⁵⁴ Watanuki Joji, "Japanese Politics in Flux," *Prologue to the Future: The United States and Japan in the Postindustrial Age*, ed. James W. Morley (Lexington, Mass: Lexington Books, 1974) 64.

Chapter Four: (Re)Construction and Degradation of Nature

The concentration and centralization of capital in the built environment proceeds according to the social logic inherent in the process of capital accumulation.¹

Undoubtedly, the Japanese development of recent decades has shown an extraordinary vigor and a Promethean energy, expressed in ideas of lopping off mountains, filling in the seas, and exploring the deep geo-front, akin perhaps to that which marked the launching of the Crusades and the founding of empires in other times. Yet too much of the energy, capital, and skills of the Japanese people had been appropriated, mobilized, and focused in a political economy of exploitation, both human and material, that ultimately exhausted both the people and their environment.²

As the quotes from Neil Smith and Gavin McCormack suggest, the rapid productive gains that rocketed Japan to the forefronts of industrialised economies, unfolded within a political economy of stark uneven development and degradation. Under an ideology of productivist 'nation-building,' total national resources, both social and material, were mobilised behind a project of inequitable and unsustainable centralisation and the exploitation of peripheries, realising stark social and environmental degradation. As theorised by MNT, Japanese development was guided by the incessant need of heavily centralised production to cast the pall of universalised relations and conditions over the Japanese archipelago. At the same time, Japanese productive relations continued to strive for renewed profits through constant differentiation borne of perpetual technological innovation and the deeper exploitation of social and material conditions. Yet, this project of political-economic expansion and exploitation would be impossible without commensurate relations with and transformations of the social-environment. The

¹ Smith. *Uneven Development* 104.

² Gavin McCormack. *The Emptiness of Japanese Affluence* (Armonk, NY: M.E. Sharpe, 1996) 65.

physical expression of this urge to both universalise and differentiate was realised in the hyper-concentration of productive and political capacities within core urban centres, most notably in the Tōkaidō Belt, and the uneven and unsustainable degradation of the constructed peripheries.

The purpose of this chapter is to briefly note the physical (re)construction and degradation of Japan that high-growth productivism was dependent upon and encouraged: the centralisation of productive and political institutions and elites in a concentrated urban core, the massive (re)construction of this core commensurate with productive needs, the peripheralisation and exploitation of outlying areas, most notably in centre-orchestrated projects of massive (re)construction and industrialisation, and finally, a brief summary of the resultant environmental degradation. In so doing, the intimate relations between the political, economic and social relations highlighted by traditional Marxian analysis and covered in the previous section, will be extended to the social-environment, as articulated by MNT. Combining the political, economic, social and environmental, a fuller understanding of the '1955 System' is allowed, and the connections between Japan's post-war techno-industrial transformations and (re)constructions of nature, between the productive and environmental, will be revealed.

The massive transformation of Japan's techno-industrial base, from the devastation of war to the world's favoured producer of chemicals, heavy machinery, ships and vehicles was predicated upon particular understandings and relations with nature, and came with severe social-environmental costs. As suggested by MNT, the techno-industrial transformations depended upon an understanding of nature as an apolitical resource base to be exploited as cheaply and extensively as possible without

consideration of 'external' worth, culture, or social-environmental health. It is not simply that Japan became the most heavily polluted nation on Earth *because of* heavy-industry high-growth productivism, as if the one is simply the unforeseen and unfortunate oversight of the other. Rather, heavy-industry high-growth productivism was *only* possible within a relationship with nature that demanded the wholesale (re)construction and degradation of the physical landscape. In this way, the political-economic, social and ideological universalisation that constituted the '1955 System,' were echoed in social-environmental relations and the massive (re)construction of Japan's social-material conditions. Political, economic, social and ideological universalisation and differentiation in which total social relations were subjugated and formed to feed the interests of the highly-centralised(ing) tripartite elite, were only possible with commensurate environmental developments, both as understanding and material relations. The two, the political-economic and the social-environmental went hand-in-hand, the one impossible without the other.

It should be noted that while Japan's high-growth productivism was dependent upon a particular relationship with the environment, it was by no means certain or monolithic. Heavy-industry productivism developed within a contested understanding and relationship with nature echoing the same schisms evidenced in productive and political relations. However, the dominant understanding of nature, that had, and continues to have the greatest impact upon social-environmental relations are those of production, and its regime of corporate profits and conservative political rule. As asserted within MNT, and articulated by Neil Smith, "[m]ore than any other identifiable experience, the emergence of industrial capitalism is responsible for setting contemporary

views and visions of nature.”³ In this understanding, nature is reduced to a raw-material base to be exploited, a sink to be polluted without political or social concern. Most significantly, nature, in this understanding, is politically silent, externalised from social concerns and political contestations – it is *the* ‘rural.’ It is contained within an overwhelmingly ‘urban’ productivist ideology which affords no consideration or voice.

Accordingly, while it might be accurate to point to traditional Japanese notions of social-natural harmony and the animist beliefs of Shinto to suggest relations with nature that transcend and problematise those of high-growth production, and sets Japan apart from its ‘western’ counterparts, their significance is far less clear. Indicative of the culturalist *Nihonjin-ron* sympathies noted above, James Morley points to Japan’s traditional characteristics of social conformity, co-operation and consensual and deferential decision-making and suggests that “postindustrial problems like environmental pollution and urban congestion... arise in different social and political contexts [in the US and Japan],” and as such “one must be sensitive not just to those phases which seem influenced by the changing economy or technology but also to the relative autonomy of the polity and the culture and to the national differences in the ‘traditions’ involved.”⁴ Yet, as noted in the discussion of productivist ideology and popular consumption, it is important to recognise that so-called ‘traditional’ Japanese beliefs are constructed and contested, safely corralled from larger political-economic concerns while called upon by those who would justify state-administered development projects promising traditional culture and natural harmony through massive production, political apathy, and pre-packaged identity consumption. Whatever spaces of

³ Smith. *Uneven Development* 1.

contestation the traditional culture and religious beliefs offered against the social-environmental onslaught of productivism proved ineffective, and in the age of high-growth, largely irrelevant. That the Japanese once witnessed gods in their rivers, did not in any way prevent them from damming, cementing over, and grossly polluting them.

The '1955 System' of high-growth productivism was dependent upon a relationship with the environment as an apolitical resource base to be exploited. Reflecting the unrestrained productivism and the exploitation of nature was the massive centralisation of productive and political capacity and power, urbanisation, and the commensurate construction and exploitation of the peripheries. The result was dire social and environmental degradation.

Centralisation

As suggested by MNT, the centralisation of power, wealth and status is the starting point of any investigation of techno-industrial transformations and (re)constructions of nature. The processes of (re)construction that resulted in productive capacity and social-environmental degradation reflected and served the political-economic centralisation of Japanese wealth, power and status in the hands of the corporate-governing tripartite. As noted above, postwar political-economic transformations both necessitated and were the product of the rise and centralisation in Tokyo of tightly-knit corporate-government elites: the LDP, Big Business and key financial bureaucracies. While this suggests the centralisation of wealth and authority in the forms of ideology, institutions and elites, it also gave rise to spatial and physical

⁴ James W. Morley. "The Futurists' Vision." *Prologue to the Future: the United States and Japan in the Postindustrial Age*, ed. James W. Morley (Lexington, Mass: Lexington Books, 1974). 14-15.

centralisation. Political-economic understandings, wealth, power and popular culture were transformed in step with a highly centralised geographical core that contained the bulk of Japan's productive facilities and resources. The subsequent industrialisation and urbanisation of Japanese society and landscape, and the reification and subjugation of the rural peripheries, emerge out of this dialectic of political-economic and geographic centralisation. This is briefly examined as it relates to the centralisation of the technical and social conditions of production in the form of industrial capacity and urbanisation.

Production

Post-war industrialisation was initially concentrated in the Tokyo-Yokohama area, and by the late 1960s had expanded to dominate the entire Tōkaidō Belt,⁵ from Tokyo in the north, reaching south over Nagoya, Kyoto, Osaka and Kobe.

Japan⁶

⁵ Tōkaidō Belt – heavily urbanised and industrialised corridor stretching south along the Pacific Ocean coast from Tokyo to Osaka and Kobe. later extending to northern Kyushu.

⁶ Lonely Planet Japan. Homepage.

<http://www.lonelyplanet.com/mapshells/north_east_asia/japan/japan.html>

As the leading quote from McCormack suggests, the development of the Tōkaidō Belt involved a Promethean (re)construction of the landscape along this industrial corridor. The economic benefits of the proximity of productive facilities, personnel, knowledge (R&D) and decision-making, were used as the rationale for (re)constructing Japan's Pacific seaboard. Reminiscent of Marx, Taira notes that the government sponsored project of rapid development reduced the Pacific Coast to a "virtual war zone" dominated by the ideology of "scrap and build," necessitating a constantly evolving, consuming process of construction and destruction to fuel economic growth.⁷ This was a corporate-government sponsored project that reflected their shared quest for expanding and centralised profits through perpetual techno-productivist innovation and the sacrifice of wider social concerns.

McCormack uses the popular term *Doken Kokka*, meaning 'the construction state,' to describe Japan as it was constantly and thoroughly (re)constructed as a base of industrial productivism; "in which construction is incidental to the reproduction of power and the distribution of profit."⁸ With the launch of the '1955 System,' Japanese leaders sought to actively dictate the socio-spatial distribution/concentration of industry by encouraging 'rational' industrialisation. In the 1950s, this project was dominated by the logic of hyper-concentration which saw the rapid and intensive transformation of the core urban centres. In the 1960s, it was pre-occupied with alleviating the *economic* bottlenecks and other hindrances to unrestrained productive growth that necessarily

⁷ Taira 171.

⁸ McCormack 33.

followed.⁹ As such, high-growth productive relations spread out over the entire Tōkaidō Belt, pulling greater swaths of land and population into dominant relations at the same time as it further relegated social, environmental, and rural concerns to the peripheries. Ruled by the logic of 'the construction state,' Japan was transformed by the forces of uneven development.

The physical (re)construction of Japan was dictated by government policy: from the 1950 *National Development Law*;¹⁰ adapted and extended through the 1st through 4th *Comprehensive National Development Plans* (1962, 1969, 1977, 1987 *Zensō*), and Ikeda's *Plan* and subsequent legislation that blurred economic development and physical (re)construction. These plans to fuel high-growth productivism, called forth the wholesale (re)construction of Japan to serve the demands of corporate production and LDP-bureaucratic rule. Consuming up to an astonishing 80% of total government expenditures,¹¹ they called forth the total transformation of Japan: carving up the landmass with an intricate series of ever-expanding highways, tunnels, bridges, flattened and concrete reinforced hills and shorelines, (re)constructed waterways, dammed rivers, and 'reclaimed' shallow coastal areas. Laid out initially in the 1950 *National Development Law*, the physical (re)construction of Japan dominated activities throughout the 1950s and 1960s, and maintained its centrality to Japanese plans for construction-production centred development throughout the 1990s.¹² Once set into motion, invested interests developed in maintaining and expanding (re)construction for the purpose of

⁹ Murata Kiyoji. "The Role of Industrial Location Policy." *An Industrial Geography of Japan*. ed. Murata Kiyoji (London: Bell & Hyman, 1980) 177.

¹⁰ *Kokudo Sōgō Kaihatsuhō* – 'Comprehensive Law for the Development of the National Land'

¹¹ Uzawa Hirofumi. "The Transition to a Welfare Economy in Japan." *Prologue to the Future: The United States and Japan in the Postindustrial Age*. ed. James W. Morley (Lexington, Mass: Lexington Books, 1974) 59.

industrial productivism, further deepening ties between corporate and government interests.

Having committed Japan's Pacific Seaboard to intensive industrial development, the government encouraged its (re)construction, 'controlled' only through massive infrastructure investments beneficial to the productivist project. Industries were encouraged to set up within the heavily concentrated core and operate with the bare minimum required to absorb new technologies and produce the product as cheaply and profitably as possible. This meant little or no pollution abatement equipment or critical attention to the spatial distribution of industry.¹³ By 1970, Japan's GNP per km² was about four times that of the US. As for GNP per area of flatland suitable for development, Japan surpassed the UK in 1959, Germany in 1962, and by 1970, was an incredible twelve times that of the United States.¹⁴ Most of this activity was concentrated in the narrow band of the Tōkaidō Belt that stretched along the Pacific Seaboard, which by 1980 was projected to account for 87% of total national industrial shipments.¹⁵ This incredible density of national productive might was concentrated around the key urban centres of tripartite wealth and power, particularly Tokyo, Nagoya, Osaka and Kobe.

Urbanisation

Political and productive power, held tightly by a narrow corporate-government elite, was echoed in the rapid growth of key urban centres, reflecting the post-war surge of urbanisation, and connecting the productive with the social. With the launch of the

¹² McCormack 44. Even in today's embattled Japan, government sponsored (re)construction remains central to government efforts at re-building and sustaining the economy.

¹³ Taira 171.

¹⁴ Bennett and Levine 456; Murata Kiyoji, "Industrial Development and Environmental Issues," *An Industrial Geography of Japan*, ed. Murata Kiyoji (London: Bell & Hyman, 1980) 189; Jinushi 77.

high-growth era, and the massive (re)construction of the core Tōkaidō Belt to further high-growth production, Japan began to conceive and transform itself into an urban nation. In the decade following the end of the Pacific War, urbanisation regained pre-war highs and continued rapidly from there. While the rural-urban divide was relatively even in 1950, by 1960 only 10% of the population remained in city, towns or villages of under 10,000 inhabitants.¹⁶ This shift appeared most dramatic in the core urban centres. From 1950 to 1960, the populations of the six largest cities each grew roughly 50%. As these core cities came to account for close to 20% of the total national population, they began to reach their saturation points and new urbanites began to swell the surrounding areas, creating massive, sprawling megalopolises. This trend continued over the next decade, seeing the population further concentrated in and around the urban cores of the Tōkaidō Belt: Tokyo, Nagoya and Osaka. The aggregated populations of these core-urban areas went from 35 million in 1960 to 50 million in 1975, from comprising 39.2% of the total national population in 1960, to nearly half by 1980.¹⁷ In 25 years, Japan could boast gains in urbanisation that took the U.S. nearly a century to accomplish.¹⁸

Tokyo represents the most extreme example of the social and physical centralisation of the high-growth era. As dramatic as the collective urbanisation that (re)constructed Japan to fuel the high-growth productivism, the transformation of Tokyo was even greater. Reflecting its near total dominance of Japanese political-economic,

¹⁵ Murata "The Role of Industrial Location Policy," 179.

¹⁶ While this can be partly explained by the legislated mergers of many small towns and villages, it still reflects a massive movement from the countryside to core urban-industrial areas. Bennett and Levine 467.

¹⁷ Tokyo: including the regional prefectures of Tokyo, Kanagawa, Saitama and Chiba; Nagoya: including prefectures of Aichi, Gifu and Mie; and Osaka: including the prefectures of Osaka, Hyōgo, Kyoto and Nara Fukutake, held 47.8% of national population in 1980. Fukutake 18-19.

productive and cultural-social relations, Tokyo urbanised faster and more extensively than any other area. Even during the most heady days of high-growth in which all major urban areas were receiving massive influxes, the growth rates of the central Tokyo-area always exceeded national averages.¹⁹ Echoing the incredible explosion of high-growth production that was likewise concentrated in and around Tokyo, during the first ten years of the '1955 System,' Tokyo's population grew by an astonishing 600,000 inhabitants per year.²⁰

In a similar fashion, the shift to sprawling megalopolises that transformed all major urban areas, was most extreme with Tokyo. As the concentrated core for all manufacturing, commercial and political sectors, institutions and elites, Tokyo exceeded its carrying capacities early in the high-growth years. From a pre-WWII city core of only 15km., Tokyo-proper had fully doubled by 1975.²¹ However, there were limits to how much Tokyo could expand in breadth and depth before it began to exhaust its given space and abilities for development. As theorised by MNT, this threatened to impinge on continued productive-profit gains for the entire nation. As a result, Tokyo, like all major cities, deepened its colonisation of the surrounding geography. The result was a core urban concentration of 30km, but a suburban stretch of 300km. This concentration of production and control over a broader geographical space, which was actively promoted by orchestrated corporate-government institutions and efforts, resulted in the massive

¹⁸ Miyamoto Kenichi. "Japan's World Cities: Osaka and Tokyo Compared." *Japanese Cities in the World Economy*, ed. Fujita Kuniko and Richard Child Hill (Philadelphia: Temple University Press, 1993) 56.

¹⁹ Obayashi Mamoru. "Kanagawa: Japan's Brain Center." *Japanese cities in the World Economy*, ed. Fujita Kuniko and Richard Child Hill (Philadelphia: Temple University Press, 1993) 120.

²⁰ From 15 to 21 million inhabitants. Mike Douglass. "The 'New' Tokyo Story: Restructuring Space and the Struggle for Place in a World City." *Japanese Cities in the World Economy*, ed. Fujita Kuniko and Richard Child Hill (Philadelphia: Temple University Press, 1993) 84.

²¹ Douglass 106.

expansion of satellite towns that echoed Tokyo's own expansion.²² The result was the proliferation of 'bed towns' constructed by the governmental Japan Housing Corporation to feed the social and material needs of Tokyo and other core cities. The constructed 'communities' were bereft of independent industry, commerce, entertainment, etc. Dramatically, Yokohama, the 2nd largest city by population, is in fact, a bed town for Tokyo.²³

Of course, the process of urbanisation cannot be separated from that of techno-industrial transformations and centralisation. The urbanisation and concentration in the Tōkaidō Belt, and particularly the Tokyo region, though sponsored by the government, was a corporate driven process. By 1974, corporations, most notably the Big Six, owned half of all non-government land in the three central wards of Tokyo, and 22% of all land in the metropolitan Tokyo area.²⁴ The dramatic shift to hyper-urbanisation and sprawling megalopolises unfolded in concert with the rapid development of heavy-industry. As demonstrated in the table below, traditionally rural industries such as agriculture, forestry and fishing fell dramatically throughout the high-growth era from half of the workforce to under 14%, while the mostly urban secondary industries including construction and manufacturing, and tertiary industries such as trade, finance, transportation and services, grew from half to fully 85% of the workforce. This was only possible with a massive shift in labour from the countryside to the rapidly transforming industrial complexes concentrated in and around key urban areas.

²² Douglass 106: Suburban towns swelled as much as 10 times over a single decade. Miyamoto. *Japan's World Cities* 58.

²³ Miyamoto. *Japan's World Cities* 58.

²⁴ Douglass 87.

Employed Population by Industry²⁵

	1950	1955	1960	1965	1970	1975
Primary Industries	48.5	41.1	32.7	24.7	19.3	13.8
Secondary Industries	21.8	23.4	29.1	31.5	34.0	34.1
Tertiary Industries	29.6	35.5	38.2	43.7	46.6	51.8

The inflows of workers to core Japanese cities to fuel the massive industrial complexes compounded the (re)construction and 'loss' of place, and the unsustainable co-development of the industrial and living spaces of urban geographies. To urbanise, Japan had to (re)construct not only its social-cultural relationships with the urban and rural, but materially (re)construct their cities to absorb inflows of people and production. The resulting sprawl of physical and social density fuelled the already stark concentration of economic and political might in the Tōkaidō Belt. This was possible only with the commiserate under-representation and over-exploitation of the peripheries, reflected in a glorification of the 'urban' and relegation of the 'rural' to increasingly derogatory scripts.²⁶ Urbanisation was the bringing together of power, production, population and culture within dominating socio-spatial relations, in which the interests of tripartite elites defined the interests of core urban areas, and the interests of the urban core defined those of the nation.

Peripheral Exploitation

Fukutake makes a connection between the widespread (re)construction of Japan leading up to the high-growth era and the loss of overseas colonies.²⁷ He suggests that Japan developed Japan, because it could no longer exploit others: internal-colonisation

²⁵ Fukutake 24.

²⁶ William W. Kelly, "Finding a Place in Metropolitan Japan: Ideologies, Institutions, and Everyday Life," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993) 194.

through uneven development. And certainly, in step with high-growth productivism came the colonisation of internal peripheries, their reification as 'outside' of modern, industrial Japan, and their exploitation and degradation. This dynamic grew apace with and as a necessary precondition for industrialisation; with each productive gain that enriched corporate and government coffers bought through deeper peripheral exploitation. This is the dynamic of uneven development in which social relations of concentrated wealth and authority are maintained by the progressive exploitation of broader social interests, and core urban scapes are dependent upon the development and exploitation of peripheral geographies.²⁸

A central feature of the nation-building plans that called forth the (re)construction of Japan, was the uneven allocation of the benefits and costs of urban-rural development. While both urban cores and rural peripheries were (re)constructed to serve heavy-industry productivism, key urban centres enjoyed the resulting flow of wealth and power. At the same time, rural areas increasingly bore the brunt of political-economic alienation and exploitative development, losing their most productive workers while absorbing the worst polluting and disrupting industries and realising few if any of the gains. And, as the effects of crowding, pollution, and rising land and labour prices discouraged further core development, industry and government increasingly turned to the peripheries to maintain growth and profits. The total national landscape was subjugated to the demands of centralised production and control.

²⁷ Fukutake 123.

²⁸ As stated by Neil Smith: "Uneven development is both the product and the geographical premise of capitalist development... Uneven development is social inequality blazoned into the geographical landscape, and it is simultaneously the exploitation of that geographical unevenness for certain socially determined ends." Smith, *Uneven Development* 155.

Responding to the inevitable contradictions of concentrated productivism, the 1962 *Comprehensive National Development Plan* (1962 *Zensō*), was tabled as an attempt to share the benefits of high-growth productivism with marginalised areas through the construction of new industrial complexes in rural areas. More accurately, however, instead of alleviating regional disparities, they were designed to alleviate the dampening effects of high land and wage costs, congestion and pollution in the core urban areas.²⁹ 'National development' plans sought the further solidification of power, wealth and affluence in a constructed urban core centred around the Tōkaidō Belt, and the appropriation and degradation of peripheral regions. The results were greater feats of productivism with the exploitation of new areas made accessible through massive government-sponsored infrastructure projects. McCormack notes that the effect of this and subsequent national development plans has been to reinforce the centralised, urban and industrial power-base over the regional, local, rural and agricultural, prioritising infrastructure development for industry over social and environmental needs.³⁰ Rather than 'liberate' rural Japan from imagined drudgery, national plans and infrastructure developments enmeshed peripheral regions and peoples in a productive-political system over which they had little control.

The total subjugation of national resources to the demands of uneven social relations was demonstrated in the near total centralised control and exploitation of national water supplies. A key priority in the colonisation of the peripheries were ambitious projects of water control and exploitation to fuel centralised industrial needs. As such, water, constructed, used, and degraded, provides a clarifying example of the

²⁹ Fukutake 124.

³⁰ McCormack 52.

restructuring of the social-environment as part of the process of heavy-industry productivism, and the dynamic of centralisation and colonisation. Issues of pollution aside, the high-growth era was dependent upon the apolitical, unproblematic use of natural resources as productive material, regardless of social importance or sustainability. This was demonstrated in the insatiable drive to regulate, dam, re-direct, re-sculpt and exploit Japan's fresh and salt water, coastlines, riverbeds and waterways. McCormack noted that "Japan adopted the technology of comprehensive dam construction and hydropower generation [in rural areas], but primarily as a means to strengthen urban industry."³¹ Rural areas and waterways were sacrificed for urban industrial interests, channelling national resources behind corporate needs and ambitions.

Water, as a resource, was not simply being 'exploited' within an industrial-social project, it was being regulated, (re)constructed and exploited to further a project of central(ising) tripartite wealth and power. In the fifty years following WWII, Japan has become the most heavily dammed nation in the world, boasting over 1000 dams in the space of California. As a result, today Japan cannot boast a single free-flowing river on the main island, as hydro-electric energy and fresh water is diverted to centralised industrial and consumptive needs. This has contributed to environmentally and socially destructive conditions such as heavy silting, reduced water flow and increased pollution, landslides, exacerbated earthquake damage, red tides etc. Likewise, the heavily centralised tripartite interests embarked on massive reclamation projects, literally levelling mountains to fill in bays and estuaries as sites of industrial production, and to feed the voracious construction companies that sustain LDP coffers. By 1960, 2,321

³¹ McCormack 45.

hectares of Japan's coastlines had been reclaimed, with another 24,957 hectares reclaimed in the 1960s, and 40,000 more planned for the first half of the 1970s.³²

While the regulation and (re)construction of water was witnessed in core areas, the effects on rural peripheries were more extensive and profound. The urban (re)construction of water was designed to contribute to urban industrial and consumptive needs, creating more space, providing clean water, and fuelling the engines of consumptive desires. In comparison, peripheral (re)construction was not intended and did not serve rural interests. Rather rural (re)construction, where the vast majority of damming, silting and pollution occurred, robbed the people of their traditional livelihood and culture centred around fishing and farming, necessitated mass re-locations, and completely (re)constructed/destroyed their socio-spatial landscapes for central profits and power. Wet-paddy rice farming, and the sustainability of communities, traditions and culture, proved difficult to maintain when the source of water was diverted for urban industrial needs. Likewise, it was difficult to fish a bay once it was filled in and housed a petrochemical complex.

The techno-industrial development of the high-growth era characterised by the 'heavy, thick, long, and big' industries was predicated on the appropriation and (re)construction of the Japanese landmass (and relationship with nature). The appropriation of the social-environment for the purpose of productivism and GNP-ism was captured in successive corporate-government policies that sought the massive industrialisation of a (re)constructed Japan. It involved the spatially centralised development of production, power and wealth, massive urbanisation, and the reification and exploitation of the peripheries. The result was the (re)construction of Japan as the

³² McCormack 45, 46, 49.

most polluted nation on Earth, no longer able to support the regenerative needs of environment and community. This is made clear with the resulting environmental degradations that spurred social-environmental movements.

Social-Environmental Degradation

The political-economic and socio-spatial expressions of capital lay the foundations for our understanding of productive relations, but it is the social and environmental degradation that lies at the heart of dominant relations and gives rise to popular protests and crisis. In this, our analysis begins to depart from MNT. While MNT theorises the necessary environmental degradations consistent with capitalist development, degradation is focused upon primarily as it contributes to further productive development. Consistent with its traditional Marxian roots, MNT's focus remains on the political-economic relations of production. However, by prioritising the experiences and importance of social-environmental movements, as they challenge dominant relations, demands that we give greater consideration to social-environmental degradations because of their necessary impact on the individuals and communities with which they are integrated, and on processes of social contestations and change. It is in the specificities of degradation and crisis that the productive, political, social and physical relations of the '1955 System' are brought together and revealed, and we begin to understand the social-material conditions the spurred contestations and change..

Generally, accounts of Japanese social-environmental degradation have ignored the larger relations of production and power and the dynamic of uneven development, centralisation and exploitation. McKean, whose work, *Environmental Protest and Citizen Politics in Japan*, stands as a defining account of SEMs, is a case in point.

McKean understood pollution as resulting from the efforts of local elites to attract industry, while being unable to afford the necessary protective infrastructure. This is seen as eventually having progressed to the point where pollution was no longer tenable, and the demands of previously marginalised citizens could no longer be ignored. The result, according to McKean, was the proliferation of citizen movements.³³ While this account might be accurate in its details, it is a narrow, insufficient account that offers little by way of explanation or insight into the larger, more significant social relations of production and power. The unending march of production, technological innovation, growth and destruction is taken for granted, and localities are left responsible for their exploitation and degradation at the hand of centralised elites. The victims are made culpable.

As theorised within MNT, the social-environmental degradation experienced by Japan was the necessary twin of the political-economic relations of tripartite high-growth productivism. Morris-Suzuki states that “at the very moment when Japanese industry seemed in sight of its long held ambition – catching up with ‘the West’ – aspects of industrial technology which had long been ignored began to force themselves on the attention of managers and technicians.” She notes that “[t]he environmental crisis of the late 1960s was not something new or unforeseen. Rather, it was a consequence of the whole way in which technology had come to be understood and controlled in Japanese society;” a system that held decisions within a narrow centralised network, excluding those that would suffer the most from those decisions.³⁴ Technology, like the

³³ Margaret A. McKean, *Environmental Protest and Citizen Politics in Japan* (Berkeley: University of California Press, 1981) 25.

³⁴ Morris-Suzuki, *Technological Transformations* 202-204.

environment, was understood and controlled according to the profit-needs of centralised corporate-government elites.

Koji follows with the observation that the Japanese government supported a form of technological adoption that was particularly harmful to the environment. Linking with the above discussion of post-war productivist ideology and perpetual technological innovation, the government supported the rapid adoption of 'unbundled' technology, encouraging manufacturers to take only the essential technology for production, neglecting pollution-abatement technology and the like as unjustifiably hindering the rapid adoption of technology and output of industrial product. Koji concludes that, "[this] policy meant that the heavy and chemical industrial plants, stripped of pollution control safeguards, simply dumped untreated smoke and waste into the environment. A polluters' paradise."³⁵ Heavy-industry productivism, as it was premised on the adoption of technology as quickly, inexpensively, and profitably as possible, relegated 'external' interests, communities and environmental concerns, to the peripheries.

As the discussion of the '1955 System' suggested, the dynamic of perpetual technological innovation operated in concert with a larger web of relations underlying a particular political-economic regime of power and wealth. Echoing Morris-Suzuki and Koji above, the dire state of Japanese social-environmental conditions were directly related to an entire system of political-economic control that centralised and maintained power and wealth within select corporate-government elites through the sacrifice of social and environmental interests. Productive capacities were built-up around core urban centres, and demanded the (re)construction of the social and material conditions of central Japan and the peripheries upon which they depended. This was a unidirectional

dynamic in which decision-making and wealth were concentrated in core urban scapes, although the negative consequences were spread throughout Japan. As noted by Morris-Suzuki, “[t]he channels that so effectively conveyed technological information between the bureaucracy, public research bodies and private companies provided no scope for the exchange of ideas between enterprises and the local residents most severely affected by environmental damage.”³⁶ And, within the strictures of high-growth productivism as laid out here, there was no reason why they should.

Both the adoption and promotion of high-growth productivism and the understanding and use of nature as unproblematic raw resources reflected the priorities of the corporate-conservative elite, and the dynamic of uneven development: centralisation and exploitation. The social-environmental results were hammered home by a virtually endless litany of pollution problems building in frequency and intensity through out the 60s, until by 1970 “Japan was literally the most polluted nation on earth.”³⁷ By 1970, Japan was reeling under a proliferation of *kōgai*:³⁸ industry-related water pollution, air pollution, silting of waterways, soil erosion and forest depletion, loss of fish and seaweed stocks, etc. Heavy-industrial productivism serving the interests of corporate-governing elites necessarily resulted in the massive physical (re)construction and degradation of the environment, which in turn, necessarily impacted on individuals and communities. It should be of little surprise then, that all the world’s major pollution related diseases first

³⁵ Taira 171.

³⁶ Morris-Suzuki. *Technological Transformations* 204.

³⁷ McKean 17.

³⁸ *Kōgai*, while generally translated as ‘pollution’ actually has a wider meaning which highlights the social dimension of environmental issues. *Kōgai* is understood as any public nuisance or injury resulting from production, whether it be water, air and soil pollution, unwanted noise, vibrations, traffic congestion, loss of sunlight, obstruction of views etc. Smith, *Democracy Derailed* 160. In this way ‘*kōgai*’ suggests not singularly an ecological, or political, or community issues, but potentially all of them and others.

appeared in Japan. By the early 70s, around half of the Japanese public claimed to be suffering from some form of environmental pollution, and over 80% claimed to have suffered or feared future suffering.³⁹

The patterns of social-environmental degradation that accompanied high-growth productivism followed the concentration of corporate-governing power within the Tōkaidō Belt, and the 'development' and exploitation of the peripheries. Again, Japan's water-systems, and the communities and eco-systems dependent upon them serve as illustration as they were 'developed' to serve centralised(ing) interests. Water, relied upon in vast quantities for industrial and communal purposes, became the sullied mirror of the fluid and inseparable social, economic, political and environmental relations that promoted heavy-industrial productivism. As noted above, bays and estuaries were filled to provide much-needed land for industrial and urban needs, rivers were dammed to provide power and diverted for processing and communal requirements, and waterways became choked by industrial and urban effluent. Consequently, by 1970, all but one river on the main island of *Honshu* was 'regulated'.⁴⁰

Dammed, pumped, and re-routed to serve productive purposes, Japan's water showed the greatest and most visible degradation as it flowed through areas of urban concentration, such as in and around Tokyo, Osaka, Fukuoka and Nagoya. About 54% of the national population and over 80% of industrial shipments were concentrated along these rivers.⁴¹ Already contaminated by a lethal cocktail of industrial effluents, the degradation of these core urban rivers also echoed the rapid urbanisation that swelled cityscapes and overwhelmed ill-funded sewage facilities. Although productive output and

³⁹ McKean 20.

⁴⁰ Bennett and Levine 457.

national wealth had multiplied many times throughout the high-growth era, by 1972, only 23% of Japanese *urban* land area had sewage systems, leaving vast quantities of untreated waste pumped into ground sumps and waterways. In spite of the incredible wealth that floated upon them, all of the major rivers flowing through these core urban areas were grossly polluted by untreated sewage, carrying biological contamination at least three times government standards.⁴² Predictably, sewage was a particular problem in the heavily congested areas of Tokyo, evidenced in the case of the Tama River. Once a source of Tokyo drinking water, and widely celebrated in literature and popular attention for its beauty, the Tama River, as a source of potable water, had to be abandoned by 1972. The volume of sewage released into the river was three times the actual water flow.⁴³

The spread of industrial and biological contaminants flowed from the core urban centres, inflicted surrounding waterways much as booming suburbs inflicted the surrounding landscapes. This was demonstrated in the massive eutrophication (over-fertilisation) of fresh water lakes and coastal areas alike. Gaining widespread attention, eutrophication struck Kasumiga Ura near Tokyo, and Japan's largest freshwater body, Lake Biwa near Kyoto. It was also evidenced acutely in coastal areas of Tokyo Bay, Ise Bay and the Inland Sea, where red tides grew acute, and threatened traditional seafood harvesting.⁴⁴

While the heavily centralised interests of corporate-production and conservative-power were located primarily in key urban centres and impacted most readily upon

⁴¹ Murata. *Industrial Location Policy* 179.

⁴² Bennet and Levine 457-8.

⁴³ McKean 120.

connected eco-systems, they were nevertheless intimately dependent upon and inflicted massive damage on a much greater socio-spatial sphere. *All* waterways and their interconnected communities suffered, as centrally directed 'development' projects extended the grasp of corporate-government interests over the entire archipelago. Nation-wide, industrial water consumption rocketed during the heavy industry production boom. Of particular concern, the use of water in severely damaging industries, such as food processing, pulp and paper, chemicals and related industries, cooling and/or heating for chemical and metal industries, rose from 20% to 61.3% of industrial water usage. As a result, by 1970, virtually 100% of Japan's fresh surface water was contaminated by industrial effluents.⁴⁵ By 1971, the Environmental Agency had tested over 500 water sites that exceeded acceptable thresholds for industrial contaminants.⁴⁶ Following processes of uneven development, pollution extended throughout Japan, stretching out from core urban concentrations, and (necessarily) impacting in profound and negative ways on core and peripheral environments. The results were necessarily social as well, as communities suffered under the contamination and death of their environments, and themselves.

The social implications of high-growth environmental degradation become clear in the following discussion of social-environmental movements. It is at this point that MNT, necessary in directing the investigation of the political-economic underpinnings of Japanese social-environmental relations, is challenged by the experiences and importance of SEMs. As theorised within MNT, and demonstrated above, social-environmental

⁴⁴ Andrew Goudie and Heather Viles. *The Earth Transformed: An Introduction to Human Impacts on the Environment*. (Oxford: Blackwell Publishers. 1997).

⁴⁵ Bennett and Levine 457.

⁴⁶ *Japan Economic Yearbook 1973* (Tokyo: Oriental Economist. 1973) 117.

relations are constructed in accordance with the integrated relations of the political, economic, social and environmental, as dominated by the demands and logic of production. Prioritising the explanatory weight of production, MNT has been useful in directing our attention to the relationships between high-growth productivism, corporate-government collusion, perpetual technological innovation, and the social ideologies and consumer norms that assured popular acquiescence. As such, the incredible productive gains realised during the '1955 System,' and the political-economic interests that benefited most from them, are seen as dependent upon commensurate environmental relations. The environmental results, as theorised by MNT, and born out above mirrored the uneven development at the heart of high-growth production: the hyper concentration of the social and material conditions of production within core urban scapes, paid for by the unsustainable exploitation and degradation of constructed peripheries. The result was the wholesale degradation of Japan's environment, witnessed in the gross (re)construction and pollution of Japan's waterways, coastal areas, fisheries, air and soil.

MNT is useful in directing our attention to the destruction of the environment as a necessary condition of capitalist production, absorbing the costs of surplus accumulation, and spurring further technological and industrial developments. In this way, environmental degradation is understood primarily as the product of, and contributor to the productive relations that dominate social-material relations. As such, environmental analysis risks being ensnared in a web of historical materialist pre-occupations that prioritise the seemingly absolute laws of capitalist production over the impact upon and possibilities of the social, that reduce the myriad manifestations of social experience,

protest and progressive possibilities to that of organised labour, and remain trapped by visions of a unified socialist project focused upon the nation-state.

To more fully understand the role of the 'environment' within total social relations, the implications of environmental degradation, and the processes of political, economic, social and environmental change, we must build upon MNT's analysis while abandoning the pre-occupation with productive relations, sites, actors and objectives, for the experiences and importance of social-environmental movements.

Chapter Five: Social-Environmental Movements (SEMs)

The investigation must deal with both environmental pollution and citizen participation because these are inextricably interwoven in the Japanese context: environmental protest occurs entirely through the vehicle of citizens' movements, and almost all citizens' movements are concerned with some sort of environmental issue.¹

As noted by McKean, social-environmental movements hold particular pride of place in the history of Japanese citizen-based politics. This suggests the importance of this case study, as it attempts to uncover the particular conditions that gave rise to SEMs, and their implications for processes of political, economic, social and environmental change. The attention given to SEMs provides the turning point between the investigation and claims being made here, and those favoured by MNT. As suggested, MNT is valuable in highlighting the political-economic relations behind capitalist production, the social and material contradictions and crises that emerge, and the broad patterns of uneven development and environmental degradation that spur further development. However, in keeping with traditional Marxian approaches, MNT tends to reduce environmental crisis to the availability of necessary productive resources, and popular contestations tend to be limited to those of organised labour as they struggle to articulate socialist understandings and strive for a working-class state. There are no connections being made between the particular attributes and role of the environment within the social apart from production, of the place-specific experiences of environmental degradation that give rise to contestations, the particular features of these contestations as they break from the straightjackets of communal restraint and political-

economic expedience, and most importantly, the pivotal role of social-environmental movements (and popular protests in general) in affecting the direction and shape of political-economic, techno-industrial and social-environmental change. Trapped within tired teleologies, MNT can only see environmental protest as peripheral to 'more fundamental economic issues,' and are generally dismissed apart from their potential contribution to labour struggles. In understanding and contesting dominant social-environmental relations, SEMs must be embraced as important guides and explanatory factors in the 'unfolding' of total social relations.

Directing our attention to SEMs as they struggle to understand and contest their own experiences of high-growth productivism, this section provides a brief introduction to the social fabric from which they emerged, the critical distinction between environmental and the more established protest efforts favoured by MNT, and the rise of actual SEMs, concentrating on the most significant movements, particularly that of Minamata, and the widespread protests that followed.

Japanese Social Fabric

As evidenced in the discussion of the '1955 System' and (re)constructions and degradations of nature, one should be wary of easy explanations for Japan's incredible growth in productive capacities and wealth, social relations or environmental conditions that rely on 'traditional' Asian or Japanese attributes.² Yet, without reifying them as

¹ McKean 5.

² Japanese culture is often portrayed as prioritising social cohesion, authoritarianism, communal stability and the like. This was the case particularly in the 80s as pundits tried to uncover the Japanese key to success, and/or to justify authoritarian governing systems such as they imagined in Japan. On the construction of notions of Japanese-ness, and the exclusion of heterogeneous, non-state centric understandings, see Donald Denoon, et al. *Multicultural Japan: Palaeolithic to Postmodern* (Cambridge: Cambridge University Press, 1996).

innate or absolute, we *should* recognise that Japan's postwar economic development and environmental relations were, in part, dependent upon consensual social traits. Further, to understand the context and challenges confronted by citizen movements, we must recognise the social norms from which they emerged, and in which they operated. It is appropriate, then, in introducing a discussion of SEMs to note that the social-political fabric of Japan traditionally promoted cohesion, stability, acquiescence to authority, perseverance and dedication to the group, while discouraging individualistic protest, antagonism, the interests of the individual over the group, loss of face, etc. But this is not to promote a singular, 'traditional' view of Japanese society. While recognising the pressure of 'traditional' Japanese social attributes, we need to appreciate how a general cultural sensitivity has been constructed as a social absolute that serves elite interests while denying the unrest and contestations beneath Japan's seemingly tranquil exterior. We should recognise that constructed and contested cultural norms, such as those attributed to the Japanese, can be used to further elite interests, how 'culture' can become a tool of oppression even as the rest of the world looks on with admiration.

The 'traditional' values often associated with Japan and other 'Asian' states are accepted by many in spite of histories that suggest a far more complex social fabric. In spite of hegemonic social norms, Japan has witnessed frequent and often violent protests, labour struggles, and other social contestations. Within these, it is appropriate to highlight the unique and profound challenges posed by SEMs.

Although significantly different from previous popular protests, and rooted in the immediate and local conditions of degradation, SEMs grew from and benefited from a growing wave of unrest swelling throughout the postwar period. The '1955 System,'

while celebrated for its political stability and unprecedented economic growth, was also marked by unrest and repression, most notably in dramatic and violent postwar efforts to organise and promote labour, and large-scale public protests against Japan-US security agreements.³ While SEMs came to national attention within such a tradition, and at the same time as other notable contestations, it is important to recognise how they were distinct, and unique in their challenge to the productivist relations and elites.

The Social-Environmental Distinction

Broadly speaking, Japanese oppositional groups and action can be divided into two categories that highlight the schism between MNT and SEMs: elite, and popular, with few links between the two. Elite protest has traditionally been represented by oppositional political parties and radical groups. While oppositional parties and radical groups of elite intellectuals and students were generally distinct from each other in their sympathies and efforts, they shared a detachment from the general population, and general ineffectiveness. Opposition parties such as the Japan Communist Party (JCP) and Japan Socialist Party (JSP), share a long history of opposition, and might have posed a significant threat to dominant political-economic interests in the immediate post-war period. However, by the time the '1955 System' was launched, these parties had settled into a comfortable pattern of ineffectiveness and popular alienation.⁴ Similarly, non-partisan radical groups made up of 'radical intellectuals' and privileged students, maintained elite interests while venting "a nihilistic, romantic, expressive, millenarian, radical, violent, irrational, value-based, and value-oriented current, in pursuit of abstract

³ It was during the 1960 anti Japan-US Security Treaty riots, in which the term *shimin undō* (citizens movements) was first used, being passed on and then identified with environmental movements.

or quixotic goals.”⁵ While agitating for complete change in the national political and economic fabric, radical elites maintained a distance and disdain for the popular masses, mirroring the interests and norms of corporate-governing elites. Partisan and radical elites both viewed the general population as ignorant masses to be manipulated and controlled for their self-interested, top-down, authoritarian political projects. By and large, Japan’s political elites, left-wing parties, ‘radical’ intellectuals and students, were unable and unwilling to deal with the issue of social-environmental degradation.

In contrast, the un-institutionalised, non-partisan, largely local-based SEMs, proved far more effective and significant in promoting change than the elite protests favoured within MNT. As noted by White, in contrast to elite protests, “[t]he contrary current, then and now, tends much more toward constructive, realistic, instrumental, moderate, nonviolent, rational (by some definitions) pursuit of concrete, proximate and tangible goals as far more characteristic of collective contention by the common people.”⁶ Unencumbered by pre-determined truths and emancipatory projects, SEMs were responding to immediate experiences of degradation, and to varying degrees and with varying support, explored every avenue open to them, creating new political agents and avenues along the way.⁷

McKean suggests a commonality in the formation of SEMs in which pollution victims, in accordance with ‘traditional’ Japanese mores of social cohesion and acquiescence to authority, would approach their local political and corporate civic

Smith. *Democracy Derailed* 160.

⁴ White 425; Smith. *Democracy Derailed* 164.

⁵ White 436.

⁶ White 436. It is notable that in general, Japanese SEMs tended not to be focused on or concerned with protecting nature for its own sake, but pursued environmental protection to ensure community interests, livelihoods, QOL and economic sustainability. Exceptions became more common as SEMs gained widespread national attention and support

leaders, about pressing social and environmental degradations. Nothing would happen. After prolonged efforts and rebuffs, victims were forced to consider new forms of protest and action. Un-represented by elite oppositional actors such as labour and Marxian political parties, citizens were forced to take action on their own. As noted by White, “[w]ith moribund opposition parties, corporatist unions, incestuously establishment media, and a vacillant judiciary, the people have no one to look up to but themselves.”⁸ Consequently, the burden of insuring democratic accountability and social-environmental redress rested on the people. It was the resultant popular and effective opposition that distinguished the growing SEMs in challenging the ‘1955 System’ and the priorities of MNT.

The very nature of pollution, through its effects on individuals and communities at a personal and local level, exposed the ideologies of productivist nation-building and quality of life as empty rhetoric. Attention to SEMs suggests that understandings and relations with ‘nature’ are embedded within a far richer tapestry of social, cultural and biological bonds than a simple productivist agenda can account for. Similarly, while elite partisan and radical protests tended to concentrate on the abstract, principled and quixotic, SEMs were rooted within local experiences, and centred around cultural-historical belonging and attachment, and social and biological need. SEMs sprung up not because of a valued stand against abstracted forces of production or to contribute to a singular project of socialist emancipation, but because the environment remains fundamental to social existence, and embedded across social totality. This is profoundly different from the motivations of elite protests, and highlights the importance of social-

⁷ McKean 26.

⁸ White 440.

environmental relations to any project of progressive analysis and politics. Individuals and communities protest social-environmental degradation because they must. This is what distinguishes the environment within social relations, and the importance of SEMs.

Social-Environmental Movements (SEMs)

By the early 1960s, signs of unease with the pattern and processes of Japanese technological, industrial and social-environmental change were emerging. People had begun to realise that the quality of life for the purported second richest democratic country in the world was lacking, and that the promises of high-growth productivism were unobtainable.⁹ More significantly, people were beginning to grow sick, and in some cases, die. This is a significant point to be stressed in understanding environment-based protest movements. Some maintain that environmental considerations are the luxury of industrialised affluence, thus undercutting the legitimacy of SEM concerns.¹⁰ Yet, the case of Japanese social-environmental crisis suggests that SEMs are more than the bourgeois unrest of a largely urbanised middle-class longing for a mythical past of social-natural harmony. Environmental consciousness and activism were not the luxury of affluence, but the necessity of degradation; they were the direct response to the very real experiences of industrial pollution and community suffering.

A relatively small-landmass, with industry and populations crammed together on its less than 20% flat surface, Japan soon began to show the unsustainability of its techno-industrial practices. Just as it seemed to be realising its ambition of catching up with the

⁹ As noted by Morris-Suzuki, "anti-pollution movements were often the products of a long gestation. They reflected a gradual recognition by local peoples that the costs of rapid technological change were not just temporary inconveniences." Morris-Suzuki, *Technological Transformation* 205.

¹⁰ See John C. Pierce et al. *Public Knowledge and Environmental Politics in Japan and the United States* (Boulder, Colo.: Westview P. 1989).

West, the health of its citizens and environment was deteriorating. Individuals and communities, first those most dramatically affected, and then the population at large, began to protest the social-environmental conditions of heavy-industry productivism and the political-economic regime that promoted and profited from it. The result was "almost certainly the largest and most significant social movement in Japan's modern history."¹¹

While social-environmental movements were not new to Japan, a series of high-profile cases of industrial pollution, which became known as the 'Big-Four,' turned the attention of the nation to environmental issues, and transforming the possibilities of citizen rights and redress. It was the ground-breaking cases of industrial pollution and popular contestations in Toyama-Ken (Itai-itai disease¹²), Yokkaichi City in Mie-Ken (Yokkaichi Asthma¹³) and, most importantly, Minamata Disease in Minamata (Kumamoto-Ken) and Niigata (Niigata-Ken¹⁴) that most significantly threatened the profit-driven project of high-growth productivism. They were "the forerunners of the

¹¹ McKean 1.

¹² Itai-Itai disease shares with Minamata Disease the dubious distinction of being the most publicised examples of industrial pollution. Dating back to the 1920s, Itai-Itai was caused by cadmium poisoning of the Jinzū River by the Kamioka plant of Mitsui Mining and Smelting. Contaminated river water was used to irrigate rice fields. People ate the rice and became diseased, leading to the decalcification of bones, particularly in the pelvis and legs, bone deformation, fractures, severe pain from slightest activity, including respiration - particularly disastrous effects (death) in women who were told that they had no right to protest as suffering was their lot. Victims were ostracised by community members as freaks, hypochondriacs, disease ridden, hereditarily inferior, pompous, greedy and arrogant. Because of the highlighting of mostly food-borne pollutants, the victims also bore the anger of local producers who had a harder time selling their (contaminated) wares. Organised citizen protest emerged mid-60s, filed a lawsuit in 1968. June 30, 1971, court settled for the plaintiffs, and was the first of the Big-Four to be settled.

¹³ In 1955, an old naval fuel base in Yokkaichi, on Ise Bay near Nagoya, was transformed into a petrochemical 'kombinat', the largest in Asia-Pacific at that time. It began full-scale operations in 1960. By the fall of that year, around 1000 inhabitants were suffering from pollution-caused asthma. After nine years of ineffectual pleas to civic leaders by citizen coalitions with support from organised labour, the JCP, and JSP, 9 victims filed suit against six of the kombinat industries (1 Sept. 1967). On 24 July 1972, after suffering from chemical emission for twelve years, victims won their court case.

¹⁴ In 1964 methyl-mercury poisoning emerged in Niigata-Ken, along the Agano river. Unlike the response in Minamata, action was swift, and victims received support from prefectural citizens and government outraged that nothing was apparently learned in Minamata. Shōwa Denkō was publicly confirmed in 1967 as the culprit despite government attempts to suppress information. 12 June 1967, 13

citizens' movements that dominated Japan's political landscape in the late 1960s and early-mid 1970s: politically mobilized grass-roots organisations focused on local or regional issues and employing a combination of litigation, symbolic violence, and electoral politics to achieve concrete...ends."¹⁵ Along the way, they created new avenues, of citizen-based contestations, and were instrumental in uncovering and publicising the ideology and practices of high-growth productivism. As the springboard of national consciousness and action, the Big Four marked the beginning of the end of heavy-industry productivism. As noted above, the most significant and far-reaching case of industrial pollution and social protest was Minamata.

From the mid-1960s, the popular fears stemming from Minamata Disease combined with growing awareness over air pollution, other environmental disruptions and the general crisis in Japanese quality of life resulting from gross urbanisation and industrialisation. It was the birth of widespread popular concern and protest over industrial pollution, and has grown into a global symbol and warning of social-environmentally damaging techno-industrial processes and relations. As exclaimed by Japanese sociologist, Hidaka Rokuro, "to know Minamata is to know Japan. From Minamata, Japan becomes visible." Truly, to know Minamata is to know Japan; not only what it states about productive-political interests, but its lessons for citizen-based contestations and change.

Minamata is a small community in the outlying prefecture of Kumamoto, on the south end of Japan's southern island of Kyushu. It has been traditionally reliant on an

victims, with support from lawyers, lefties and local support, launched Japan's first pollution lawsuit. 29 Sept. 1971. Niigata District court found against Shōwa Denkō.

¹⁵ Frank K. Upham, "Unplaced Persons and Movements for Place," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993) 342.

agricultural and fishing economy and culture based on the Minamata River and the rich bounty of the Shiranui Sea.

Minamata and its Surroundings¹⁶

In 1908, the Tokyo-based Chisso petrochemical company established operations in Minamata. As early as 1926, the first negative environmental consequences on fish stocks were noted. Though effluents from the manufacturing of carbide, fertiliser, petrochemicals and plastics damaged fish stocks, the town remained by-and-large supportive of Chisso. A relatively poor community far from the centres of industry and power, Minamata residents were grateful for the jobs, wealth and status they saw as accompanying one of Japan's foremost chemical corporations. Furthermore, as the single largest employer in the community, Chisso soon dominated local politics, culture, and tax revenues, with Tokyo educated factory executives serving in the top posts of city councillors and mayors.¹⁷

¹⁶ Minamata City Homepage: <http://island.qqg.or.jp/hp/minamata.civ/english/me_2b.htm>

¹⁷ Donald R. Thurston, "Aftermath in Minamata," *The Japan Interpreter* 9 (Spring 1974): 31. Highlighting the connections between the centralisation of wealth and the peripheralisation of poverty and degradation. Uzawa comments that "Minamata is a symbol of the poverty which still prevails in a country

In 1932 Chisso began to manufacture acetaldehyde in Minamata. Dependent upon the use of mercury as a catalyst, acetaldehyde was a valuable commodity used in the manufacturing of plastics, drugs, cosmetics, photo chemicals etc. Production levels remained low throughout the war period, but with Japan's defeat and the loss of external colonies and industrial facilities, large-scale production in Minamata began. Chisso, known as a top-rank, advanced and innovative company was an important part of Japan's nation-building goals. Favoured by government plans to encourage the petrochemical industry, and in step with the nation-wide industrial surge, Chisso's production soared and more and more mercury was released into the community (along with more than 60 other chemicals).¹⁸

Mercury was released with the industrial effluents into the Minamata River and Minamata Bay. There, bacteria converted the inorganic mercury into organic methyl-mercury where it was passed up the food chain and deposited in the fish consumed by local residents. Building up in the brain tissues, and passing the placenta into the foetus, mercury steadily destroyed the brain tissue of its victims. The effects of Minamata Disease included sensory disturbances, loss of co-ordination, blindness, deafness, tremors, muscular weakness, degeneration and rigidity, hyper-salivation, deformities and extreme pain. In the most extreme cases, it resulted in death.¹⁹ As depicted by Huddle and Reich:

Robust men and women who had formerly enjoyed good health suddenly found their hands trembling so violently they could no longer strike a match. They soon had difficulty thinking clearly, and it became increasingly difficult for them to

that takes pride in being the third largest industrial power in the world, and of the agony which industrial contamination has inflicted on the poor." Uzawa 51.

¹⁸ W. Eugene Smith and Aileen M. Smith. *Minamata* (New York: Holt, Rinehart and Winston, 1975) 26-28.

¹⁹ Smith and Smith 187.

operate their boats. Numbness that began in the lips and limbs was followed by disturbances in vision, movement and speech. As the disease progressed, control over all bodily functions diminished. The victims became bedridden, then fell into unconsciousness. Wild fits of thrashing and senseless shouting comprised a later stage, during which many victims' families, to keep the afflicted from injuring themselves or others, resorted to securing them with heavy rope.²⁰

Because of the shame traditionally associated with illness in Japan, the reflex to find fault with the sufferers, and a deep reluctance to break social cohesion, it is hard to know when the disease first began to effect Minamata residents. Appearing in relatively poor fishing neighbourhoods in which families consumed large quantities of fish, it was largely disregarded, blamed on victims' attributes: alcoholism, lack of hygiene, poverty, etc. Victims, often poor and discriminated against, tried to hide their ailments from others, perhaps even their families and themselves. Under pressure not to break the communal cohesion of 'non-sickness,' not to challenge the social discomfort/shame with mental and physical illness, and not to call attention to themselves, victims remained silent. That the local hospital was owned and run by Chisso didn't help.

In spite of the profound effects of mercury poisoning on their community, the residents of Minamata remained reluctant to challenge Chisso, or the productivist ideologies and relations in which they were embedded. Local elites believed that deference towards the centre and avoidance of conflict were both proper and practical behaviour in the best interests of the community. Their constituents shared the same political tradition and accepted these arguments on the wisdom of cultivating a smooth working relationship with economic and governing elites.²¹ Localities bowed to centralised authority and power, and community individuals bowed to civic leaders seen

²⁰ Norie Huddle and Michael Reich. *Island of Dreams: Environmental Crisis in Japan* (New York: Autumn P. 1975) 106-7.

to represent that authority. In Minamata, the result was continued pollution and suffering.

Upham notes the difficulty victims had in articulating their suffering in the face of traditional restraints and the nation-building 'Production-First' ideology: "[t]o most Japanese and to many of the victims themselves, the appropriate behaviour for persons harmed by industrialisation was to suffer in silence. To stand up for one's own rights, and especially to do so in the courts, was to be selfish and disloyal - to put one's own interests above those of Japan."²² It was only when the social-environmental consequences extended explicitly to the community-level, that concern and action became seen as legitimate. But then, the government, local, regional and federal, stepped in to redirect the protests back into acceptable, established channels of control. Relying on traditional acquiescence to authority, and the popularly accepted role of the bureaucracy as taking care of the people, government elites tried to dissipate uncertainty and anger through established government channels and investigations.²³

In spite of the cynical efforts of corporations, bureaucracies, and political leaders, industrial effluents from Chisso continued to flow, and increasing numbers of residents became sick and died. From a few seemingly isolated cases of a strange disease afflicting poor, marginalised neighbourhoods, methyl-mercury poisoning began to cut larger and more visible swaths through the community. Although research was conducted on the cause of the disease, accurate conclusions, let alone action, were hampered by corporate cover-ups, ministry rivalries, suppression, ignorance and discrimination. Even when

²¹ McKean 24-5.

²² Upham 338.

concrete evidence surfaced that methyl-mercury was the likely cause, it was quickly covered-up, the research teams disbanded, funds withdrawn and responsibility re-located. Even after the Ministry of International Trade and Industry (MITI), the Ministry of Health and Welfare (MHW) and the Ministry of Agriculture and Fisheries (MAF) had clear evidence of Chisso's blame, the Ministry of Justice refused to initiate investigations against the chemical giant. Chisso, supported by MITI, pushed for yet more studies. Wrapping increasingly widespread sickness and environmental degradation within the smothering blankets of governmental procedures, the government did not officially acknowledge Chisso's blame until 1968.²⁴

At the same time as Chisso and government agencies became aware (and covered up) the cause of Minamata Disease, the victims formed the *Minamata Mutual Assistance Society* to negotiate with Chisso. The result was an agreement, that while inadequate, provided a degree of communal peace. After considerable agitation and effort on the part of victims, that threatened communal cohesion and pitted victims against the larger community, Chisso agreed to pay U.S.\$830 for deceased victims, and U.S.\$280 annually for living victims. Without acknowledging responsibility, Chisso managed to buy peace. For as little as U.S.\$830, contestations were co-opted by shared communal, corporate and political pressure. Yet, this did little to address the cause of sickness, or prevent people from dying. As noted by Upham, "the events of this [subsequent] uneventful period illustrate what 'harmony' can mean and what it can cost to maintain it."²⁵

²³ As noted by Upham. "At every juncture where it had a chance, the government took action to discourage individual action, particularly legal action, and to reward cooperation and dependence on the bureaucracy." Upham 345.

²⁴ Upham 340.

²⁵ Upham 340.

This agreement, whereby Chisso agreed to minimal compensation based on *mimai*,²⁶ while denying victims of their rights to push for further compensation, protected Chisso against future findings, while giving the corporation legal and psychological leverage over the victims. Both Chisso and the government then claimed that the issue had been dealt with, and were successful in convincing the victims that based on this agreement, any further efforts at compensation, etc., would be useless.²⁷ The lack of information made available to the victims due to the 'informal' nature of the arrangement with Chisso and the 'mediation' of the government supported this outcome. Both Chisso and the various government agencies knew that Chisso was responsible, but this was less important than the maintenance of high-growth productivist efforts and norms.

Minamata Disease was effectively shelved as a political issue for the time being. Chisso continued to dump untreated effluent into the Minamata River and the victims suffered and died in relative silence. For all intents and purposes, this was the end of Minamata pollution-victims' agitation, and a period of quiet was achieved. Upham explained that "[h]ad events elsewhere not dramatically altered the balance of power in Minamata, redirected the attention of the national media to pollution, and brought the victims new political allies, the 1959 negotiations might have come to represent one more instance of successful Japanese informal dispute resolution."²⁸ But, Minamata was not an isolated occurrence, but only the first of many crises about to flare up across the country.

²⁶ *Mimai* – 'sympathy' that does not connote responsibility

²⁷ Chisso knew at this point that it was responsible through the tests of their own research. Upham, 341.

²⁸ Upham 340.

In 1968, a similar group of victims of methyl-mercury poisoning from Niigata²⁹ visited Minamata and rejuvenated the fight against Chisso, this time with somewhat chagrined popular support. On 14 June 1969, one faction of the Minamata victims, frustrated with continued corporate and government obfuscation, and the relative acquiescence of their victim-peers, took the dramatic step of filing a lawsuit against Chisso. This unleashed a series of confrontations that included bitter community recrimination and ostracism, violent protests in which company thugs beat protesters, and the establishment of a semi-permanent protest camp in front of Chisso headquarters in Tokyo. These tactics represented a dramatic departure for citizen protest, bringing together the methods of pragmatic, local and experience-based popular protests, with the attention-grabbing direct methods of previous radical groups. In the meantime, other pollution cases, notably the Big Four, began to gain public notice, and national and international attention became fixed on methyl-mercury poisoning, the uncertainty of Japan's most important food source, and the crimes of Chisso and government agencies.

On 20 March 1973, Kumamoto Prefectural Court found against Chisso Corporation in a biting indictment of criminal negligence, and awarded the largest settlement ever in a pollution-related case. The size of the award solidified similar pollution related cases across the country, resulting in re-negotiated settlements, and massive public attention. Mercury poisoning, as an issue and touchstone, remained an important issue before the courts and public attention throughout the 70s, fuelling increasingly wide-spread fears and protest.

More than forty years after Chisso began to release mercury into the local environment, and some twenty-years after the first documented cases of Minamata

²⁹ Niigata is the capital city of Niigata-Ken, a prefecture on the western, Japan Sea Coast of Japan.

Disease emerged, the victims of corporate-government collusion and their supporters gained an important victory against the forces of uneven development, and the exploitation of communities and their environments for centralised profit and control. As unprecedented as the victory of the Minamata social-movement was in articulating their stories, garnering attention and support, and persevering in the face of criminal collusion, bribery, and out-right thuggery, their victory must be shared with a much larger chorus of contesting voices emerging across the country. Fuelled by the success of Minamata and the other Big Four, social-environmental protest movements sprung up across the country, contesting the unsustainable, unjust and undemocratic subjugation of peripheral concerns and health to the centralised demands of profit. As predicted by Putnam in 1972, "[t]he great mercury scare' provides a textbook example of the kind of problem we will meet again and again in our chemical-filled age. The lessons we draw from it can serve us in confronting similar challenges to come."³⁰

National Awakening

While the Big Four, and Minamata in particular, demonstrated the extent of social-environmental degradation and the nature of organised popular protest, the social-environmental movement that threatened the Japanese political-economic regime was much wider and deeper than any one of these cases, or the four combined. By 1970, the environment had grown into a national political issue without precedent, joining rural and urban communities, core and peripheries, localities and nation in a sustained awakening and critique of governing elite and capitalist development. In this way, the social-

³⁰ John J. Putman. "Quicksilver and Slow Death." *National Geographic* 142 (October 1972) 507.

environmental movements of the late-60s and early-70s were distinct from the popular movements that preceded them, and greater than the individual pollution cases from which they emerged.

Public opinion polls conducted regularly between 1959 and 1973 demonstrated a steadily growing popular concern with environmental problems. Informed by the Big Four, and their own experiences of degradation, citizens were becoming more aware and uneasy with the social-environmental costs of the high-growth era. Between 1966 and 1971, the number of pollution-related complaints to the responsible 'Autonomy Agency' exploded from 20,502 to 75,702.³¹ This growing awareness and general sense of suffering grew in intensity, so that by 1970, over 60% of respondents asked of their first priority for the government desired action on *kogai mondai* – industrial pollution.³² This growing insistence on action was articulated by increasingly insistent protest organisations, which by 1973 conservatively numbered over 3000 at the local level alone, and nationally involving up to 6 million participants. The largest single organisation boasted 300,000 members.³³ A March 1973 national poll, demonstrated an important shift in popular attitudes, and a growing acceptance and approval of the individual and community-based agitation that seemed anathema to 'traditional' mores only a short time before; 51.5% of respondents supported the growing citizen movements, five times greater than the 10.6% that disapproved.³⁴ The Japanese public was becoming aware of the degradation of high-growth productivism, and openly advocating counter-

³¹ *Japan Economic Yearbook 1973*. 118.

³² Bennett and Levine 462.

³³ McKean 20. 256.

³⁴ McKean 236.

establishment action through non-traditional means. But then again, Japan has never been as 'traditional' as its leaders would hope.

In the wake of Minamata and the Big Four, SEMs emerged across the country, reflecting rural and urban concerns over the dire consequences of corporate-government led high-growth productivism. As the centralised heart of Japanese production and power, the contradictions of high-growth productivism were readily apparent in urban centres such as Tokyo. These protest movements grew from a concern with obvious health hazards, such as water, air and soil contamination, to more ambiguous, and perhaps ambitious, quality of life movements. By 1973, up to 10% of the total Tokyo population had already been active in some organised form of citizen movement.³⁵ Moreover, McKean's survey of two Tokyo suburbs in 1973 indicated that 75.7% approved of citizen movements, and 88.9% suggested that they would co-operate with such movements (this is significantly higher than the already impressive national figures quoted above).³⁶ While LDP support faded, and popular anger directed at the bureaucracy and big business grew, nearly 90% of respondents indicated support for anti-establishment, citizen-based protest organisations.

By the early 1970s, popular unrest was no longer limited to the obvious cases of pollution, such as the Big Four, but had extended into the more amorphous, and overtly political-economic concerns of quality-of-life and the distribution of productive costs and benefits ('sunshine rights', infrastructure developments, citizen participation in local and regional decision-making bodies, urban planning, housing, commuting-time, leisure

³⁵ McKean 237.

³⁶ McKean 237.

facilities and space, etc.).³⁷ This reflected a dramatic broadening of popular concern and action. Though SEM participants and the general public were initially concerned with the personal and immediate threats posed by industrial pollution, by 1972 the majority of participants surveyed by McKean had moved on to preventive concerns and actions, with barely one-third having become active after personally suffering from environmental pollution directly. Similarly, close to half of the participants surveyed remained committed activists even after their initial concerns were addressed, becoming in McKean's terms 'principled altruists.'³⁸

As theorised within MNT, as the concentrated cores of capitalist production suffered under the contradictions of development, threatening further expansion and profits, corporate Japan looked increasingly to the unevenly developed peripheries. In order to escape the scrutiny and action of growing protests, industries and government increasingly relied on the rural peripheries for new production sites, resources and sinks. Ironically it was the corporate-government efforts to 'develop' the hinterlands that gave rise to the most powerful of the Big Four, and launched the widespread protests that made further urban development untenable: Minamata. The effects of further industrial development in traditionally rural areas was predictably devastating, and gave rise to equally urgent protests that threatened the LDP's previously most loyal and predictable support base. As heavily centralised elites responded to growing urban contestations and attempted to further offload the costs of production-power on the peripheries, rural populations organised, protested, and threatened the LDP's electoral heartland.

³⁷ In 1972 the *Japan Economic Yearbook* added a section on 'Urban Problems,' concentrating on the associated social problems of rapid industrialisation and environmental degradation. *Japan Economic Yearbook 1972* (Tokyo: Oriental Economist, 1972) 113.

³⁸ McKean 130-1.

Foreshadowing corporate-government strategies to come, the rural SEMs' greatest successes were in portraying the battles as pitting rural and traditional culture against urban, and western industrialism. The LDP was branded as a pro-industrial party that was willing to sacrifice the livelihoods and traditions of rural Japan.³⁹

Taken together, urban and rural SEMs threatened the continued concentration of wealth and authority within the core corporate-conservative elite, and the commensurate off-loading of the costs on the social, political and geographic peripheries. Echoing the unprecedented 'success' of high-growth productivism, social-environmental degradation intensified, and SEMs grew in scope and participants, stretching from small community-based efforts to redress local degradation and injustice, to a nation-wide movement extending across region and class. Initially rooted in the local and personal experiences of individuals and their families, citizen movements grew to encompass the marginalised and affluent, fishers, factory workers and professors, rural farmers and urban 'salarymen.' From the small fishing neighbourhoods of Minamata, social-environmental unrest had grown to *the* pressing national crisis. According to McKean's survey of urban-based SEMs in 1972, participants were fairly equally divided in gender, better educated than the general public, with leaders generally of superior education and enjoying above-average socio-economic and occupational status.⁴⁰ They tended to be a bit older than the popular median, allowing a broader perspective of the effects of economic and social change on their communities, reflected in a growing attention within citizen movements to preventive measures and broader political-economic issues. Mature, educated and affluent, urban citizens turned to protest movements realising that

³⁹ McKean 93-4.

the political-economic system that they had believed in and served, was alienated from them, offering no avenue for participation, and quite possibly destroying their communities and their environments. As for the less affluent and rural protesters that had long suffered, in silence and in action, under a system for which they bore the brunt, the immediacy, and potentially fatal aspects of pollution forced them to take action.⁴¹

The growing popular insistence on corporate-government responsibility and action extended much further than the participants of SEMs, permeating the very fabric of national consciousness at every level. Between 1960-1965, pollution related articles in the national newspaper, the *Asahi Shimbun*, increased 230%; between 1965 and 1971, another 500%.⁴² In 1971-72, environmental concerns garnered the 2nd and 3rd most coverage in total national newspaper coverage.⁴³ On articles concerned explicitly with urban issues between 1970 and 1973, pollution related coverage dominated, followed numerically by closely related quality of life concerns such as commuting distance/time, urban density and so on.⁴⁴ The example of newspaper coverage is reflective of widespread national attention to pollution-related developments, and the closely-related stresses, contradictions and concerns of elite driven hyper-productivism.

The widespread popularity of SEMs, as they served to uncover and critique the structure of Japanese production-power relations, gave impetus to a wider array of contested issues and popular anger. It became obvious that the crisis confronting individuals and communities were not solely environmental, but reflective of the close

⁴⁰ McKean 87: 210. It is notable that many of the SEMs were carried by women, both in rural and urban areas, marking a significant break with traditional notions of acceptable female action.

⁴¹ McKean 130.

⁴² *Japan Economic Yearbook* 1972, 120.

⁴³ Bennett and Levine 462.

⁴⁴ Bennett and Levine 471.

political and economic ties at the base of high-growth productivism. Social-environmental degradation was becoming recognised as indicative of an entire system anathema to popular concerns, health, and quality of life; concerns that had begun to emerge earlier in the high-growth era but lacked the urgency and cohesion that the Big Four had galvanised. The increasingly pressing contradictions of productivism, the political-economic relations that promoted them, and the nefarious popular effects, were hinted at earlier in the mid-60s students', anti-war and anti-US Security Treaty protests, and after, with the anti-Narita airport,⁴⁵ women's liberation⁴⁶ and various environmental-related urban quality of life movements. But it took social-environmental degradation and contestations to bring the threads together and effectively challenge the corporate-government elite and their agenda of hyper-productivism.

The cumulative result was a shift in popular attitudes surrounding development, productivism, traditional political and social sensitivities. By the early 70s (if not earlier), Japan had reached its capacity for absorbing the contradictions and tensions of two decades of rapid industrialisation and economic growth. As post-war memories of depravation faded amongst the affluence of hyper-industrialisation and consumption, production-at-any-cost lost some of its sheen, tarnished as it was by poor working conditions, lack of social welfare policies, pollution and sickness. Matsushita Keiichi, writing in 1971, was able to proclaim

The people of Japan are different from what they were ten years ago... they have finally been roused to action ... by circumstances that are making certain areas of

⁴⁵ For an excellent study of anti-Narita Airport protests, as it reflected the enmeshing of social and environmental concerns, and of the possibilities of strong local-based cohesion and action, see David E. Apter and Nagayo Sawa. *Against the State: Politics and Social Protest in Japan* (Cambridge, Mass: Harvard, 1984).

⁴⁶ On the challenges posed by women's liberation movements, see Muto Ichiyo. "The Birth of the Women's Liberation Movement in the 1970s." *The Other Japan: Conflict, Compromise, and Resistance Since 1945*, ed. Joe Moore (Armonk, NY: M.E. Sharpe, 1997).

their personal lives almost unbearable ... they have begun to cooperate ...to do something about war and nuclear weapons, urban plight and environmental pollution.⁴⁷

Popular attitudes were changing, and with them, perceptions of Japan's political-economic elite, and, the possibilities for action. Echoing Matsushita above, the surging increase in popular protest movements in the late 60s-early 70s, constituted a new direction in the popular perception of Japanese citizen rights and Japanese democracy.⁴⁸ As noted by Dower, "at the popular level the almost catatonic fixation of the ruling groups on industrial productivity and economic nationalism stimulated citizens' protest movements that eschewed doctrinaire ideologies and focused on specific issues such as quality of life, environmental protection, community services, and the like... represent[ing] a new kind of grass-roots democracy." This was a direct and substantial threat to the ruling elite; "Japan [had] entered a new stage."⁴⁹ A stage of profound crisis and change.

Marked by "pragmatism, openness, moderation, egalitarianism, participatory internal democracy, and a focus on limited and realistic objectives quite at odds with more elite forms of opposition,"⁵⁰ SEMs reflected the widespread degradations of high-growth productivism, and spread throughout the country. In contrast to more traditional and elite opposition groups, SEMs offered "a quieter, more amorphous but more widespread form of protest which caused the greatest concern to the Japanese government" as they aligned the general public against the corporate-government

⁴⁷ Matsushita Keiichi. "Citizen Participation in Historical Perspective." *Authority and the Individual in Japan: Citizen Protest in Historical Perspective*, ed. J. Victor Koschmann (Tokyo: University of Tokyo Press, 1978) 171.

⁴⁸ Bennett and Levine 461.

⁴⁹ Dower 6.

⁵⁰ White 438.

agendas, and by 1970 had raised the environment to the single most important political issue in Japan.⁵¹ They were “unprecedented examples of common people taking on the giants of Japanese business and politics and winning.”⁵² As such, SEMs represented the first truly meaningful threat to the established post-war political order through advocacy of citizen agency and participatory–democracy through local self-government. They included social-environmental protests, closely related consumer and urban rights movements, quality of life, women-rights, Korean and Buraku-min movements. Together, they moved Matsushita to declare that “[w]e are seeing the onset of a genuine citizen revolution (*shimin kakumei*).”⁵³

⁵¹ Morris-Suzuki. *Beyond Computopia* 54-5; Smith. *Democracy Derailed* 161.

⁵² White 437-8.

⁵³ Matsushita 173.

Chapter Six: Crisis

Restrained by the productivist pre-occupations of traditional Marxian thought, MNT looks to organised labour and state-bound political parties as the privileged focus of analysis and agents of social change. As such, environmental degradation is examined primarily as it concerns productive processes and the relations and goals of labour, and more sustainable and just social-environmental relations become dependent upon the emancipation of an aggregated working-class within an unified socialist project headed by 'the Party.' Although the number and prominence of social-environmental movements has grown apace with the escalating environmental crises of the 80s and 90s, they have been given uneven attention within MNT, and tend to be dismissed as local, parochial and lacking in the economic logic sufficient for real change. Unable to 'see' SEMs beyond this caricature, MNT reduces diverse and articulate movements to their potential challenge or contribution to a single unified project of socialist emancipation behind the banner of the working-class and its party.

The Japanese case demonstrates that SEMs are a crucial focus of attention and agent of significant change. In contrast to the traditional darlings of the left, Japanese SEMs emerge as key players in exposing the extent and consequences of social-environmental degradation, the political-economic relations and actors dependent upon such degradation, and in articulating and pushing for a systemic re-allocation of democratic and productive power to the community level. In so doing, SEMs presented the gravest threat to Japan's corporate-governing elite and the '1955 system' of centralised(ing) high-growth productivism. Destabilised and threatened with usurpation by the building solidification and mobilisation of citizen groups, and the national and

international economic crisis, Japan's tripartite orchestrated the shift to a 'light' information society-economy, precipitating profound techno-industrial and social-environmental transformations. In order to appreciate the central role played by SEMs in influencing the direction and scope of social-material change, this chapter focuses upon the unique and unprecedented threat SEMs posed to Japan's political, bureaucratic and corporate interests and elites.

The LDP

While an incredibly diverse array of SEMs had sprung into action by the early-70s that defy easy generalisations, some commonalties can be discerned of their basic attitudes and beliefs that challenged Japan's entrenched political-economic interests. As revealed by McKean, SEMs were hugely successful in understanding and exposing the incestuous nature of the Japanese corporate-governing elite, and the shared tripartite responsibility for social and environmental disrepair. The majority of participants surveyed, and increasingly the general public, classified business, the LDP and the bureaucracy as enemies of the environment and citizen movements. At the same time, traditionally marginalised and ineffective anti-establishment groups were enjoying a popular resurgence, while SEMs developed into a new and significant political force on their own.¹ This was a groundswell against the '1955 System' from which there was no escape for Japan's corporate-governing elites.

Demonstrating a profound interest and knowledge of politics, the vast majority of movement participants and supporters targeted the role of the LDP in fostering industrial

¹ McKean 178. Watanuki suggests that the ruling tripartite was being threatened by an ascending triumvirate of opposition parties, empowered local governments and citizen movements. Watanuki Joji.

pollution, and articulated a desire for fundamental changes in the nature of Japanese politics. They brought to public attention the LDP's relations with and dependence upon corporate-productivism, their collusion in promoting and covering-up social and environmental degradation, and the heavily centralised and undemocratic norms of government decision-making. In the process, SEM's de-legitimised government-led industrialism and decision-making as hopelessly corrupted by corporate concerns, undercutting the ability of the government to make decisions and lead the Japanese economy and society. At the same time, they advocated a complete transformation of Japanese political, economic, social and environmental relations; "a 180-degree reversal in the flow of authority."² SEMs were seen as signifying a new stage of political consciousness, a new type of citizen that necessitated a re-configuration of power relations fundamentally at odds with continued norms of LDP-led rule.

Prior to the eruption of SEMs, the LDP enjoyed concrete stability. Not even the anti-Security Treaty riots had threatened their hold on power, unions were in retreat, and the left was seemingly content to rip itself apart. As long as the government could point to steadily expanding production and consumption, they had been able to weather any storm. Yet, by 1970, this was in disarray as environmental crises and contestations flared across the country, becoming the single most important political issue and threatening the political foundation of the '1955 System.' As noted by Fukutake, "[t]he Japanese 'miracle' of becoming a great economic power has by now proven to be a disaster, as the growing seriousness of the pollution problem and the setback of growth ... clearly

"Japanese Politics in Flux." *Prologue to the Future: The United States and Japan in the Postindustrial Age*. ed. James W. Morley (Lexington, Mass: Lexington Books, 1974) 82.

² Matsushita 173.

indicates.”³ The LDP could no longer point to the economy as justification. The ‘economy’ was the problem. The result was plummeting support for the institutionalised ruling party, and gaining popularity for ‘left’ contenders: the JSP and JCP, and most importantly, citizen-movements themselves.⁴

The growing antagonism towards the LDP, was predictably, most stark with SEM participants. Yet the proliferation of movements nationally, and their growing popular support, suggests a far more widespread and growing challenge to elite interests than SEM numbers alone indicate. The deepening antagonism of SEMs was particularly troublesome as participants tended to be more electorally active than the general public, carrying far greater proportional weight than numbers alone would suggest. Politically ‘turned-on’ by their experiences of environmental and social degradation, participant-activists boasted electoral turn-outs of 89%, and active campaigning of an incredible 75% rurally, and 62% nationally.⁵ In an ossified political regime where parliamentary seats are held for life and inherited from one generation to another, an incredible 17% of activist-participants were actually running for office themselves.⁶ The heightened political activity of rural voters would have been particularly alarming to the LDP, dependent as they were upon the disproportionate weight of rural votes in maintaining their ruling majority. The LDP relied on the peripheries to maintain their hold on power much as they relied on the peripheries as a source of raw materials and sink of industrial

³ Fukutake 5.

⁴ McKean 178.

⁵ McKean 217-8.

⁶ McKean 220.

pollution; but nowhere was pollution stirring greater action against the LDP, often as voting majorities.⁷

One might demur that the attitudes and electoral practices of participant-activists did not suggest a broader change in political leanings, in that citizens attracted to SEMs might already have favoured oppositional parties and therefore not represented a significant drop in LDP support so much as a solidification of opposition. However, SEMs represented the electoral body in general: rural and urban, more and less educated, affluent and poor. SEMs represented not so much a solidification of opposition, but a wholly organic groundswell, robbing the LDP of their traditional support. The entire electorate was on the move, and the LDP was suffering.

McKean notes that across the broad scope of activists, with or without previous political or activist experience, there was a shared hostility towards the right and favourable leanings to the left.⁸ This is consistent with trends across the electorate that witnessed a declining support for the LDP since the late 60s, and the gaining strength of the JCP and JSP. This is echoed by Bennett and Levine, who note a growing trend towards *datsu seitō* (party leavers). *Datsu seitō* represented the unprecedented breakdown of traditional party loyalty, in which over one-third of the electorate shifted allegiances in 1973.⁹ In fact, all partisan shifts, regardless of initial affiliation were to the left.¹⁰ The longer they had to protest, or the more issues and groups they protested with, the more participants moved to the left. And, as the crisis continued, and the more

⁷ McKean 218.

⁸ McKean 185-6.

⁹ Bennett and Levine 484.

¹⁰ McKean 199.

involved activists were forced to become, the further to the left their political attitudes shifted.¹¹

Most SEM participants lacked previous political experience, suggesting that pollution issues were a mobilising force amongst a traditionally quiescent populace. As one participant noted: “[w]e leave politics up to others and we never fight. That’s a Japanese trait, but it’s not citizenship, and that’s why citizens’ movements are important. We are developing the nerve to complain and demand what we want.”¹² Once organised into a group of shared concerns, participants found their involvement profoundly politicising; coming to understand how their individual experiences of environmental degradation were reflective of much larger socio-economic relations, which they in turn targeted. As noted by McKean, “citizens’ movements affect the attitudes, beliefs, and even the subsequent political behaviour of their members... They do not simply recruit members for a brief flurry of activity from which people depart unchanged, but actually transform the political attitudes of those they mobilize.”¹³ SEMs were the vehicle of this new political awareness and empowerment. As citizens became better educated and concerned about environmental issues, they became more and more willing to challenge the political and economic systems that placed economic development over the environment.¹⁴ As revealed by McKean, 44% surveyed felt they “learned politics” through their involvement(s) with citizen movements; 23% felt they had been “radicalised.”¹⁵ As SEMs continued to proliferate, and gain support from the general

¹¹ McKean 207.

¹² McKean 169.

¹³ McKean 232.

¹⁴ Fukutake 122.

¹⁵ McKean 170.

public, the LDP and the conservative interests they had institutionalised, were losing power over the people.

The widespread turn against LDP policies and ideologies was apparent in popular opinions of national leadership. Reflecting on the tenure of former P.M. Satō who reigned over incredible productivist gains (1964-1972), 89% of participant-activists classified his policies as “totally bad,” and his motivations as “the worst.” Even of those participants who classified themselves as LDP-supporters, 63% condemned Satō. As for then current P.M. Tanaka (1972-74), recognised as one of Japan’s most significant post-war prime ministers, the condemnation wasn’t as uniformly negative, yet point to the increasingly frayed fabric of high-growth politics. Though partisanally conservative activists tended to be enthusiastic about his rural development plan (*Kaizōron*), a massive productivist strategy to offset core urban degradation, others preferred to call it *Kōgairon*, meaning ‘the plan to spread pollution through out Japan.’¹⁶

As the LDP faired poorly in the eyes and polling booths of participants and citizens in general, the perception of oppositional parties also began to change. As observed by a rural activist: “[The LDP] only wants to help industries and people with big money ... I’ve come to think that the JCP is best of all, the most honest and sincere.”¹⁷ As demonstrated in many cases, the efforts of anti-pollution movements helped the political strength of the JSP and JCP, suggesting a significant and growing challenge to the LDP.¹⁸ The greatest change in party politics was seen in the surging

¹⁶ McKean 182. For those that supported Tanaka’s Plan, it might be significant that McKean’s surveys concentrated on urban residents who would not bare the brunt of regional development projects.

¹⁷ McKean 191.

¹⁸ While the JSP and JCP benefited the most from the drop in LDP support, other oppositional parties such as the Kōmeitō Party, (known as a “muck-racking” party that tried to gain popularity through embarrassing and exposing the LDP), also benefited in participant opinion surveys. McKean 179.

support for the Japan Communist Party, which grew from 20,000 dues-paying members in 1955 to 300,000 in 1972, while boasting a *daily* party newspaper circulation of 2 million copies.¹⁹ This offered a particularly serious warning to the ruling elites.

Even though traditional opposition parties benefited from the social-environmental crisis, this should not divert attention away from the movements themselves. The JCP and JSP sought to exploit the growing opposition to the LDP for their own agendas, and maintained many of the vestiges of 'elite' opposition. While 'established' critics offered valuable analytical skills, and the ability to contextualise the crisis within larger political-economic frameworks, it was the citizens themselves that created the openings for contestations, and ultimately presented the greater threat. This is not to diminish the significant contributions made by oppositional elites however. McKean noted that the JSP and JCP were valuable in understanding pollution as consistent with the industrial system as a whole. Accordingly, the LDP's answer of more economic development through 'national development' was rightly condemned as exacerbating the problems. The real answer was seen to be an overhaul of the entire economic and political system. The JCP and JSP then noted the unsuitability of the LDP for this task, responsible for creating the conditions and beholden to those forces that benefited from it the most.²⁰ The growing popularity of these leftist platforms, coupled with the proliferation of movements suggested a growing link between the experiences of environmental degradation and the more theoretical and wide-sweeping critiques presented by the JSP and JCP. As the links between diverse movements and established

¹⁹ Watanuki 76.

²⁰ McKean 213.

leftist parties strengthened, the pesky but insignificant local protest took on a new, sinister appearance to established interests.²¹

The popular turn against the political norms represented by the LDP, was seen at the polling booths locally, regionally and nationally, as citizens looked to contending parties and traditions. The result was a popular turning away from the LDP and an electoral ground-swell for opposition candidates in local, regional, and increasingly national posts. Since their founding by corporate interests in 1955, until environmental and quality of life concerns erupted, the LDP polled consistently over 50% of the popular vote for the Diet. In 1967, the LDP polled under 50% for the first time and signalled a steady decline in support: 1967 – 48.8%; 1969 – 47.6%; 1972 – 46.8%. In 1976 the LDP received only 41.8% of the vote for the Diet, all but losing power, but for rural ‘gerrymandering.’²²

The results were even more notable in local and prefectural politics. As contestations were rooted in the immediate experiences of individuals and communities struggling with the direct impacts of environmental stress and pollution in their daily lives, local and prefectural politics became the favoured terrain of political protest and marked a dramatic shift away from the LDP. Citizens were angry over the perceived LDP dependence on and cow-towing to industrial interests, sacrificing citizen health for financial kickbacks. In the voice of one activist, McKean captured the feelings of many: “The LDP’s problem is money, their activity in real estate and construction, and the donations they get from industry ... The government, the prefecture, the mayor, and

²¹ It is interesting to note that members of activists groups, while appreciative of the help from the JCP were wary of undo influence, and the impression of manipulation of the movements by the JCP. McKean 198. If the activists feared this, then what must the ruling elites have thought?

²² Morris-Suzuki, *Beyond Computopia* 55.

industry are all drinking and conspiring together so Japan can't [solve this problem] ... they say there's no pollution even though we can see it ... They're a bunch of liars."²³ At the local and prefectural level the results were dramatic.

In 1967, tripartite interests were shocked as a left-wing intellectual won the Tokyo governor position, the very heart of high-growth production and power.²⁴ And this was just the beginning. As SEMs proliferated, so did the attacks against the LDP and support of local and prefectural alternatives. By the early 1970s, most major cities were in the hands of the opposition.²⁵ By 1974, 41% of the population was politically represented at the prefectural or local level by 'progressive'²⁶ reformers. Most troubling for the ruling elite, was the loss in 1975 of nine prefectures, including the key centres of production and power: Tokyo, Osaka and Kyoto.²⁷ Dependent as they were upon continued exploitation (social, political, spatial and environmental), the LDP was quickly losing their previously iron-grip to new and empowered political actors and ideologies.

As citizens became more aware of the social-environmental consequences of productivism, and the limitations of traditional political mechanisms, they began to withdraw from the LDP and embrace new political avenues. Most notably, as citizens shifted their party allegiances to the left, they also began to favour participation in social movements over traditional political mechanisms. As noted by Bennett and Levine, "[t]he majority of citizens, or at any rate very large pluralities, gradually detached from power groups of all ideological colorings, and in various ways and degrees [sought] to

²³ McKean 186.

²⁴ It is interesting to note that from this point on, governmental White Papers began to explicitly address environmental and QOL issues.

²⁵ Morris-Suzuki, *Beyond Computopia* 55.

²⁶ Non-LDP, most notably from the Japan Socialist Party (JSP) and Japan Communist Party (JCP)

²⁷ Smith, *Democracy Derailed* 162.

create new forms of political and social participation.”²⁸ This is supported by Fukutake who noted a shift in political consciousness and action in (re)constructed urban areas, with previous conservative ‘bosses’ losing power to new movements born of urban and industrial pollution.²⁹ This affected the entire nature of Japanese politics, legitimising open political conflict, and opening the door to greater bottom-up democratic participation. As asserted by one SEM participant: “[our] community is being ignored by everyone – mayors, governors, Diet representatives ... So we must protect our own community because no one else will do it for us. This is real self-government. I have only just begun to realise that we must fight to protect our right to govern ourselves.”³⁰

Although many protesters struggled to maintain an explicit distinction between their efforts and goals and those of more established oppositional parties,³¹ this forced separation of efforts and identities did not seem to diminish the every real threat seemingly diverse and disconnected movements posed to the LDP and ruling tripartite. If anything, the LDP and Big Business had proved themselves successful in containing opposition parties, and opposition parties seemed content with minimal representation and maximum in-fighting. The greater threat to the ‘1955 System’ of corporate-governing rule, was that citizens would recognise the strangle-hold established elites had on traditional political avenues and seek out new, uncontrolled paths of power and control. In growing numbers and intensity, this is exactly what citizens did, embracing SEMs in their direct calls for action. As noted by McKean, “[c]itizens’ movements articulated views that certainly were not being voiced by the more established political

²⁸ Bennett and Levine 485.

²⁹ Fukutake 80.

³⁰ McKean 195.

³¹ McKean 234.

pressure groups in Japanese society; similarly, they mobilized the otherwise unorganized and formerly underrepresented interests of the political innocents.”³²

Protesters broke out of ‘traditionally’ dictated straitjackets of protest and contestations, and began to build new mechanisms of local and regional politics; replacing the LDP not only with new parties, but with a new citizen-based politics beyond political parties. As more and more citizens lost faith in established political norms, and directed their energies towards new social movements, social movements themselves, their capabilities and scope, likewise began to change, growing in their efficacy and appeal. Empowered citizens, enjoying the growing capacity of their maturing organisations dramatically challenged the nature of political decision-making and control. Taking aim at local-level political mechanisms, SEMs and their supporters challenged conservative control, demanding consideration of their concerns, and putting into place pro-reform candidates. This was but the first step in the realisation of a new type of political consciousness and action based on the needs and desires of citizens, unrestrained by conservative political traditions and institutions, as they pushed towards the realisation of citizen-based ‘radical’ democracy.

As we saw above, pollution victims and activists first attempted redress and action through traditional Japanese political channels, that is through networks, petitions, etc. This failed. The result was that “the Japanese public seem[ed] to be groping for new forms that would replace existing ones that have proven rigid or intractable as avenues of influence on new issues and would serve as new mechanisms for the resolution of conflict that is now out in the open.”³³ This was certainly true in Minamata, where

³² McKean 231.

³³ McKean 226.

victims initially pursued traditionally sanctioned avenues of redress based on social cohesion and strict hierarchies – to no avail. As sufferers continued to bond together into loose coalitions and later organisations of sophistication, they turned their backs on ‘traditional’ mechanisms in favour of more direct confrontation, taking their demands straight to local leaders and decision-making bodies. This pattern was repeated throughout Japan, as organisations solidified and pressed local and prefectural leaders and institutions for fundamental change.

Rooted in local conditions, it was natural that SEMs directed their energies first against local politicians and institutions, hoping for attention and action at the local and prefectural levels. Taking aim at local leaders, SEMs were responsible for the inclusion of social-environmental concerns, and to a significant degree, the adoption of reform-minded regulations at odds with prefectural and national norms. While there were uneven results to these tireless efforts, in many areas beset by pollution-related disease and impaired QOL, the results were real and significant. For example, eighty-five Kyoto city administration section-chiefs surveyed in 1974, agreed that during the crisis years (1964-74), citizen movements were the most significant source of policy initiative after the mayor.³⁴ This is incredible in a political climate known for its heavily centralised top-down traditions in which legislation is conceived and drafted by centralised ‘experts’ before being presented to the political actors.

Pushing their experiences and interests onto the local political agenda, citizen movements recognised that a single reform-minded regulation or admission of responsibility was not enough when the source political culture and mechanisms remained. Accordingly, SEMs began to push for greater openness of the decision-

making mechanisms, information-sharing and the incorporation of citizen representatives on decision-making bodies. Further, SEMs increasingly put their weight behind anti-pollution candidates of their own, gaining support from previously impervious political elites and civil servants, and taking over the seats of local power.³⁵

It was not enough to share information on social-environmental issues or political decisions. SEMs demanded a direct participatory role with their candidates in key local and prefectural bodies. As a result, local bodies began to re-conceptualise their roles, from administering top-down directives, to actually serving the interests of their constituents. This contributed to a long-term trend towards increased competition between core and periphery, Tokyo and localities.³⁶ In many respects, local governments forged ahead with restrictions that departed dramatically from national priorities. Local policy initiatives and successes were picked up across the country, where they inspired similar efforts and successes.³⁷ This is significant as the centralisation of authority, governance and wealth was fundamental to the Japanese political-economy, guiding high-growth transformations and (re)constructions. Any effort that served to challenge this arrangement, threatened the entire basis of Japanese production-power. This offered/demanded a different view of Japanese society, culture and politics than the unproblematic, top-down, hierarchical, centralised Japan ruled by the LDP, MITI and corporate elites.

While agitating for greater inclusion of their candidates and views within traditional political mechanisms and institutions, protest organisations began to realise a

³⁴ McKean 242.

³⁵ McKean 240-1.

³⁶ McKean 253.

³⁷ McKean 242.

fundamentally different understanding of democratic politics. As highlighted above, many groups demonstrated a commitment to democratic and participatory principles that explicitly and adamantly put them at odds with traditional Japanese politics, group dynamics and hierarchical underpinnings. As noted by McKean,

the majority of activists with definite opinions agreed ... that the strength of a citizens' movement lay in its new role as a broad coalition of many kinds of people, built around a particular social problem, and that citizens' movements should reject the uses of ideology and patterns of organization presented by existing political parties and established interest groups on both the right and the faction-ridden left.³⁸

This involved more than simply eschewing traditional political parties. It was an entire political culture that was being shed, as participant-protestors created participatory democracy within their own organisations and grew to appreciate and demand a similar political philosophy across political scales. They cultivated a seedbed of oppositional co-operation, networking and capacity building that broke down traditional distinctions between groups, classes and political affiliations in a powerful way unrealised with other issues. They did not simply want the environment to be thought of or regulated in new ways, but demanded a new authentic citizen-based democracy completely at odds with established interests.

While their ability to affect change within established political-economic avenues was severely contested, the individual and collective transformations were profound. Citizens became more politically aware of their rights and capabilities, learning organisational skills, how to conduct research and counter establishment claims, do surveys, spread awareness, and how to organise and exert pressure on the political system. In so doing they not only developed a sense of resilience and independence from

traditional authority, but learned to appreciate their own powers, and the limitations of traditional politics. It was a new type of politics that dominated the 70s and was fundamentally at odds with continued norms. As noted by Upham: “by 1973...the anti-pollution movement ignited by the Big Four was being described as a radically new form of Japanese political action, one that challenged not only the closed and consensus-based style of traditional politics but also the self-image of the Japanese as preferring harmony to conflict.”³⁹

This new-found understanding and commitment to their individual and collective democratic rights was profound, and was applied across the broad spectrum of political and economic issues. Comparing Japanese SEMs with the American civil rights movement, McKean asserted that Japanese movements were about demanding rights for the previously unheard and victimised, giving voice to the “average citizens intimidated by the oppressive weight of an elitist, hierarchical social and political tradition in Japan.” Furthermore, “Japanese environmentalists are considerably more inclined not only to be suspicious of capitalism as an economic philosophy, but also to question the growth strategies Japan used in the past ... harbour[ing] basic doubts about the integrity and trustworthiness of political institutions.”⁴⁰ They were turning points for environmental issues and for the nature of Japanese democracy.

Eschewing established political parties and even political-economic norms and institutions, SEMs challenged the very basis of LDP and tripartite rule. Developing their organisational and analytical capacities as environmental degradation and corporate-conservative collusion continued, participants grew to appreciate and demand radical

³⁸ McKean 147.

³⁹ Upham 342.

democratic relations that located political authority and decision-making capabilities amongst themselves. SEMs rejected citizen participation within established norms and institutions as the subservient masses to be guided by the tripartite elite or established opposition actors, but as democratically awakened citizens demanding institutional acquiescence to *their* interests and demands. The vast majority rejected any notion of equality between citizens and the government, and asserted that governments should lead from the initiatives of the citizens.⁴¹ According to Matsushita, “[SEMs] represent[ed] a new political trend that [sought] genuine popular sovereignty and democracy, with full citizen participation in government as an antidote to the weaknesses of established political parties, labor unions, and the various radical groups.”⁴² SEMs signalled a truly radical departure for Japan that reached across the intimate and inseparable links between political control, governance and production.

The Bureaucracy

The challenge citizen-led SEMs levelled against the bureaucratic elite, and bureaucratic governance in general, mirrors that against the LDP covered above, and helps to illuminate the connections between the two. The widespread and growing condemnation of the political elite was echoed in attacks against the bureaucracy, as citizens perceived bureaucratic policies, interests and relations with industry as implicated in social-environmental degradation. Similar to the revelations made of the LDP, SEMs illuminated the bureaucratic role in covering-up and maintaining productive practices harmful to community health and the environment, and in turn, de-legitimised

⁴⁰ McKean 258, 256.

⁴¹ McKean 164.

previously sacrosanct bureaucratic-elite governance over the broad orientations and policy details of Japanese economic and social development. With public attention focused on the collusion of bureaucracies in productivism and the undemocratic nature of bureaucratic governance, citizens demanded a relocation of control to the local and individual level completely at odds with 'traditional' cultural stereotypes and productive-power interests. Together, the political and governing supports of the '1955 System' risked being swept away by the flood of popular anger and radical democratic beliefs unleashed by SEMs. Scrambling to regain control, the political arm of the government, the LDP, sought to assert itself. The bureaucracy, once holding the tripartite together through its personnel and expertise, found itself forced (at least temporarily) onto the sidelines.

While Japan had certainly experienced both democracy and unrest before, they have tended to be the result of top-down ideals and efforts, unevenly realised. Contemporary SEMs, on the other hand, signified a new stage of bottom-up citizen agency, a radicalised political consciousness, a new type of citizen. This in turn necessitated a re-configuration of core-citizen power relations. Previously the citizen was not recognised as a responsible and active participant in democratic rule, but ignorant masses to be manipulated and controlled *for* continued political rule.⁴³ The bureaucracy had 'assumed' a patriarchal role, claiming for themselves the responsibility of looking over and managing the interests of the citizens. This lack of agency coached within hierarchical, patriarchal traditions and understandings, was also expressed within established 'protest' groups, such as the JCP, the JSP, and elite intellectual critics. With

⁴² Matsushita 172.

⁴³ Matsushita 183-4.

even the opposition tending towards a governing culture of 'progress authoritarianism,' few links were established or expected between the actual people and the leaders. The result was a strong tradition of bureaucratic management and arrogance on one hand, and a weak tradition of independent political responsibility and action on the part of individuals.

Post-war productivism, based on the total channelling of national resources behind heavy-industry, was sold to a Japanese public devastated by the experiences and deprivations of war. The bureaucracy, particularly the key financial ministries, such as MITI and MOF, positioned themselves as the experts that would lead Japan towards the promises of productivist affluence. As long as Japan was seen to be growing, with steadily expanding GNP and a flood of newly accessible consumer goods, the social pact was strong. Yet, the contradictions inherent to that development could not be suppressed. The severe social-environmental consequences that reduced Japan to the world's most polluted country, with a low relative standard of living, and growing cases of community ill-health, served to de-legitimise the entire system of bureaucratic-elite led decision-making. The issues that had galvanised popular support in the high-growth era no longer held sway, as new concerns, carried by new voices, gained prominence. As noted by Allinson, "[p]ersonal grievances, popular outrage, and organised opposition to environmental pollution... forced a set of new issues onto the political agenda."⁴⁴ And the bureaucracy was no longer trusted to address them.

The negative attention focused on previously 'untouchable' bureaucracies shed light on the relationship between the bureaucracy and the LDP, exposing the governing and political arms of corporate control. In the popular mind, and accurately so, there was

no clear distinction between the political arm of government comprised of the LDP, and the governing function of the bureaucracies. As long as popular attention was focused on the goal of productivist nation-building, this was generally accepted. However, as the nefarious effects of corporate-government collusion were articulated by SEMs, citizens increasingly turned against the bureaucracy. While productivism became recognised for its dependence upon communal sacrifice and environmental destruction, the bureaucracy, once the protector of the people, was judged for its complicity, and deemed incapable of addressing the problems. Worst, the bureaucracy was seen not only to benefit from the corporate-governing relations in general, but the building social and environmental crises in particular. As theorised by MNT, as social welfare stagnated and the relative quality of life declined, bureaucratic budgets soared, as did their reach and control.⁴⁵ Bureaucratic justification for exploding government expenditures were increasingly called into question as SEMs exposed the bureaucratic role in maintaining and benefiting from systems of social and environmental exploitation.

The role of SEMs in uncovering the relationships behind government-bureaucracy sponsored productivism, was brought out clearly across contested sites. The Big Four in particular, because of the media and broad popular national attention, served to highlight the prejudices of Japan's elite bureaucracy against individual and community health and environment. This was powerfully drawn out in Minamata, where the bureaucracy, key financial ministries in particular, acted to protect Chisso while deliberately misleading and victimising citizen-sufferers. Tucked-off in the far southern corner of Japan, this

⁴⁴ Allinson 142.

⁴⁵ The national budget ballooned 8 times 1955-70. Capturing a growing awareness and anger, Watanuki noted: "Of course, the budget is determined by the Diet; however, it is the bureaucrats who draft the budget and it is the bureaucrats who administer the ever-growing expenditures." Watanuki 81.

might not have been a problem. But, the persistence and networking of victim-activists, and the growing national state of pollution, catapulted Minamata, and other sites of bureaucratic malfeasance to the top of national attention. At every opportunity, MITI and MOF were seen as acting to suppress information harmful to corporate interests while maintaining authority within a narrow field of bureaucratic elites. As SEMs focused national attention on specific cases of industrial pollution, the much-touted 'Japanese-way' of bureaucratic-led industrialism and decision-making was increasingly called into question.

The same tight-knit channels between the bureaucracy, researchers and industry that were once celebrated as fostering high-growth and efficiencies, were revealed as a closed, 'soft-authoritarian' system, barricaded from public input or concerns.⁴⁶ The elite Japanese bureaucracy, so adored in western analysis, was increasingly seen as a negative, over-bearing influence completely at odds with norms of freedom and democracy. This was articulated in the widespread popular perception of Japan society as a *kanri shakai* (a management society), marked by the heavy-hand of bureaucratic and technological control.⁴⁷ Fairing badly across regional and partisan lines, in urban and rural areas, the age of benign bureaucratic governance was coming to an end, and citizens were demanding their turn.⁴⁸ Having turned to the bureaucracy when in need, only to be lied to, suppressed and harassed, SEMs began searching for alternative understandings and avenues. As noted by Morris-Suzuki, "[t]he challenge to the prevailing vision of technological change therefore came, not from within the social network of innovation

⁴⁶ Morris-Suzuki, *Technological Transformation* 204.

⁴⁷ J. Victor Koschmann, "Intellectuals and Politics," *Postwar Japan as History*, ed. Andrew Gordon (Berkeley: University of California Press, 1993) 415.

⁴⁸ McKean 183.

itself, but from outsiders: small groups of farmers, fishermen, shopkeepers or factory workers, with women often playing a prominent role as organisers and activists.”⁴⁹ This suggests more than a simple ground swell in environmental awareness or criticism of specific bureaucratic policies, but a revolution in the ideology of citizen rights in which bureaucratic decision-making, and centralised change, was revealed as anathema to social-environmental health. Social contestations then became the vehicle for widespread and fundamental changes.

Much in the same way that protesters and the general public grew increasingly sceptical and hostile to traditional political parties and mechanisms, they became equally wary of bureaucratic claims of benevolent and enlightened governance. While Matsushita noted the incredibly diverse forms of citizen movements that sprung into action by the early 1970s, he recognised that in their diversity they shared a condemnation of Japanese decision-making and government-sponsored industrialisation, and advocated a turn to citizen-directed changes, and citizen-controlled and empowered localities.⁵⁰ Empowered by their experiences of overcoming corporate-conservative opposition, organising movements and articulating sophisticated analyses and recommendations, citizens gained faith in their own abilities to make decisions and govern.

The dramatic departure from ‘traditional’ hierarchical thinking and centralised top-down problem-solving with which SEMs challenged the bureaucracy, was seen in the increased use of the courts. Traditionally, the bureaucracy placed themselves between the people and the government. Claiming impartial expertise, the bureaucracy relied on

⁴⁹ Morris-Suzuki. *Technological Transformation* 204.

⁵⁰ Matsushita 171.

traditional notions of social cohesion and mediation to absorb, deflect and deaden any threats to core interests. This self-serving mechanism of 'traditional' conflict resolution was exposed by SEMs as criminally ineffective. Having found government channels, political or bureaucratic, beholden to their corporate backers, SEMs were forced to take their grievances to the courts. This trend, set in to motion by the Big Four, was effective in both highlighting the inadequacy of the government response, and threatening the hitherto dominant bureaucratic interests with a new foci of authority. The effect was to legitimise the courts as a venue of public dissatisfaction, and to force action from corporations and their governing agencies. Further, because of their success at seeking compensation *after* pollution occurred, activists increasingly went to the courts to *prevent* development, and to sue government bodies that would allow them.

No longer could bureaucracies hide behind the myth of serving the people. Through SEMs, the citizenry began to realise the possibilities of real democracy, and target the bureaucracy for its obstruction. The Big Four was successful in expanding notions of civil liberty to include protection from pollution, providing social and institutional acceptance of the courts as an avenue of civil protection, and spurred the proliferation of SEMs. McKean suggests that in spurring citizen movements, the courts were also influenced by the movements, helping to create and respond to a changing political culture. Reflecting SEMs clear challenge to continued top-down bureaucratic governance, McKean asserts that, "these Big Four cases converted the courts from a mechanism for orderly rule from above into a channel of participation from below."⁵¹

In a growing challenge to bureaucratic governance, SEMs articulated a concern with and understanding of social relations that extended 'beyond' local issues of

environmental destruction. Rather, social-environmental concerns were a springboard to larger questions of “*who* decides what constitutes public interest and *how* public policy is to be determined – questions that touch the very basis of Japan’s political culture.”⁵² This was mostly strongly felt at the local and prefectural level. Concerned citizens became the leading political force and policy initiator in many communities, transcending the initial attempt to have their interests considered by established decision-makers, to a fundamental reconsideration of Japanese social needs/myths, and the direct democratic ability to determine and carry-through decisions on their own. As predicted by Matsushita, “[t]he result of this protest will determine whether the system is to be reformed so that the citizen himself has responsibility for defining the public interest, or whether he will continue to be manipulated by an established power structure that monopolizes responsibility.”⁵³ As such, SEMs represented the first truly meaningful threat to the established post-war governing order through advocacy of truly democratic local self-government. As noted by Watanuki, “*even if* the LDP were able to maintain its majority in the Diet and *even if* the national bureaucracy were able to retain its powerful position at the center, an emerging friction between the national and local governments may very well operate to counter the bureaucracy’s centralized and sophisticated planning from above.”⁵⁴ This again distinguishes the SEMs from other citizen-based protest movements. Unlike the ANPO riots, or the battle over Narita, SEMs stirred local and regional demands for participatory democracy right across the Japanese archipelago. It was more than simply a movement to redress a single issue, or problem, but a

⁵¹ McKean 79.

⁵² Matsushita 172.

⁵³ Matsushita 173.

⁵⁴ Watanuki 82.

movement for a fundamentally different Japan that cut across the most basic and entrenched issues.

True to Watanuki's prediction, the 'age of crisis' was also the 'age of retirement' for the bureaucracy. Never again would the bureaucracy enjoy the same prestige and power as they did in the high-growth era. With popular voices growing increasingly numerous and insistent, politicians and private business recognised the threat to productive and political relations, and began to assert more direct control, in effect, sidelining the bureaucracy. While top bureaucrats had once dominated the upper ranks of the LDP and *Keidanren*,⁵⁵ following the crises years of the early 1970s, they steadily lost presence and influence in both bodies. Forced to account for government actions, and watching their popular support and local, regional and national seats dwindle, politicians increasingly demanded tighter control over government policies and actions. Where the political arm of the government was once content to sell legislation drafted 'behind the thrown,' in the face of popular anger, they went behind the thrown and grabbed the reins for themselves. Nowhere was this change so meaningful as in the key financial bureaucracies that had dominated the high-growth era. Marking a significant change, from 1972, the ministers of MITI, MOF and MFA were drawn predominantly from career politicians. The same pattern unfolded in *Keidanren*, where bureaucrats once dominated the positions of chair and vice-chair, but were replaced with 'pure' business leaders.⁵⁶

⁵⁵ *Keidanren* – Federation of Economic Organisations; an extremely influential corporate group representing the core corporate interests that dominated heavy-industry productivism

⁵⁶ Allinson 139-140. Clearly elite bureaucracies have retained huge powers and importance in the Japanese governing system. This is made clear in the following discussion of 'light industry.' However, the relative degree of power, and public acquiescence, has been diminished significantly.

Big Business

Social-environmental movements and the general public, growing increasingly critical of the overly-bureaucratic, patronising and insulting style of political rule, were equally, if not more scathing of corporate hyper-industrialism. Inasmuch as MNT is correct, in that corporate-productivism is the preponderant base of total social relations (productive, political and social-environmental), the threat posed to its continued practices, actors and ideologies was *the* threat to the '1955 System.' As SEMs attacked the ruling LDP, the elite bureaucracies and the corporate interests behind socially and environmentally damning productive relations, and advocated a fundamental redistribution of political and productive control, it presented a unique and profound threat to Japan's corporate-governing interests and elites. Confronted by this challenge, Japan's ruling tripartite launched a process of techno-industrial transformation from 'heavy' to 'light' industry and the commensurate shift in understandings and relations with nature. This assertion, that SEMs played a significant role in the direction and scope of techno-industrial processes, political-economic relations and the social engagement with and (re)construction of the environment, sets this thesis apart from MNT.

Protesters and the general public, increasingly understood the principle role of industry behind the growing social-environmental degradation, to the extent that *kogai*, the general term used for pollution, became understood as meaning '*industrial* pollution.'⁵⁷ Connecting social and environmental degradation with industrial activities led to widespread condemnation of the techno-industrial underpinnings of high-growth productivism, and the relations of control and wealth that sacrificed social-environmental concerns for profit and power. Led by SEMs, people began to demand a re-focus in

productivist priorities away from the high-growth model of the '1955 System' to more social-environmentally sensitive production in which quality of life usurped profit.

An initial and significant success of SEMs was to publicise and contest the industrial causes and consequences of social-environmental degradation. In so doing, corporate-interests were exposed as the primary agents of environmental destruction, using the full strength of their enormous economic, political and social power to cover-up and deny the consequences of their regime of production and profit. As noted above, the post-war era was obsessed with and dependent upon the popularly embraced goal of high-growth productivism. From the ashes of war, Japan was to soar to the forefronts of the world's economic powerhouses on the strength of unified national ambitions and traditional cultural attributes channelled through perpetual technological innovation and unswerving productivism. However, the severe social-environmental crises of the late 1960s–early 1970s, combined with the national and global crises of the early-mid 1970s, marked the end of the high-growth era and the dashing of corporate dreams. As stated by Morris-Suzuki, “at the very moment when Japanese industry seemed in sight of its long held ambition – catching up with ‘the west’ – aspects of industrial technology which had long been ignored began to force themselves on the attention of managers and technicians.”⁵⁷ Most notably, these ‘aspects’ were social-environmental. According to Fukutake, “[t]he Japanese ‘miracle’ of becoming a great economic power has by now proven to be a disaster, as the growing seriousness of the pollution problem and the setback of growth after the 1973 oil crisis clearly indicate.”⁵⁹ Fukutake goes on to recognise environmental degradation and the low popular standard of living as the twin

⁵⁷ McKean 183.

⁵⁸ Morris-Suzuki. *Technological Transformation* 202-3.

downfalls of the myth of Japanese productivism. Taken together, he is stressing the social-environmental costs of productivism.

The social-environmental consequences of high-growth productivism and the corporate involvement and responsibility, were brought to national attention through the committed efforts of diverse SEMs; most notably, the Big Four. Forcing the details of corporate productivism onto the national consciousness through protest, media⁶⁰ and the courts, the Big Four acted to refocus the onus and blame away from the victims, and on to the real culprits. Where industry had been able to rely on traditional dispute resolution mechanisms, and the collusion of key political and bureaucratic allies to overcome initial unrest, the widespread negative attention, and the airing of grievances in the courts and media, signalled a sea-change in the political economy of social-environmental relations. SEM participants were not to be mislead by tripartite promises, easy-answers or deterministic excuses. As uncovered by McKean, “[participants] believed that government and industry knew that their policies exacerbated pollution and persisted with those policies anyway, not out of lack of alternatives or because of technological bottlenecks, but rather out of malicious negligence, financial greed, and callous indifference to human suffering.”⁶¹

As social and environmental crises escalated, a perceptible change in social attitudes followed. The memories of war time poverty that the elite had used to foster productivist-cohesion, began to fade in the face of new deprivations: production at any cost, poor working conditions, lack of social welfare policies, and pollution. Japan had

⁵⁹ Fukutake 5.

⁶⁰ The popular shift away from the ideology of productivism or “GNP-first” was graphically highlighted in the national newspaper, the *Asahi Shinbun*, in a series titled “Kutabare GNP!” – Down with GNP! Taira 170.

reached its physical and social capacities for absorbing the contradictions and tensions of two decades of rapid industrialisation and economic growth.⁶² The constant exhortations to produce more in order to overcome crisis, had been proven bankrupt, and popular attitudes were undergoing fundamental reversals. Recognising that further industrial development was not an option for overcoming social-environmental degradation (in spite of corporate-government assertions then and now), activists favoured slow or zero economic growth. Seventy-eight percent of those polled “unquestionably prefer[ed] both growth and pollution to stop at present levels or decrease rather than continue.” Twenty-seven percent added that economic growth had *no* positive benefits, while fifty percent highlighted pollution as the biggest threat of continued productivism. Seventy-eight percent recognised former P.M. Tanaka’s plan for rural development, as disastrous. While fifty-five percent believed that only traditional farming/agriculture should be allowed in rural areas, thirty-one percent allowed the possibility of other ‘non-pollution’ industries such as tourism and traditional cottage industries. Together, up to eighty-six percent of the participants in diverse and burgeoning SEMs wanted strict controls over the political-economy of the peripheries that were fundamentally at odds with productivist uneven development.⁶³

Japanese industry had relied on the exploitation of rural areas, populations and environments to overcome the contradictions of unchecked productivism. As urban concentrations had reached their saturation points, industry had relocated new facilities and harmful production practices to rural areas desperate for revenue. Yet, as urban protests grew ever more strident and further curtailed core industry practices, the effects

⁶¹ McKean 139.

⁶² Bennett and Levine 456.

of regional 'development' were likewise becoming more clear and municipalities and prefectures were won over by SEM-sponsored political actors. Rural areas, once desperate for development, had begun to question the underlying assumptions and practices of industrial development, enacting new restrictions, and banning outright new 'developments.' Japanese industry, dependent upon the largely unrestricted development of outlying and rural areas, was thrown up against the wall of popular restraint.

Based on uninterrupted techno-industrial transformations and productive growth through the wholesale exploitation of citizens and the environment, the very basis of corporate-government control and wealth, the centralisation of power and exploitation of peripheries was threatened. As noted by Dower, "at the popular level the almost catatonic fixation of the ruling groups on industrial productivity and economic nationalism stimulated citizens' protest movements that eschewed doctrinaire ideologies and focused on specific issues such as quality of life, environmental protection, community services, and the like... represent[ing] a new kind of grass-roots democracy." Citizens were becoming better educated and concerned about environmental issues, and more and more willing to challenge the political and economic systems that placed economic development over the environment.⁶⁴ Dissatisfied with the vast gains of their labour and sacrifice being continually enrolled into heightened production, citizens called for massive investments in social welfare, quality of life and environment-protecting legislation and institutions completely at odds with established tripartite interests.

As articulated within MNT and substantiated here, addressing the root-causes of pollution necessarily threatened the very economic and political basis of dominant social

⁶³ These figures represent the opinions of SEM participants. McKean 134-5.

⁶⁴ Dower 122.

relations. Productive relations were predicated on fundamentally polluting techno-industrial relations and the channelling of total resources into heightened productive capabilities. Within the logic of the '1955 System' the ruling elite could not deal with the growing demands for environmental protection, quality of life investments, and the preservation of the rural traditions and environments while maintaining their dependence on heavy-industrial productivism ("with their train of ancient and venerable prejudices and opinions").⁶⁵ The '1955 System' of high-growth productivism depended upon the very relations that citizens, led by SEMs, were unwilling to accept. As such, like the LDP and the bureaucracy, corporations were dependent upon a system they could no longer maintain without addressing the social and environmental degradations that they were unable or unwilling to address. SEMs accurately perceived industry's inability to address the degradation they had spawned. While seventy-three percent of those polled clearly labelled industry as responsible to clean-up the pollution and address its consequences, and another sixty-nine percent thought government shared the blame, a full ninety-two percent, nearly every single person asked, believed that neither industry nor the government could be trusted with the task.⁶⁶

The inevitable result, was escalating crises and proliferation of pollution protest organisations and action. As articulated by SEMs, citizens became increasingly aware of the corporate-governing collusion behind industrial pollution, the criminal disregard for public health, and the undemocratic nature of centralised rule and production. Advocating a turn to community-based politics and productive decision-making, SEM-backed parties and political actors proceeded to take back the regions of industrial

⁶⁵ Marx, *Manifesto* 37.

⁶⁶ McKean 133.

exploitation, and the core cities and prefectures of centralised production and power. Accordingly, “defenders of the economy feared not just increased expenditure but a total industrial shutdown.”⁶⁷ As simply put in the *Japan Economic Yearbook*: “environmental disruption was one of the largest problems in Japanese economy in 1970 [*sic*].”⁶⁸

Writing in broad terms that encompass Japanese experiences, but also those of the other major industrialised countries, Doug McEachern suggests that the distrust of centralised authority that swelled in the late 1960s and early 1970s included a growing distrust of industry-led technology, and the social-environmental consequences of capitalist technological development. This was revealed in the normally staid pages of the *Japan Economic Yearbook* (1971). While adding a section on ‘Environmental Disruption,’ with a subsection titled ‘Occurrences of Shockingly Serious Cases,’ the *Yearbook*’s editors opined that “The final objective of future technological innovations should be rediscovery and establishment of harmony between nature and man.”⁶⁹ As ‘shockingly serious cases’ of industrial pollution were brought to public attention by SEMs, Japan’s corporate elite were confronted with a popular turning away from the technology-driven, productivist ideologies of the ‘1955 system.’ As such, these widespread protests represented a serious threat to the continued regime of power exercised through capitalist affluence. McEachern asserts that the proliferation of SEMs “highlights a weakness in the original postwar strategy to combine high rates of economic growth and a degree of increased affluence with a stable social order...What the events of the late 60s reveal is that affluence, by itself, contains no long term guarantees that the population will remain socially passive.” On what must have been an

⁶⁷ McKean 227.

⁶⁸ *Japan Economic Yearbook 1971* (Tokyo: Oriental Economist, 1971) 144-145.

ominous note for the core-elite, he continues, “[i]t seems fair to observe that if these movements had continued and if the social and economic circumstances that enabled them to flourish had persisted, then the health of the capitalist enterprises would have been impaired.”⁷⁰

SEMs forced a profound reconsideration of post-war productivism and relations with nature. Demanding a fundamental shift towards citizen-led decision-making, governance and production, SEM’s offered a different vision of Japanese politics and productive relations completely at odds with continued tripartite rule. No longer were Japanese citizens content to accept real deprivations for the chimera of affluence and quality of life. Rather than looking back gratefully at the expanding availability of consumer durables, electrical appliances and luxury goods, citizens were awakened to what they had lost, and the shallowness of tripartite promises. After two decades of increased consumption, it was clear to many that they had sold out cheap. McKean notes that “[l]eaning further to the left than the Americans, they regard Japan’s affluence as a quality forced on society by profit-seeking industrialists dependent on the perpetual expansion of markets, and many believe that Japanese consumers would readily surrender this affluence if offered a choice and a respite from advertising.”⁷¹ Importantly, this was more than the idle musings of isolated intellectuals, it was reflected in the growing demands of consumers themselves – an essential bulwark of high-growth productivism.

Rather than accept the elite-driven fear-mongering over the supposed deprivations citizens would have to endure for the sake of the environment, there was an adamant

⁶⁹ *Japan Economic Yearbook 1971*, 103, 147.

⁷⁰ Doug McEachern. “Combining Democracy with Growth: The Search for a Formula.” *Democracy in Contemporary Japan*, ed. Gavan McCormack and Yoshio Sugimoto (Sydney, NSW: Hale and Iremonger Pty. 1986) 27.

demand that citizens had suffered enough. Rather than suffer greater deprivations to maintain corporate profits, there was a broad consensus that industry must pay for the clean-up, from profits, without raising prices or tax-assistance. The people had already paid, it was time for industry. And pay industries did. At the height of popular contestations (1969-1974), corporate investments in polluted related equipment grew nearly ten times.⁷² By 1975 pollution abatement expenditures reached 17.1% of total equipment costs.⁷³ At the same time, corporations were subject to court-imposed indemnities that challenged not only profits, but their very survival.⁷⁴ And still, it wasn't enough.

While the tripartite warned that the environment could not possibly be taken into account without threatening a lower QOL, the majority of citizens recognised this as a bargain. When citizen priorities were polled by the government, the vast majority favoured "preservation of nature" over further 'development,' even when development was understood to include other desperate QOL concerns like housing.⁷⁵ For increasing numbers, the demand for sustainable and democratic social-environmental relations was profound, and extended far beyond the shallow offerings of more of the same baubles. Turned on by environmental deprivations, SEMs, and citizens in general, were increasingly moving on to the more fundamental issues of *who* decides *what* is produced, and *how*. As noted by Moore, "[t]he broad scale and persistence of resistance constitutes

⁷¹ Referring to the academic supporters of SEMs. McKean 133.

⁷² At the same time, government expenditures grew five times. Together this signifies a substantial diversion of capital away from productivist projects of expansion and profit. *Japan Economic Yearbook 1975/1976* (Tokyo: Oriental Economist, 1976) 72.

⁷³ *Japan Economic Yearbook 1977/1978* (Tokyo: Oriental Economist, 1978) 71.

⁷⁴ Minamata was a watershed after which court-ordered compensation grew across all pollution cases. In spite of their fears of insolvency, by 1975 Chisso Corporation had paid out over \$80 Million in compensation. Smith and Smith 135.

⁷⁵ Watanuki 70. 59.7% favoured "preservation of nature" vs. 20.2% for "development"

a damning indictment of the failure of all-out capitalist development to make for a decent life for the ordinary people, for they show that even the Japanese economic ‘miracle’ cannot deliver the most essential goods of all – justice, equity, and dignity for all.”⁷⁶ And it was these calls, for “justice, equity, and dignity for all” that were becoming increasingly articulate and strident, and the ruling elite could not satisfy. As announced by Moore, the diverse collection of social movements that grew in strength and efficacy,

represented a double break. It was a break with the growth-at-all-costs corporate ideology behind Fordism, which they attacked as both hollow and oppressive. It was a break with the limited elite vision of ‘peace and democracy,’ to which they counterposed egalitarian, participatory democracy as an antidote to corrupt, LDP money politics.⁷⁷

SEMs brought these two streams of criticism and advocacy together in a way that linked the social-environmental costs of high-growth productivism with a particular, repressive, political-economic regime. Together, calls for citizen-led and controlled, democratic and sustainable social-environmental and political-economic relations shook the ‘1955 System.’

As well as the grassroots challenges to patterns and processes of social-environmental and techno-productivist change, corporate-Japan was also confronted with the loss of both internal and international resources. While the peripheries were closing to further development, Japan was buffeted by international developments for which corporate-governing elites were completely unprepared: a surge in oil prices, international protectionism, growing competition from NICs, rising resource costs and dwindling foreign technology stocks to borrow from, the Nixon shock, skyrocketing land

⁷⁶ Moore 354-5.

⁷⁷ Moore 376.

prices, etc.⁷⁸ Unable to garner the necessary social support to implement further productivist deprivations, growth rates plummet from nine percent in 1972-3 to minus one point three percent in 1974, recovering only to a relatively modest three to four percent by the late 1970s and 1980s.⁷⁹ As a result, Japan's growth rate, 1974-1979, was only half of that for 1967-1972. Industrial production actually fell in 1973, and didn't regain 1972 levels until 1978.⁸⁰

While politicians and pundits point to various *external* pressures to account for Japan's fall from productive grace, Morris-Suzuki points to "growing domestic opposition to pollution," and reminds us that "the oil crisis of 1973 was no more than the superficial stimulus to a process of change whose roots lay deeply embedded in the structure of the Japanese economy."⁸¹ Partially, Japan had advanced as far as it could on the coattails of foreign technology; there wasn't much left to beg, borrow, or steal. It was time for Japan to create its own technological inroads. Likewise it had pushed social-environmental degradation to the limit, unable to proceed without serious technological and environmental (re)constructions. Noted by Morris-Suzuki, "high growth was already doomed as early as 1968 or 1969...What is more, many Japanese business people and economists recognised these signs. The concept of an information society, which began to be popularised at precisely this time, was in fact a tentative proposal for a solution to the crisis which Japanese industry faced from the late 1960s onward."⁸²

This thesis does not deny the global dynamics that Japan and the rest of the world had to confront at this time, only that the ability and means available to Japanese

⁷⁸ Hein 116.

⁷⁹ Morris-Suzuki. *Technological Transformation* 210.

⁸⁰ Williams 138.

⁸¹ Morris-Suzuki. *Technological Transformation* 210.

political-economic elite were conditioned by the extent of social-environmental and popular protest domestically. Similarly, it is not denied that the US and other economic powers were moving in the same direction toward 'light' industry and that Japan had to continue the mad rush of technological innovation to be competitive; but, the extent to which Japan changed, the nature of the changes, and the rationales behind them were significantly determined by domestic concerns following the contradictions of productivism, social-environmental degradation and popular protest. Even during the much vaunted oil crises, surveys suggested that the majority of Japanese favoured stricter environmental protection, even if it implied economic costs.⁸³ Even while they were inundated with corporate and government warnings about the global state of crisis, and the dire impacts on their quality of life, Japanese citizens, wizened by two decades of unrestricted productivism, had had enough.

While MNT would dismiss SEMs, or channel their energy and support behind labour-driven socialist projects, the Japanese case demonstrates the significant threat SEMs posed, and their fundamental opposition to party-driven and centralist ambitions. Building in urgency and impact through the early and mid-1970s, SEMs exposed the social, environmental, economic and political consequences of heavy-industry productivism, and the corporate-government interests behind it. The relative low standard of living and the growing weight of environmental degradation and communal suffering found expression in a national swell of popular protests that threatened to destroy the '1955' edifice of democracy, production and stability. The promises of post-

⁸² Morris-Suzuki, *Beyond Computopia* 50.

⁸³ McKean 21.

war 'productivism' that had served as the societal glue holding together the techno-productivist and social-environmental relations beneficial to corporate-government interests had been exposed as a façade hiding unequal relations and dire social and environmental consequences. In so doing, SEMs politicised the hitherto a-political and largely uncontested techno-industrial and social-environmental basis of uneven wealth and rule. Because of the ruling elite's vested interests in the continued exploitation and degradation of communities and the environment, they were found unable to address the mounting environmental or political crisis. The result was a snowballing shift to the left, and beyond, to citizen-centred and controlled politics and action. SEMs and the widespread popular support formed in their wake, threatened to wrestle control back from the centre of corporate-government interests and empower the localities and regions at odds with the political and economic 'core.' Struggling to replace the dynamic of centralisation and peripheralisation, with citizen-based politics, decision-making and control, SEMs posed the greatest threat to conservative rule and Japanese capitalism.

Chapter Seven: *Hakuchū*

The crises that shook Japan in the early-mid 1970s were not, as often accepted, and promoted by Japanese politicians and business leaders, reducible to external factors such as the oil or Nixon shock, but was intimately tied up in domestic changes and challenges. The wholesale prioritising of productivism had been proven bankrupt, and the government in particular, was under immense pressure to address the dire social and environmental consequences, or risk losing political-economic control. While MNT is useful in illuminating the dynamics between crisis and further techno-industrial developments, the crises are understood primarily as it relates to the conditions of production, meaning material resources and/or labour. The Japanese case demonstrates that production, as it unfolds within and dependent upon an integrated social totality, is potentially susceptible to challenges and crises on all fronts. In particular, the Japanese case demonstrates that the environment is an important terrain of contestations not only because of the degradation and diminishing of productive resources, but the impact on the health and quality of life of individuals and communities. Likewise, popular contestations retain the importance given within MNT, although the explanatory weight and emancipatory hopes placed on organised labour must give way to communities and environmentally-minded organisations as they struggle to articulate their experiences, seek redress, and challenge the centralisation of authority.

The corporate-governing response to SEMs' challenge was two-fold. On the one hand, the Japanese tripartite acted with denial, obfuscation and outright illegal activities in support of the offending industries, followed by empty policy promises and an

attempted re-centralisation of authority.¹ When this failed to provide the social-harmony necessary for continued profits and rule, the core-elite embarked on an ambitious project of techno-industrial transformation and the commensurate (re)construction of nature; both as understanding and material relations. A shift to 'light' industries of electronic goods, computerised machinery, robotics, and increasingly, information industries and services, promised the maintenance of uneven development through the re-conceptualisation and material relations with nature, and the promises of a more just and democratic quality of life.

This section briefly accounts the tripartite's failed attempts to regain centralised control and production through the channelling of protests and concerns through the deadening mechanisms of the state, while implementing a flurry of pollution-related legislation which failed to impress or confuse the increasingly organised and sophisticated protest movements. In spite of their efforts, the ruling elite could not deal with the social-environmental degradation of heavy-industry productivism within the framework of the '1955 System.' The inevitable result, was the escalation of crises and the proliferation of SEMs into ever-expanding social welfare and quality of life concerns and action. In the end, as highlighted by McKean, "defenders of the economy feared not just increased expenditure but a total industrial shutdown."²

As demonstrated in the above discussions of environmental degradation and social contestations, the LDP was reluctant to accept the pleas of pollution-suffers, or take seriously the threat SEMs posed. Their initial response was to deny that pollution was a problem. If and when that didn't work, they stressed that the LDP, the dutiful

¹ A pattern firmly established in Minamata, and seen consistently across the Big Four, and most other cases.

bureaucratic watchdogs, and the corporations themselves, were doing everything possible to combat it. While 'Tokyo' rationalised that a certain level of pollution was typical for such a prosperous nation, they steadfastly refuted any link between pollution and the political-economic system as a whole. Rather, they rolled out the threadbare adages that the people must be prepared to sacrifice for the greater good of the nation. Further, in an argument which has become all too familiar, they claimed that high-growth production, with its relations of perpetual technological innovations and benign government guidance, was the only possible solution; it was only with continued rapid economic growth, achievable with an LDP government, strong bureaucratic governance, and healthy, profitable corporations, that Japan could address pollution.³

Yet, pollution-related grievances escalated as victims and their supporters turned increasingly to direct action, the media, and the courts to press their claims, and the tripartite found their established position as the political, economic and social centre of Japan threatened. The claims of benevolent guidance that the '1955 System' had relied upon, were being dismantled, and new loci of action and control were being developed. In an attempt to counter this, the government acted to re-assert their centrality, pointing to the same 'traditional' attributes of social-cohesion and a patriarchal state they had called upon to fuel high-growth productivism. As noted by Upham, "[a]t every juncture where it had a chance, the government took action to discourage individual action, particularly legal action, and to reward cooperation and dependence on the bureaucracy."⁴ As victims experienced in Minamata, reliance on state structures and processes often meant prolonged suffering as victims endured endless and ineffective investigative and

² McKean 227.

³ McKean 212.

conciliatory processes, of which *mimai* is an illustrative example. Relying on the mediation of the government, the silence of suffering was purchased through minimal corporate payments that expressed 'sympathy' but not guilt. Chisso Corporation, politicians and the bureaucracy, actively encouraged the acceptance of this offer, and discouraged further agitation, while suppressing information about the known effects of methyl-mercury poisoning, which continued to flow unabated. While this was possible in 1959, when social-environmental degradation seemed contained in specific localities scattered across the peripheries. It quickly became woefully insufficient. Once similar incidents of degradation and suffering emerged across the country, elite efforts to suppress and contain the costs of high-growth productivism proved insufficient to placate the growing legions of sufferers and their supporters. As SEMs expanded beyond the localities of degradation, they increasingly sought new mechanisms of redress, such as the courts.

While Japan had a weak judiciary tradition prior to the Big Four, they subsequently emerged as new contenders in popular legitimacy, authoritative decision-making, compensation and regulation. The courts found successively in favour of the plaintiffs, and came out with stinging indictments of production-at-all-costs, recommending a strengthened tort system, which would make it easier for victims to press claims, rewarding large sums of money and responsibility from industry.⁵ The government stepped-in to regain control. While the courts supported the assertion of individual and group rights, and the responsibilities of industrial offenders, the corporate and governing elite, notably MITI, asserted the primacy of industrial production and

⁴ Upham 345.

pushed for “a comprehensive system of extrajudicial dispute resolution by the bureaucracy.”⁶ Upham explains that “[t]o divert this activism away from the courts and politics, the government had to find an alternative for tort suits to compensate pollution victims and a mechanism for anticipating and defusing local pollution issues before they developed into national issues.”⁷ The government response was to expand the ad hoc measures used in isolated cases such as Minamata, to a nation-wide mechanism to institutionalise the identification, investigation, mediation and compensation resulting from pollution-related disputes. While legitimising this move with claims of quicker and more just treatment of victims, it was also sold to the public as being more ‘Japanese’: non-confrontational, relying on the paternalistic state, etc.⁸

While the government invested considerable money and energy into diverting and assuaging popular anger over pollution-related degradation and illness, it was insufficient to counter the nation-wide groundswell of SEMs. Targeting specific cases in which pollution and victim-hood could be easily identified, and ‘scientifically-proven,’ elite attempts to re-centralise redress through the already de-legitimised bureaucracy did little to check the continued defilement of the environment, or quell the growing contestations and drop in popular support. Of particular concern, was the inability of bureaucratic re-centralisation to address the growing identification of industrial pollution with far-reaching quality of life concerns. While an extra-judiciary body might have placated community unrest over a particular instance of social-environmental degradation with the

⁵ For an optimistic look at the importance and possibilities of an emboldened judiciary, see McKean.

⁶ Upham 343.

⁷ Upham 343.

⁸ It should be noted that this system of centralised redress, while suggesting government commitment, and involving considerable sums, was in all effects dismantled by 1987. Upham 343.

application of financial band-aids, it did little to quell the growing association of pollution with an entire social, economic and political regime.

As a threat to the '1955 System,' the SEM style, form, and content of popular political action had to be quashed - but it was becoming clear that to do this, pollution also had to be solved. The 'business-as-usual' approach was proven insufficient, and the corporate-governing elite had to regain political momentum and control. This was expressed in the *relative* decline of the bureaucracy, as politicians and corporations sought to regain control and address pressing popular concerns. Consequently, the issue of industrial pollution shifted from bureaucratic offices, to the Diet.⁹ After more than a decade of fiddling at the margins of action, the LDP was forced to recognise the threat posed by SEMs, and pass an impressive-seeming bevy of pollution-related legislation, emerging with the strictest laws of any affluent industrialised nation and spending the most on anti-pollution measures.¹⁰ As early as 1967, as the SEMs surrounding the Big Four were taking on more serious overtones, and the cases of Yokkaichi Asthma, and Niigata methyl-mercury poisoning were heading for the courts, the LDP passed the *Pollution Counter Measures Basic Law*, a public-relations exercise that insisted that any measures must be "in harmony with the healthy development of the economy."¹¹ Roundly criticised as insufficient, this was followed in 1969 by three government *White Papers* openly critical of the social-environmental costs of 'Production-First.'¹² These were followed in 1970, with the much-celebrated 'Pollution Diet.'

⁹ Patrick notes the declining role of MITI in particular. Patrick 7.

¹⁰ As a % of GNP. McKean 21. Government expenditures on pollution counter measures grew 5.6 times between 1971-1977. *Japan Economic Yearbook 1977/1978* 71.

¹¹ As insisted by MITI: quoted in Smith. *Democracy Derailed* 161.

¹² The *Economic White Paper: Challenge to Affluence* (July 1969) published by the Economic Planning Agency and highlighting the environmental costs of productivism; the *Welfare White Paper: Basic Conditions for Prosperity*, published by the Ministry of Welfare and calling for the greater internalisation

By 1970, pollution had become *the* most significant political issue confronting the government, and while their actions were more manipulative than altruistic, the consequent flurry of activity was the greatest “concessions to its plebeian constituents that it has never equalled before or since.”¹³ As celebrated by McKean: “[citizen movements] were the single most important cause of the nation-wide concern about environmental problems, they were a strong stimulus for the creation of Japan’s impressive package of environmental legislation passed since 1970, and the [court] verdicts themselves constitute one of the most ‘environmentally progressive bodies of case law anywhere in the world.’”¹⁴ As part of the ‘Pollution Diet’ the LDP revised the *Basic Law for Environmental Pollution Control*, removing the caveat that action be “in harmony with the healthy development of the economy.” At the same time the government established the Environmental Agency, the Central Environmental Dispute Coordinating Commission, and fourteen additional anti-pollution laws. Nationally, new institutions and anti-pollution policies sensitive to popular concerns were passed, and a greater willingness to work with regional and local authorities manifested. Locally, more political debate, contestation, and resistance to top-down, Tokyo directed edicts emerged, along with more partisan politics and greater sensitivity to popular concerns. At the party level, new coalitions, platforms, and agendas sprung up with new sensitivity to citizen concerns and the environment. Even big business got in on the act, with “a realisation that there are limits to corporate irresponsibility,”¹⁵ and were led to feel “embarrassment”

of environmental costs; and the *National Life White Paper*, by the Economic Planning Agency, which quantified Japan’s lagging standard of living relative to other nations.

¹³ White 438.

¹⁴ McKean 43.

¹⁵ White 439.

and “shame” over pollution, and began to engage in pollution-related research and action.¹⁶

Of all this, Upham assures us, once the government and businesses committed themselves, solving industrial pollution was actually quite easily done. As a result, within a decade Japan went from the most polluted environment of any major industrialised nation, to merely comparable to the rest. Upham tells us that relying on similar measures of carrots and sticks adopted elsewhere, Japanese elite “[were] able to use them more effectively and vigorously than elsewhere because the degree of pollution had created a political consensus that made it very difficult to oppose antipollution measures openly.”¹⁷ While, as Upham recognises, the dire state of social-environmental degradation demanded action, his optimism belies the tripartite relations dependent upon corporate profits and the continued abuse of the environment. As impressive as the above list of SEM accomplishments and establishment action are, the results were far more limited. As concluded by Bennett and Levine,

Although this list of accomplishments gives the impression the Japanese are actively engaged in solving their environmental problems, the decisive changes in disruptive procedures have been few... reform proceeds slowly, controlled by the reluctance of government and industry to find economic and political alternatives... business resists every attempt to require it to change its ways, and government is reluctant to enforce its laws too vigorously.¹⁸

Rather than address the root causes of social-environmental degradation, the flurry of government action, sought to placate growing unrest without seriously threatening the basis of tripartite relations. To give too much attention to these policies would be misleading, and confuse a band-aid for a cure. These policies, rather than

¹⁶ Bennett and Levine 464.

¹⁷ Upham 343.

affecting substantial or systemic change, were designed to quell public outrage until business-as-usual could resume.

The clearest sign that the '1970 Pollution Diet' and other tripartite-led initiatives were insufficient, was the continuing efforts and successes of social-environmental movements. Rather than easily co-opted by tripartite window-dressing, SEMs continued to protest the ongoing destruction of their environments, and win growing strength at the local and regional political level. In spite of the much touted 'Pollution Diet,' SEMs continued to proliferate, and their message struck deeper and more empowered cords in the popular consciousness. By 1974, 41% of the national population was politically represented at the prefectural or local level by 'progressive' reformers.¹⁹ By 1975, progressive governors ruled in nine prefectures, seven of which were metropolitan, including the core urban anchors of the Tōkaidō Belt: Tokyo, Osaka and Kyoto. By October of that year, 46 of 47 prefectures had passed ordinances dealing with the protection of nature, all 47 had pollution prevention sections, 44 had pollution control centres or research institutes, and 43 had administrative environmental departments. At the municipal level, 274 had departments or sections, and another 512 had sub-sections dealing with environmental issues, 49 had their own pollution control centres or research institutes.²⁰ "In sum," according to McKean, "citizens' movements have forced the local level of government in Japan to deal with an agenda set by their citizenry, to make decisions independently of guidance from the national governmental problems."²¹ The tripartite was failing to adequately address the cause and consequences of social-

¹⁸ Bennett and Levine 465.

¹⁹ Meaning non-LDP. Smith. *Democracy Derailed* 162.

²⁰ McKean 244-5.

²¹ McKean 245.

environmental degradation and was confronted with a nation-wide revolt threatening both peripheries and core metropolitan areas.

With their electoral base shattered, their regional and local satellites ‘lost’ to citizen-led campaigns of reform, and threatened with a loss of national power, the LDP entered a period of decline that lasted for most of the decade: *hakuchū*.²² White states that during *hakuchū*, when the LDP majority was but slight and their popular support even more precarious, they “became unprecedentedly careful, moderate, defensive, and responsive in regard to the opposition, to the public, and to democratic norms – especially on the local level.”²³ White further notes, that the LDP’s success at reversing the downward trend for the 1979 election was through co-option and ‘buying-off’ of oppositional policies through ‘collaborative’ efforts and outright bribes. Their short-term strategy of co-opting opposition through the centralisation of the mechanisms and means of social-environmental redress, the sharing of political capital and nods at collaborative decision-making, and through a succession of weak environmental laws, had proven useful in holding on to power, although just. It proved insufficient as a long-term strategy however. While taking care of the partisan challenges favoured by MNT, it still left the more significant threat: the citizens themselves.

The continued pressure of SEMs confirmed that the legislation and orchestrations that the corporate-government elite initially fiddled through was insufficient in addressing the systemic causes of pollution or affecting real change in the nature of political or governing power in Japan.²⁴ The fiddling did however give them the

²² *Hakuchū* suggests a state of relative parity

²³ White 430.

²⁴ It is possible that even if the LDP had wanted to seriously tackle pollution, they would have been obstructed by the bureaucratic and corporate interests they relied upon. Editors of the *Japan*

breathing space and tools to advance a long-term strategy to regain political control over the meaning and relationship with nature, and to set into motion the transition to 'information-capitalism' dominated by so-called light industry. This involved the (re)construction of the socio-cultural understandings and relations with nature such that techno-productivist 'advances' could continue to centralise power and wealth within the bounded socio-spatial scape of Tokyo, as local and prefectural pressures were co-opted with promises of regional empowerment, social-environmental harmony, egalitarian affluence and conspicuous consumption. The utopian vision of the information society helped make-up for the lack of real action on the environmental front and the demands for wholesale systemic changes. As noted by Morris-Suzuki, "Japan's business and political leaders were starting to recognise the necessity of discovering new directions for economic expansion and new ideologies which would endow those directions with political content and credibility."²⁵ But importantly, as pointed out by McCormack, "the underlying conviction of the way to proceed did not change"; just a switch from *kombinats* to technopolises.²⁶

Economic Yearbook recognised that MITI and the powerful Ministry of Construction effectively prevented any restrictions on continued development. *Japan Economic Yearbook 1978/1979* (Tokyo: Oriental Economist, 1979) 73.

²⁵ Morris-Suzuki. *Beyond Computopia* 26.

²⁶ *Kombinats* were massive Soviet-inspired industrial complexes constructed in the peripheries, and favoured during the high-growth era. McCormack 55.

Chapter Eight: The Convergent Solution: (Re)Constructing the Social Landscape

It is my contention that democracy in the industrialized world is in fact in direct conflict with the need of capitalism to pursue efficiency in production.... Development has driven out democracy, both political and economic, as hindrances to national competitiveness... it is the very pursuit of efficiency within the [Japanese] corporation that has progressively corroded and eroded both political and economic democracy in society at large.¹

The aim of science and technology are designed to achieve is shifting from efficiency hitherto pursued to preservation of the natural environment, safety and resources-saving.²

Underestimating the depth of popular concern and outrage represented by SEMs, the Japanese ruling elite stumbled through a decade of half-hearted measures more concerned with preserving established relations than abating pollution or protecting communities. Yet, as 'Tokyo' proved unwilling, or unable to address the social-environmental relations fundamental to high-growth productivism, SEMs continued to proliferate, and the social underpinnings of centralised and exploitative production and rule continued to fray.

Any project of renewed and secure productivism had to dispel the increasingly pressing SEM and popular turn against undemocratic, unequal and centralised control and wealth premised upon exploitative and unsustainable production. The understanding of nature as a source of raw materials to be exploited and polluted with abandon, forcibly confined to an apolitical sphere beneficial to corporate-government interests had been shattered. At the same time, the political and economic relations that benefited from and called forth the degradation, were being challenged by enraged and empowered localities,

¹ Moore 353.

² *Japan Economic Yearbook: 1977/1978* 59.

demanding greater control over political and productive relations, control and wealth. Together, the shift in understanding and relationship with nature, and that between localities and regions with central authorities, constituted a general turning-away from the social foundations of the '1955 System.'

Amongst crisis and uncertainty, the government acted to re-positioned itself as the helmsmen leading Japan to calmer (and cleaner) waters. As early as 1971, the influential MITI and corporate funded Japan Computer Usage Development Institute (JACUDI), presented *The Plan for an Information Society*,³ in which three possible solutions were proposed. The first option was most consistent with the traditional patterns of corporate-government rule as it involved the development of Japan's regions through massive public works that would channel national resources through the bureaucracy, industry and LDP.⁴ The second option, which directly answered many of the critics and contestations rocking the government, and very much at odds with the first option, called for the creation of a welfare state along Scandinavian lines. Predictably, this strategy lacked stable support or effort. The third option, proposed the total restructuring of Japan as an information society. In light of the multiple challenges confronting the Japanese political-economic order, JACUDI strongly advocated the third option. A shift to an information society dominated by light industry offered the 'Convergent Solution,' *promising* to address all of Japan's social, economic and environmental problems, while exacerbating none of them.⁵

³ *Jōhō Shakai Keikaku*

⁴ The Tanaka Plan kind of strategy, built on massive public works, was in part untenable because of inflationary fears, and the environmental costs associated with it. Morris-Suzuki, *Beyond Computopia* 65.

⁵ "JACUDI and other bodies were...successful in popularising the information society idea, not so much because it offered a clearly superior solution to any one of these impending disasters, but because it could plausibly be presented as the convergent solution – that is, as the single plan whose implementation

After a decade of bitter contestations and *hakuchū*, resulting in half-hearted and ineffective pushes in various directions, the ruling elite, as signified by MITI's *Signposts to a Prosperous Information Society* (1981), closely echoed JACUDI's report of ten years earlier, and came out strongly in favour of the third option. Promising to solve the problems of social-environmental degradation while ushering in a new, prosperous ecotopia of light industry, the information society offered the ruling elite renewed legitimacy in their uneven relations of centralised(ing) governance and production. The shift to light industry and an information society was orchestrated through government policies and changes in the nature and means of techno-industrial production, as heavy-industry of ships, steel and chemicals gave way to computers, robots and services. Yet, to enable the shift in techno-industry, and reflecting the pivotal role of SEMs, the social underpinnings of corporate-government led productivism had to be (re)constructed. As essential as the ideological and consumptive 'package' was in ensuring the high-growth success of the '1955 System,' it was equally central to light industry, perhaps more so. In direct response to heightening social-environmental contestations and the broader turning away of citizens from the norms, institutions and actors of high-growth productivism, the shift to light industry promised to usher in a neo-traditional age under the benign hand of corporate-government governance, and transform Japan into a conflict-free technoutopia.

Central to this effort was the re-casting of perpetual technological change and (re)constructions of the environment as a positive, desirable process, that preserved and strengthened community, the environment and over-all quality of life. Through the

would ameliorate all (and aggravate none) of the major problems threatening the Japanese economy in the 1970s." Morris-Suzuki. *Beyond Computopia* 58.

promises of new light and intelligent technologies, the ruling elite turned back the clock to a mythical time of social-natural harmony built on re-discovered rural connections, social cohesion, consumption, and a (re)constructed *Nihonjin-ron* that promoted the unique intelligence of the Japanese people as essential to world economic ascendance. In short, light industry was to fulfil all the promises made of heavy-industry, while protecting the environment and ushering in an age of unprecedented democracy, leisure and cultural development.⁶ It was, as coined by Morris-Suzuki, the birth of 'information capitalism,' "suggest[ing] the interaction of a particular form of technology with a particular social and economic [and environmental] system."⁷ In this, the shift to light industry mirrored and advanced the processes of centralisation and degradation evidenced in the high growth era.

Social-Environmental Harmony

Perhaps the most ironic note in the shift to light industry was an invigorated faith in technology as the protector of nature and community. Challenged with maintaining corporate profits and government rule while addressing social-environmental needs and the contestation of SEMs, the tripartite acted to re-package nature, from a politicised resource to be extracted from and polluted, to a social artefact, a product, constructed, packaged, and sold as affluence, lifestyle and identity in promotion of the 'information society.' And rather than acting at cross-purposes, as in the case of heavy-industry, the preservation of nature and the techno-industrial shift to light industry were seen as

⁶ As laid out in the *Machine Information Law* of 1978, which sought to integrate and promote the machinery, electronics and information industries as engines of total economic growth in an effort of "meeting the increasingly diverse and sophisticated needs of our people by the enhancement of national life, the improvement of citizens' welfare, the creation of a society in which life is worth living etc." Quoted in Morris-Suzuki, *Beyond Computopia* 30.

necessary compliments. The shift to light industry promised a glorious future in which production could continue unabated, as consumers enjoyed ever expanding products in a state of social-environmental harmony.⁸

SEMs had succeeded in politicising the environment and directing the unflattering light of degradation squarely on the corporate-government elites. In the process, communities came to recognise and celebrate the inherent connections they felt between themselves and their environments, and in so doing, re-cast the a-political, productivist understanding of nature the '1955 System' had depended upon. The shift to light industry rested upon the ability of the ruling elite to re-claim this understanding of nature, and (re)construct it in line with core productive and political needs. This was done with assurances that the very aspirations of communities and SEMs were possible only through the technological promises of light industry. This allowed the elite to re-control the expanded political landscape, re-centralising their power over understandings and relationships with nature, and demanding renewed technological innovations.

The shift to light industry was portrayed as consistent with the innate attachment of the Japanese people with their specific geography and the inherent Japanese cultural characteristics that followed. As articulated by government and industry, the 'new' Japan, strove to (re)integrate their perceived uniqueness originating in the *Jōmon* Period⁹ of forest dwelling hunters and gathers that lived in splendid ecological harmony and gave root to the unique Japanese civilisation. In particular, it was stressed that the traditional Japanese harmony with, and reflection of the natural environment was expressed in the shared spirit of *wa*, *ie*, and *aida*: harmony, household, and connectedness (undichotmous

⁷ Morris-Suzuki. *Beyond Computopia* 70.

⁸ As articulated by JACUDI. Morris-Suzuki. *Beyond Computopia* 60.

connections). Pointing to these unique (and patriarchal) characteristics, it was confirmed that the Japanese shared a profound attachment to their environment that was distinguishable from the unsustainable 'Western' norms that dominated heavy-industry and posited a strict dichotomy between the social and the natural.¹⁰ Heavy-industry, as it was developed by industrialised 'Western' nations was seen to represent the inharmonious relations that gave rise to social-environmental degradation and crisis. Light industry, as it was to be developed in Japan, and consistent with innate Japanese characteristics, was necessarily more sustainable. While the Japanese might have ignored their cultural roots of social-natural harmony during the misguided high-growth years, they could be assured that the government and corporations, were now redressing past wrongs and solidifying productive relations consistent with a homogenous community of people born in commune with a bracketed and unique land.

Yet, as highlighted within MNT, capitalist production remains inherently dependent upon the constant exploitation and uneven re-creation of the conditions of production – whether it be 'heavy' or 'light.' This posed obvious challenges. The constant exploitation and (re)construction of the environment, as the necessary corollary of technological change could not be avoided; but, it could be re-conceptualised as a social and environmental good. This was possible by claiming that light industry was the expression of innate Japanese characteristics of social-environmental harmony, and thus the (re)constructed landscape and re-centralisation of political-economic might that it depended upon, was the re-establishment of social and environmental harmony destroyed

⁹ *Jomon* Period - 7000-250 BCE

¹⁰ McCormack 173. In an ironic twist, the ideology of 'inbetween-ness' can be likened to MNT's sense of social totality bridging social-natural dichotomies, and allowing unrestricted social construction of the environment as somehow 'natural.'

by heavy-industry. It was claimed that the Japanese people, with a unique history and culture, had always cultivated a harmonious relationship with the environment. This traditional relationship, in turn, *demand*ed the (re)construction of Japan consistent with the exigencies of light industry.

The productive demands of light industry, complete with the massive (re)construction of the Japanese landscape that it depended upon, could then be seen as ushering in a new age of social-environmental harmony, and putting to rest the fears promulgated by SEMs. The reliance on a resurgent *Nihonjin-ron* that built upon a belief in traditional and innate characteristics that expressed the Japanese people's attachment to their specific landscape provided the foundation for the socio-cultural (re)constructions that legitimised and promoted light industry: the turn to the rural, egalitarian and democratic communities, inherent 'light' intelligence and global civilisation. Yet, as pointed out by Morris-Suzuki, the Japanese relationship with nature has always been fluid, and the idea that traditional Japanese culture emphasised a social-environmental one-ness, is a elite-driven construct that has more to do with the 'scientific' lust for the greater commodification of total social-material conditions, than historical veracity.¹¹

Renewed Regionalism

Although Japan was to transcend new frontiers through the development of light industry, it was to be based upon neo-traditional relations, principally renewed bonds between members of a community and their specific natural environments. Happily ensconced in their empowered localities, connected by complicated computer circuitry, and high-speed infrastructure projects, the information worker would be able to draw on

the wealth of traditional Japanese culture, its harmonious connection to the natural environment, and the individual's location within a tight-knit, cohesive family and community. This was most apparent, and in turn dependent upon, a renewed regionalism, in which localities and regions, often far from the Tōkaidō Belt, were re-envisioned as the empowered, democratic sites of *true* social and environmental harmony.¹²

The much heralded re-discovery of social-natural harmony and timeless connection with the Japanese landmass, prioritised the connections between communities and their specific environments. Where heavy-industry was seen as a turning away from traditional Japanese sensitivities, a Japan transformed by light industry offered a re-discovery of innate characteristics, and with them, a 'rural' Japan of sustainable and empowered communities. This reflected widespread popular concerns and the demands of SEMs. The further Japan sank beneath social-environmental degradation, gross centralisation and urbanisation, the more appealing were traditional links between individuals and their communities, and communities and their environments. This was evidenced from the 1960s onwards, with the steady growth of a *furusatō*¹³ boom: "an exaltation of Japanese folklore and rural nostalgia... idealized country life and country folk as the true exemplars of Japanese values and communal norms."¹⁴ At the same time as this yearning for a mythical pre-industrial Japan continued to grow, there were demands for a de-centralisation of productive and political authority away from the

¹¹ Morris-Suzuki. *Fuzzy Logic* 126

¹² As noted by Morris-Suzuki: "[p]erhaps the most persuasive and alluring image conveyed by Utopian descriptions of the information society is the image of a revitalised regional community." Morris-Suzuki. *Beyond Computopia* 151.

¹³ *Furusatō* – old hometowns

¹⁴ Williams 194.

Tokyo-core, to the community level. This was realised in the 'capture' of local and regional political offices by communities struggling under the deprivations of high-growth productivism. Re-awakened to their environments, individuals and communities connected their experiences of degradation with the centralisation of authority, culture and gravity to the urban metropolises and a loss of regional community bonds and meanings. As such, SEMs, and communities in general, demanded a fundamental re-alignment of cultural attachment and community control to the local level.

Forced to address these concerns, the ruling elite portrayed the shift to light industry as turning back the clock to a romanticised past of familial, communal and environmental connection, adorned with the dressings of local-democracy and latest in high-tech consumer goods. This was to be realised through the development of regional production centres located in a newly conceived rural Japan, where 'traditional' social-environmental characteristics of *wa*, *ie* and *aida* held sway. The result was both the universalisation of the peripheries as the store-house of essential Japanese characteristics, and their differentiation from core-urban megalopolises reeling under the contradictions of productivism. This dynamic of universalisation and differentiation, centralisation and degradation, was reflected in MITI's plans for regional technopolises. Departing from the economic single-mindedness of *kombinats*, these growth nodes of high-tech industry, were to bring together the holistic promises of light industrial development: political, economic, socio-cultural and environmental.¹⁵ Built around 'electronic cottages'

¹⁵ Morris-Suzuki. *Beyond Computopia* 153.

conjured up by light technology amongst the unspoilt nature of the regions, technopolises promised unprecedented regional wealth and independence.¹⁶

As articulated in the *Information Society and Human Life* report (1983), published by the Economic Planning Council, all the contradictions and contestations that plagued industrialism would be addressed through the promises of new technologies. The result would be harmonious communities, nestled in nature and light industry production.¹⁷ The promises of re-discovered rural Japan, was also then a promise of a renewed social contract, in which technological progress would provide the base of social stability, strong families, cohesive communities, and a nurturing environment. Fundamental to this was a renewed promise of democracy. The contestations that transformed Japan's social-political landscape from the late 1960s onwards, increasingly connected local experiences of industrial pollution with the concentration of wealth and authority in core urban centres, and the relegation of regions and communities to peripheral warehouses and pollution sinks. Thus, SEMs' critique of heavy-industry production and the demand for greater democratisation, social control of resources, production and decision-making within specific regions and localities went hand-in-hand.

The shift to light industry answered these critiques in the promised decentralisation of wealth and authority sure to accompany the development of high-tech regional centres, the de-vesting of authority to the prefectural and local level, and the economic justice achieved through shared middle-class norms. This was a holistic

¹⁶ Alvin Toffler's vision of the 'electronic cottage' was adopted widely, and echoed in the Social Policy Bureau's vision of the household as an 'intellectual information centre.' Morris-Suzuki, *Beyond Computopia* 170-1.

¹⁷ As observed by Morris-Suzuki, "the report is then able to present the prospect of a community in which technology has virtually solved the social contradictions of alienation and exploitation inherent in industrial capitalism." Tessa Morris-Suzuki, "Sources of Conflict in the 'Information Society'." Some

package, in which the de-legitimised environmental, QOL, and political relations of the '1955 System' were to be countered by social-environmental harmony fostered in empowered regional centres of light industry. Dependent upon renewed traditional characteristics found in regional centres, light industry promised to ease high-growth urban contradictions, while promoting empowered localities with greater control over political and productive issues.

Middle-Mass Society

The democracy promised empowered localities was echoed on a more individual level through the promises of economic justice commensurate with an information society of shared affluence and leisure. As power and wealth were to flow from the core megalopolises to the peripheries through light industry transformations, it was to disperse through the population and rest within the empowered and enriched individual. Better, the Japanese were told that they had already achieved unprecedented equality. As proof of the resurgent values of traditional social cohesion and equality of opportunity needed to quell contestations, and seen as necessary pre-conditions for the transition to light industry, the government cultivated a new class-less, conflict-free vision of Japan as a *Chūryū Shakai* - 'Middle-Mass Society.'

The Japanese elite dealt with the death of the high-growth era and the increasingly strident popular protests, with a flurry of new regulations for business, compensation for victims and greater nods towards social security. While insufficient on their own, they provided the foundations for an ideological shift towards light industry, and a belief in

Japan as a 'middle-mass society.' This was a deliberate sleight of hand to dispel the encroachment of SEMs onto the explosive terrain of QOL.¹⁸ Proclaimed by P.M. Miki Takeo (1974-76), with backing from a group of prestigious *Todai*¹⁹ academics, *Chūryū Shakai* promoted a conflict-free vision of Japan, marked by the helpful hand of the government and agency of empowered individuals.

Regardless of where one lived in Japan, or how they contributed to the technological nation-building, all Japanese could find strength in their new association with a mythical middle-mass that cut across class, professions, education and training, affluence, lifestyle or geography. Supported by government-sponsored polls, this ideological construction aimed to diffuse calls for greater social welfare and the legitimacy of divisive class identification, as the vast majority could identify with the newly expanded, affluent 'middle mass.' The effect was the legitimisation and maintenance of the established order while diffusing protests. Menial, blue-collar work that dominated heavy-industry was to give way in the new Japan, to white-collar, salary-worker norms of highly skilled and educated information workers.²⁰ As promised as early as the 1969 *Policy Outlines for Promoting the Informationisation of Japanese Society*, drafted by MITI's Industrial Structure Council, the shift to information society promised "access to reliable information, free [citizens] from clerical work, and thus bring about the blossoming of human creativity."²¹

¹⁸ Taira 169.

¹⁹ *Tōdai* - Tokyo University

²⁰ Kelly 196.

²¹ Quoted in Morris-Suzuki. *Beyond Computopia* 9.

As a section of the Japanese population, 'young industrial wage-workers' were identified in national surveys (1971), as the least satisfied with their life conditions.²² Combined with growing popular unrest, this presented a potentially explosive demographic that the ruling elite needed to address. Rather than identify with their blue-collar occupation and trade unions, the great mass of workers were re-envisioned as empowered knowledge workers similar in identification with engineers, office workers and the like. The result, according to Morris-Suzuki, was to further eviscerate the already marginal labour movement as a serious social-political contender.²³

While promising greater national welfare and economic equity, Taira advises that "this ideological sleight of hand was more a wishful thinking than a serious empirical generalisation."²⁴ Moore is even more direct, suggesting that the middle-mass was "neither new, nor middle, nor mass ... a muddled construct that excluded only the very wealthy and the very poor from an ill-defined 'middle' in which everyone from factory workers and farmers, mom and pop shop owners and doctors, to managers and engineers was lumped together."²⁵

While the foundations of any claim of middle-mass ascendance were empirically dubious and politically problematic, it had general appeal. As illustrated by Taira:

The basic fluidity of social structure is assumed as given. Everything flows and floats. For all practical purposes, except for a small number of unfortunate people washed out into the sea and another small number...who live upstream or beyond

²² Bennett and Levine 479.

²³ Concentrating on trade unions, the avenue in industrial society with which "the dissatisfaction of workers have traditionally been expressed." Morris-Suzuki opines that "perhaps the most alarming feature of the new economic and social order is the declining effectiveness of the very organisations which exist to articulate and confront these problems." Morris-Suzuki. *Beyond Computopia* 178.

²⁴ Taira 182.

²⁵ Moore 385.

the cloud-covered peaks of the mountains, virtually everybody is happily together in the middle stretch of the stream.²⁶

Taira's naturalistic rhetoric is appropriate for the role 'middle-mass' ideology played in easing the turn to light industry, the quelling of popular anger over social-environmental degradation, and to legitimise the continued (re)constructions of the physical landscape and the centralisation of wealth and power. Implicated in all these processes was the resurgence of popular consumption.

Renewed Consumption

Along with a newly hegemonic middle-mass society, Japan emerged from the fires of social-environmental crises adorned with the latest consumer fashions and ideologies. The post-modern Japan of light industry, was to be marked by a middle-mass society of white-collar information workers, complete with white-collar consumer norms.²⁷ Highlighted by Japanese 'info-society' guru, Hayashi Yujiro, in his seminal work *The Information Society* (1969), it was clear that the transition to the information age was dependent on a transformation of consumer products and preferences, with greater emphasis and price placed on the 'information-added' qualities such as market research, design and fashion.²⁸ Fuelling the transition to light industry, information was to become a consumer product, obtainable by all, as it was produced by all, in the streets, homes, offices and factories. Through its purchase, consumers could confirm their newly appointed status while assuring the successful national shift to light industry and its

²⁶ Taira 183. Some twenty years later, the ideological strength of the middle-mass myth was observed by myself, as it was often pressed upon me from students, shop-keepers and teachers, representing a broad socio-economic spectrum. The underlying message, seemed invariably the contrast between Japan's prosperous and just social-contract compared to divisive-individualistic 'western' countries.

associated promises of social-environmental communion and sustainability. As a result, most Japanese eagerly embraced their identification in the middle-mass and the consumptive codes that signified belonging, fuelling massive social investments in research and development, new techno-industrial procedures, and the further commodification of social information and culture within easily packaged and sold fashion and identity.

With profound impacts on the Japanese social-environment, and a ready contrast to the durable consumer goods that dominated heavy-industry consumption, light industry was increasingly wrapped within a consumptive search for information, fashion, leisure, recreation and identity. Now that their 'rabbit hutches' were filled with consumer goods, the next commodity was escape.²⁹ As critically noted by Fukutake, "[t]he mass media have exerted pressure that has driven consumption to new heights, while cajoling the citizen to frantically seek recreation facilities and more free time. The result is a surging 'leisure boom,' a mass race to have as much 'fun' as the next fellow."³⁰ Rather than a needed respite from the drudgeries of employment, in which personal, familial and communal bonds could be re-created, Fukutake lamented that leisure consumption was a market driven pursuit that threatened to become the goal of all life, collapsing meaningful distinction between work, home, and personal life. The type of consumer who succumbed to this Siren he called the *homo ludens*: "The .. type of man who considers consumer spending, amusement and pleasure the goals of life."³¹ Work, home, and

²⁷ Kelly 196.

²⁸ Morris-Suzuki, *Beyond Computopia* 9.

²⁹ Bennett and Levine note that a higher QOL, and more leisure, was identified in public opinion polls as a pressing demand since the late 60s. Bennett and Levine 480.

³⁰ Fukutake 98-9.

³¹ Fukutake 105.

consumption were enfolded into the singular corporate-driven pursuit of expanding markets and profits that left little room, or need, for protest.

Fukutake's observations were in keeping with the material changes in production and consumption that followed and fuelled the shift to light industry. Dependent upon information-input, light industry replaced the durable consumer goods of the '1955 System' with products distinguished more for their 'value-added' input: information, fashion, prestige, identity. This went beyond the initial drive to 'rationalise' heavy-industry production through the incorporation of information, to a new consumptive focus on the ever-changing and ephemeral qualities of 'beauty, sensitivity, play and creativity'.³² Accordingly, the transition to light industry as it manifested in consumptive relations (and necessarily production), proceeded from heavy-industry of consumer durables, to light industry of information added products, to an information society, in which information itself, in the form of fashion, identity and leisure become the manufactured and consumed products.³³ This involved a shift in popular consciousness from an ideology of 'Middle-Mass Society' to a 'Consumer Society' of 'micro-masses' each defined and identifiable by consumptive habits and aesthetic accruelements; even the celebrated development of the 'neo-homo sapiens'.³⁴

As information input demanded 'total' production processes of small batch products, and beyond, to the branding and marketing of identity, it also demanded the (re)construction of Japan itself. Consistent with the demand for information consumption, the Japanese landmass was to be reduced to information products that

³² 'Heavy, thick, long and big' (*jū-kō-chō-dai*), was seen to give way to 'light-thin-short and small' (*kei-naku-tan-sho*), and ultimately to 'beauty, sensitivity, play and creativity' (*bi-kan-yū-sō*)

³³ As evidenced in *The Information Society and Human Life (1983)*, drafted for Japan's Economic Planning Agency, by info-guru Masuda Yoneji. Morris-Suzuki. *Beyond Computopia* 13.

could be (re)constructed at will and sold as national identity, leisure, or adventure. This legitimised the extensive (re)construction of the Japanese landscape through massive construction projects according to the dictates of light and information production and centralisation. The links between light industry consumption, the re-discovery of rural Japan, and the (re)construction of the Japanese landscape was demonstrated in Japan's national railway campaign of the early 70s: 'Discover Japan.' Much as industry was moving from 'mass' to 'micro' production, JR's campaign highlighted the regional differences within Japan to spur domestic travel consumption; which, according to Ivy, "reorganised the entire cultural topography of Japan according to a continuum of 'tradition' and 'modernity.'"³⁵ Sharing a monolithic natural community of characteristics, Japan was nevertheless broken-up into distinct regions expressing environmental and social characteristics making them suitable for light industrial development, and a readily packaged and consumed commodity. This was furthered in the 1980s, as 'Discover' Japan gave way to 'Exotic' Japan, the intensification of micro-differentiation in which the entire geography was classified according to manufactured identities. While 'Discover Japan' was still premised on the seemingly inherent characteristics of Japanese communities and their environs, 'Exotic Japan' was a celebration of newly created consumptive 'identities' manufactured by resorts and theme parks. It was micro differentiation within a project of universalising identity consumption and physical (re)constructions.

³⁴ Neo-homo sapiens – *shinjinrui*. Kelly 196.

³⁵ Ivy 252.

Originating within the universalising core of Tokyo as epitomised by the hugely popular Tokyo Disneyland,³⁶ theme parks became as ubiquitous as technopolises, regurgitated across the Japanese landscape, in department stores, shopping centres, and even internalised into the development of entire cities, and became a prevalent feature of post-industrial consumption life-style Japan.³⁷ Noting the process of uneven development in which core relations colonise the peripheries to maximise markets and profits, McCormack criticised the proliferation of resort-theme parks:

As homogenous and nouveau riche resorts drawn to identical Tokyo design proliferated in the Japanese islands, local interests or peculiarities were swallowed up and negated; the natural environment that originally justified the siting of the resort facilities undermined; and environmental damage, whose ultimate costs – including economic costs – are incalculable, spread; social morality was undermined and communities divided as speculative virus spread and eroded the ethic of work and production that brought Japan success in the first place.³⁸

The result was a proliferation of theme parks that brought place and information together in ‘novel’ consumptive packages designed in Tokyo. New high-tech resorts sprung up in the hitherto ‘pure’ regions of harmonious social and environmental relations, and were connected by newly built and expanded expressways, *Shinkansen*³⁹ lines, tunnels, bridges and cable networks, that ‘allowed’ the ‘discovery’ of Japan and the flourishing of traditional harmonious living in new ‘exotic’ locals. Anchored in (re)constructed technopolises and resorts eagerly ‘discovered,’ the shift to light industry promised the birth of post-modern Japan in which the drudgeries of heavy-industry

³⁶ Founded in 1983, Tokyo Disneyland welcomed over 140 million visitors within the first 10 years of operations and remains the most popular and successful theme park in Japan. McCormack 97.

³⁷ One of the more notable examples of the integrated consumption of leisure, place, and the environment is *Huis Ten Bosch*, a recreated medieval Dutch town constructed as a real, lasting, postindustrial city, complete with 6km of canals, promising to bring together ecology and economies, leisure and relaxation, boasting close to 4 million visitors in its first year of operations, and with plans to develop actual housing. Omura Bay, Nagasaki. McCormack 98-9.

³⁸ McCormack 105.

productivism and the concerns of degradation and curtailed QOL gave way to unabashed leisure consumption in fabricated communities, theme parks and resorts.⁴⁰

For an alternative take, Douglass warns that the generally accepted belief that the techno-industrial shift to light-info industry enabled an actual boom in consumption is problematic. Douglass asserts that household 'real income' actually fell, due to the skyrocketing costs of housing and land, and commensurate roll-backs in union and labour positions and demands, transition to part-time labour manufacturing, etc. He suggests that the discrepancies are most noticeable in housing, where in spite of government declarations of middle-mass society, the distinction is increasingly class-based and stark. But, whether the new consumptive norms of middle-mass Japan were mere baubles and bells masking a declining standard of living or not, the result was largely the same. The (re)constructed 'leisure' state was an opportunity for new economic-industrial development; an attempt to morph around the growing social and environmental contradictions of a still developmental state, without sacrificing GNP, profits or established corporate-government elites, all while steadily (re)constructing understandings and relations with the social-environment to further the centralisation of wealth and authority.⁴¹

Resurgent *Nihonjin-Ron*

While the promises of a middle-mass society of leisure consumption and 'discovered' regions might not have provided the average Japanese family with a house,

³⁹ *shinkansen* – high-speed 'bullet-trains'

⁴⁰ It can be said that Japan has pioneered the transition from productive to leisure based economy-society. By 1990, the leisure market was around 70trillion yen and rising (while work hours and actual leisure time remains constant since the 70s. McCormack 80.

⁴¹ Douglass 102-3.

it did provide an easily recognisable 'home' in the neo-conservatism of resurgent *Nihonjin-ron*. Through-out the 70s, and into the 80s, a proliferation of chauvinistic *Nihonjin-ron* emerged along with the resumption of economic growth and the ousting of left-leaning political parties and popular contestations.⁴² It was the consolidation of 'information capitalism,' the integration of political-economic regimes, technology transformations and (re)constructions of nature, wrapped within a total project of social control and manipulation.⁴³

Much in the same way it was used to promulgate *neo*-Confucian ideologies supporting elite-driven productivism during the high-growth years of heavy-industry, *Nihonjin-ron* was parading out again, but adorned with the leafy vestiges of still older *pre*-Confucian, innate Japanese characteristics. The turn to the local and regional, where social-natural harmony was still seen to hold sway, and families and communities still functioned free from the alienation of hyper-urban cores, easily slipped into a resurgent *Nihonjin-ron* in which the constructed cultural attributes beneficial to community elites were draped in the cloaks of post-modern light industry and an information society. This found national expression in 1979, with the official adoption of the national year-date based on the reigning emperor, and the official declaration of Japan as a mono-racial and *shizen kyōdōtai* – a natural community. This in turn was later claimed by P.M. Nakasone as contributing to the development of Japan as an 'intelligent society,' legitimising further techno-industrial, and social-environmental transformations.⁴⁴

⁴² Ross Mouer and Yoshio Sugimoto, "Nihonjinron at the End of the Twentieth Century: A Multicultural Perspective," *Japanese Encounters with Postmodernity*, ed. Johann P. Arnason and Yoshio Sugimoto (London: Kegan Paul International, 1995) 261.

⁴³ As noted by Morris-Suzuki, "the development of science ceases to be an exogenous force shaping society, and becomes instead the means to an end – the end of engineering the ideal society." Morris-Suzuki, *Beyond Computopia* 39.

⁴⁴ McCormack 173.

Mouer and Sugimoto observe that the currency of *Nihonjin-ron* has been highest in times of drastic change, used to manufacture social cohesion, using external (and in this case, internal) threats as fuel. The characteristics tend to include false unity within distinct Japanese and 'western' societies that posit a static culture while denying internal contradictions/contestations. Easily packaged ideological slogans, such as "Production First" during the '1955 System', or Japan as an *ie* and/or *chūryū shakai*⁴⁵ during the shift to light industry were used to smooth over complex relations within an illusion of national cohesion and development, demanding conformity where pluralism existed, and distinction where there were similarities.⁴⁶ As such, while the *Nihonjin-ron* paraded out during the shift to light industry provided a national sense of identity designed to inspire and succeed in the development and application of information technologies, it should be recognised as a state driven ideological project to re-assert social cohesion and stability.

The resurgent *Nihonjin-ron* forwarded in official reports and recommendations clearly envisioned a societal transformation, in a technologically determined fashion beneficial to established elites. In the same way that light industry was to preserve Japan's natural connection to the land, it promised a social climate that favoured the cultural attributes consistent with that connection: *wa*, *ie*, and *aida*: harmony, household, and connectedness. As a renewed connection was forged between modern Japanese and their essential spirit of one-ness with their environment, 'traditional' attributes also promised a renewed social compact in which the ideologies of social control and repression that smoothed the wheels of high-growth productivism, were applied once more. In the case of light industry, traditional social-environmental harmony was added

⁴⁵ *ie* – household; suggesting the traditional Japanese social relations and preferences centring upon enforced stability, conformity, and hierarchy. *Chūryū Shakai* – Middle Mass Society.

to the list of innate Japanese characteristics beneficial to tripartite elite, and paraded as an essential aspect of the Japanese identity, to be promoted and protected by a strong state. This social and environmental harmony, emanating from Japan's rural 'heartland' was seen as an essential repository of Japan's inherent 'intelligent' culture, that would spur the needed shift to an information society and distinguish the Japanese in the world economy. The result was the re-focusing of critical attention away from the internal contradictions of productivism and the nefarious qualities of hyper-concentrated wealth and power, to the celebration of the continued commodification of the environment (as physical and cultural resource), and promotion of neo-traditional cultural attributes that flirted dangerously with national racism, while re-enforcing social characteristics beneficial to continued tripartite rule.

Essential Intelligence

In the same way that the overtly political attributes of social cohesion and acquiescence to authority were increasingly located in 'nature' and intertwined with Japan's 'unique' characteristics, so too was an understanding of Japan as a traditionally 'intelligent' society, legitimising further techno-industrial and social-environmental transformations.⁴⁷ In contrast to rigid western intelligence epitomised by heavy industry, Japan's intelligence was portrayed as the perfect compliment to social-environmental harmony and light and information technologies. This holistic intelligence was seen to exist most purely in the rural regions in which traditional Japanese characteristics, built upon the inherent connections between community and nature, remained strong. The

⁴⁶ Mouer and Sugimoto 241.

⁴⁷ As proclaimed by PM Nakasone.

scientific and technological secrets of traditional Japanese religious and social beliefs and norms nurtured in the regions, were then 'discovered' in the life sciences, robotics, artificial intelligence, information technologies, submicron design, filtration, etc., and used to further justify the state-driven shift to light industry.⁴⁸

The 'new' sciences, based on relativity, harmony, holism, and hermeneutics, were purported to reflect traditional Japanese culture, which was then reified as absolute and used to justify the imposition of these 'traditional' notions back onto society as proven post-modern science. As noted by Morris-Suzuki, "it imposes ideas derived from science upon social thought in order to render it immune from criticism...science is accepted as absolute truth, and its terminology and methods are borrowed to make politically debatable choices seem part of the inevitable order of things."⁴⁹ Authorities insisted that Japan must embrace the resurgent neo-conservatism of *Nihonjin-ron*; the centrally dictated projects locating light industry in the regions; the massive projects of (re)construction, infrastructure, *shinkansen*, and the channelling of total national resources, because it was seen as the expression of traditional Japanese intelligence, proven by science.⁵⁰

Science was seen to evolve autonomously and value-free, while demanding particular relations with society, and between society and the environment, beneficial to entrenched elites, and their quest for expanding profits and control. As we have seen, this posited a static culture that stretched back to the *Jōmon* Period, sanctified by post-modern

⁴⁸ Morris-Suzuki, *Fuzzy Logic* 122.

⁴⁹ Morris-Suzuki, *Fuzzy Logic* 127.

⁵⁰ Adopting a static, ahistorical understanding of Japanese culture, foreign scholars have likewise given a great deal of attention to the supposed connects between Taoism, Buddhism, Shintoism and Japanese cultural cohesion and harmony with nature, and the collapse of the Newtonian world view and spread of relativity, quantum mechanics and the like, that seem integral to information technologies and

science, and justifying unequal social relations. That traditional Japanese culture, rooted within a bracketed geographical space and racial homogeneity cultivated a heightened intelligence particularly well-suited for advanced technologies and post-modern societies contributed to a national sense of privileged ascendance in which Japan's rightful place was at the forefront of global civilisation and economies. This in turn promoted further projects of techno-industrial transformations and (re)construction of the environment.

Unique Ascendance

By the mid-1980s Japanese pundits were celebrating their success in (re)invigorating their economy and 'traditional' values through the successful transition to a light industry - information society. Riding the swell of an invigorated economy, the Japanese market was flooded with flattering information on Japan for Japan. Foremost amongst this booming *Nihonjin-ron* were notions of social-natural harmony and other neo-conservative 'truths,' that placed Japan in a favourable light of international comparison. In particular, it contrasted the perceived Japanese characteristics of the *Jōmon* period, with a caricature of static 'Western' culture.⁵¹ Celebrating distinct national characteristics, secure behind a wall of surging exports, a shift in focus occurred from Japanese *culture* to Japanese *civilisation*: "with the emphasis perhaps changing from something to be appreciated to something which is seen as an advanced form of social organisation in global terms."⁵²

While the 1970s began with SEMs challenging tripartite legitimacy and power at the local, regional, and increasingly national level, by 1980, the turmoil was left behind,

understandings. This was then used to explain Japan's incredible light industrial success. Morris-Suzuki. *Fuzzy Logic* 118.

and Japan was basking in consumptive largesse. At the same time as JR encouraged consumers to 'Discover' Japan unique in its history, culture and harmony with nature, Prime Minister Ōhira announced that Japanese economic success was dependent upon this distinct and essential culture, and announced a new "age of culture."⁵³ Based on its unique geography and relationship with nature, Japan was celebrated as 'exotic', Asian, and *Ichiban* - 'No.1.'⁵⁴ Accompanying international economic success, was a sense that the essential intelligence cultivated in commune with their unique geography, and accountable for techno-industrial transformations and protection of the environment, was both distinct and superior. While notions of Japanese uniqueness had always flourished, in the past they were generally used to create space *free* from western comparison. With the turn to an information society however, *Nihonjin-ron* was used to suggest that Japan had become the ascended model for other advanced societies to emulate. Japan's ascendancy over 'western' modernism was triumphantly declared, and with it, the birth of a distinctively 'Asian' post-modernism. Drawing a direct line back to their homo-genesis in the uncertain historical mists of the *Jōmon* Period, Japan increasingly understood itself as consistent with the 'New Asia,' in which 'Japan' and Asia became again blurred.⁵⁵ The new Asia, led by Japan, was seen as holding the reigns of future world dominance.⁵⁶

A particularly ironic aspect of this new 'Asianism,' was the notion of Japan as the fountain of unique Asian attributes that distinguished it from the imperially aggressive and exploitative 'West.'⁵⁷ Yet, the calls of a new 'Asianism' based on a (re)constructed

⁵¹ McCormack 173.

⁵² Mouer and Sugimoto 239.

⁵³ Koschmann 419.

⁵⁴ Dower 29.

⁵⁵ McCormack 173.

⁵⁶ Koschmann 423.

⁵⁷ Mouer and Sugimoto 240

Japan, were essentially colonial and anti-Asian, as it posited a Japanese-defined identity on larger Asia, not un-similar to the Greater East-Asian Co-Prosperity Sphere that provided the ideological justification for the Japanese imperial march across Asia 1895-1945. Once more, the 'New' prosperous Asia is Japan.⁵⁸

At the forefront of this imperial phoenix was the old tripartite guard of the LDP, Big Business and key financial bureaucracies. The solidifying hegemony of *Nihonjinron*, and of a larger, conflated 'Asianism,' was the positing of the parochial biases of techno-bureaucratic elites on the populations. As noted by Mouer and Sugimoto, by the mid-1980s, "Japan's technoprofessional elites [had] taken full control of debate about Japan,"⁵⁹ and "the ideological thrust [was]...one of unification, homogenisation, and assimilation."⁶⁰ And with the bureaucracy, moved Japan's intellectual elites, eager to assert Japan's ascendancy over 'western' modernism and the birth of an "Asian" post-modernism.⁶¹ This was part of a larger elite effort to redefine Japan as an international post-modern entity; what Koschmann refers to as a "flurry of neoconservative futurism."⁶² In this post-modern world, Asia, led by Japanese intellectual and

⁵⁸ McCormack 172. "the contradiction that lies at the heart of the Japanese proposition of Asianism [is] between shared identity with others within the region on the one hand, and the sense of Japaneseness as meaning heir to a distinct, superior, and unique quality on the other... The sense of identity thus oscillated between the atavistic notion of being a chosen people, sharing a destiny defined by race, purity of blood, and shared cult on the one hand, and universal, confessional, voluntary notions of modernity, citizenship, science, democracy, and internationalism on the other." McCormack 171.

⁵⁹ Mouer and Sugimoto 262.

⁶⁰ Mouer and Sugimoto 240-1.

⁶¹ Koschmann suggests that the separation between academics and the establishment that marked the 60s and 70s was by the 80s broken down as intellectuals became increasingly co-opted into the consumptive system, through projects such as The Japan Research and Development Corporation, set up by the Science and Technology Agency, concentrating on cementing links between academia and business, most notably through the Exploratory Research for Advanced Technology, the ERATO Project, est. 1981. Koschmann 423.

⁶² Koschmann 420.

bureaucratic elites, and contrasted with the 'west,' was seen as holding the reigns of future world dominance.⁶³

An examination of the social underpinnings of Japan's shift to globally ascendant light industry production demonstrates how social relations play an integral role within complex political, economic and environmental processes as suggested by MNT. To understand Japanese environmental relations as it pursued the transition from heavy to light, and from light to information economies, one must consider how ideologies of harmonious, sustainable, affluent, intelligent and unique *Nihonjin-ron* were cultivated to placate popular alarm and anger, while promoting particular political-economic and environmental (re)constructions. SEMs had seriously undermined the social foundations of the '1955 System,' challenging apolitical understandings of nature and the centralisation of production and control. Popular faith in the benign hand of centralised corporate-government, of the need to channel total national resources behind perpetual technological innovation and constant productive expansion, of assured affluence and quality of life behind a barrage of consumer durables, had collapsed under the accumulated weight of environmental degradation and popular outrage. Led by SEMs, communities and prefectures were questioning their adherence to centralised edicts, and asserting more sustainable and democratic ideals. As a result, the environment was being politicised as a protected space of community sustenance, belonging and quality of life at the same time as centralised production and political power was being challenged by increasingly empowered localities and prefectures.

⁶³ Koschmann 423.

The shift to light industry and an information society promised the 'convergent solution' to these concerns. Nature, which had been politicised as the raw materials and pollution sink of heavy-industry became both the sanctified source and malleable product of light industry. Communities, suffering under heavy-handed Tokyo edicts and exploitation, became empowered technopolises of social-environmental harmony and empowered democracy. Behind a resurgent *Nihonjin-ron*, an essentially intelligent and globally ascendant Japan was re-discovered in the 'rural' peripheries where communities lived in social-environmental harmony, and the national characteristics of *Jōmon* Period hunter gathers still held sway. Light industry, became the natural expression of these socially cohesive and environmentally harmonious characteristics, promising a renewed Japan of democracy, wealth and international stature. Yet, the launching of an environmentally harmonious and socially democratic Japan (re)constructed through the promises of light industry, involved the continuation of centralised control and regional exploitation. The political-economic and environmental (re)constructions that accompanied the social shifts to light industry, and maintained the corporate-governing relations of production and control are considered in the following chapters.

Chapter Nine: (Re)Constructing the Political-Economic Landscape

There is some debate whether the pattern of strong bureaucratic and government involvement in economic development, as defined the '1955 System,' remained applicable to the challenges of the information age.¹ As witnessed in the claims made of innate Japanese intelligence and ascendance, there was a belief that light and information technologies were fundamentally different from previous industrial projects, and that these differences posed particular challenges for the staid post-war Japanese industrial structure. This line of reasoning, as forwarded by Stephen Anderson, suggests that "[t]hough the central control of bureaucracies and industrial concentration of *keiretsu* may have helped earlier economic growth, the future pattern cannot rely on such a formula."² Yet, this would seem to accept the a-historical, deterministic ideology of technology as the unfolding of scientific-truths, unencumbered by social restraints or needs, and the empowering, democratic claims made of light industry. This is clearly not the case. The shift to light industry was a deliberate project, by Japanese corporate *and* governing elites to address the challenges posed by SEMs, and to regain centralised control.³

In this way, the central claim of MNT, that social understandings and relations with the environment are dominated by the demands of production and the social-

¹ For a quick over-view of this debate, see McCargo 43-4.

² Stephen Anderson, "From Crisis to Information Society in Japan," *The Information Society in Japan. Papers Presented at the Eighth Annual Conference of the Japan Studies Association of Canada*, ed. Robert Bedeski and Carl Mosk (Victoria: Japan Studies Association of Canada, University of Victoria, 1995) 54.

³ Rather than "the product of an impartial, politically blind unfolding of pure scientific progress," Morris-Suzuki is emphatic that the shift to light industry was a deliberate, though uncertain, and contested response "developed precisely in order to meet the challenges posed by the disappearance of essential

political forces and institutions they constitute and depend upon, remains valid. Further, MNT's understanding of social and material crises as the engine of greater technological developments and the solidification of corporate-governing control is justified. However, MNT's attention to production as the driving force behind total social relations threatens to obscure the crucial role of diverse, non-labour, non-partisan social contestations. While the political-economic relations of production, particularly as they relate to technological change, remain central to any understanding of Japanese social-environmental relations, the profound challenge SEMs posed to established tripartite elites cannot be ignored. Similar to the social (re)constructions underlying the shift to light industry, the political-economic project and promises of advanced technological change reflected the challenge of SEMs and the increasing popular hostility to centralised(ing) production and power.

Japan's success dealing with the social-environmental crises of heavy-industry productivism, in part through the channelling of (re)constructed socio-cultural understandings and relations with technology and their social-environment, saw it ascend new heights as an international power-house. In the 1970s and 1980s, a shift from consumers and adapters of 'western' productive technology, to creators and exporters of original knowledge-based and -driven light-industrialism occurred. So that by the end of the 1980s, Japan was at the forefront of computer related technology, spending more on research than any other state save the U.S., with whom it had caught up with and even

economic, social and political stimuli to heavy industrial growth." Morris-Suzuki. *Beyond Computopia* 43.

surpassed in certain high-technology sectors, and the leading provider of technology to the fastest growing economic region in the world: East Asia.⁴

International Challenges

While highlighting the role of social contestations in shaping this transition, it is worth noting that Japan, like other advanced industrial states had been taking modest steps toward such an economy throughout the post-war period. The government sponsored initiatives to 'rationalise' production through the discovery and application of new light technology, developed roughly parallel to a global energy crisis and international economic slow-down. Reliant on both international oil and markets, the traditional heavy industries were in decline since the early-mid 1970s, and were further challenged in the 1980s by *endaka*,⁵ and the internationalisation of Japanese production.⁶ Yet again, this was a parallel development, that while providing added justification and helping to shape the direction and scope of change, *followed* in the wake of profound social-environmental crisis, and must be understood in relation to domestic challenges and needs. While recognition of the broader international context might suggest that the promise of light industry did not rise solely from the pressures of popular contestations, prior to these crises, the path of Japanese techno-industrial development was still uncertain. Perhaps, if the Japanese economy was turning increasingly international, this

⁴ Morris-Suzuki. *Technological Transformation* 2.

⁵ *endaka* – the rise of the yen

⁶ For an examination of this dynamic in the steel, shipbuilding, and automobile industries, see David W. Edgington, "The Rise of the Yen and Japan's Troubled Industries: Industrial Restructuring in Japan: Sectoral and Spatial Outcomes," *The Information Society in Japan. Papers Presented at the Eighth Annual Conference of the Japan Studies Association of Canada*, ed. Robert Bedeski and Carl Mosk (Victoria: Japan Studies Association of Canada, University of Victoria, 1995). Also see Patrick; Morris-Suzuki 1988; and Imai Kenichi, "Japan's Industrial Policy for High Technology Industry," *Japan's High Technology Industries: Lessons and Limitations of Industrial Policy*, ed. Hugh Patrick (Seattle: University of Washington Press, 1986).

is less an easy explanation for the techno-industrial shifts, than a symptom of the unsustainable domestic conditions that demanded it.

The decision to embrace the rhetoric and material changes of an information society, the methods pursued and effects generated, highlight the importance of popular contestations, and corporate-conservative attempts to maintain uneven relations of wealth and power. SEMs not only encouraged the shift to an information-society, but helped affect the discourse surrounding such a shift, the promises made of it, and the actual material processes and priorities. Looking at the global shift to information economies we might conclude that Japan would have made the shift by necessity anyway, and this might be the case. But, we cannot separate the global embrace of information technology from the pressures and possibilities opened up by Japanese corporate-government efforts. And, even if Japan might have pursued a high-tech industrial strategy regardless of social-environmental contestations, the nature of the changes, the technologies emphasised and developed, the impact on the environment and communities all might have been unrecognisable to us today.

Techno-Utopia

The term 'information society,' was first coined in the 1960s, and by the late-70s, after a decade of bitter contestations, had achieved a prayer like ascendance. The stalwarts of the '1955 System,' 'heavy, thick, long and big,' began to share attention with a new kind of development, based on high-technology and information: 'light, thin, short

and small,' which in turn gave way to 'beauty, sensitivity, play and creativity.'⁷ Or rather, 'Production First' gave way to 'Discover Japan,' made 'Exotic' and 'No.1.'

Called forth by a steady stream of governmental and corporate papers and plans lauding the promises of the information-age, Japan embarked on an uncertain strategy of techno-industrial change cultivated and contested through-out the 1970s.⁸ As short-term easy answers to growing contestations proved ineffective, the government, in partnership with industry, put out policy-feelers⁹ and began putting into place the foundation of a renewed Japan built upon the steady guidance of a re-legitimised corporate-government elite. While promising to usher in an age of unprecedented social welfare and quality of life, the shift to light industry first and foremost "represented a technocrats' Utopia, a public justification for the policies desired by economically powerful groups...a vision of the world transformed not by the revolutionary action of the oppressed but by the benign guidance of the ruling elite."¹⁰

As promised in *The Information Society and Human Life* (1983), drafted by the Economic Planning Agency, the shift to light industry promised the end of societal

⁷ Light, thin, short and small - *kei-haku-tan-shō*: Beauty, sensitivity, play and creativity - *bi-kan-yū-sō*

⁸ Some of the more significant government-industry reports-plans include: *Measures for Strengthening the International Competitiveness of the Computer Industry* (1966) by MITI's Electronics Industry Inquiry Committee; *Japan's Information Society: Themes and Visions* (1969), drafted by advisory body of the Japan's Economic Planning Agency; *Policy Outlines for Promoting the Informationisation of Japanese Society* (1969), by the Industrial Structure Council, MITI; *The Plan for An Information Society* (1971), MITI sponsored, corporate financed Japan Computer Usage Development Institute (JACUDI); *Signposts to a Prosperous Information Society* (1981), Industrial Structure Council, MITI; *The Information Society and Human Life* (1983), drafted by advisory body of the Japan's Economic Planning Agency; and MITI's, Industrial Structure Council and the Information Industry Committee's 1983 report *How New Media Should Develop: Toward an Affluent 21st Century*. Morris-Suzuki asserts that "it is important to remember that the reports are not mere forecasts of future developments: they are also policy documents drawn up by influential advisory bodies." Thus they should be looked upon as both utopian future-gazing, and functioning policy statements. Morris-Suzuki, *Beyond Computopia* 19.

⁹ These documents were met with both optimism and derision, and were part of a Japanese tradition of having small groups of experts sound out future possibilities to be taken up or not due to political expediencies. Morris-Suzuki, *Beyond Computopia* 25.

¹⁰ Morris-Suzuki, *Beyond Computopia* 22.

conflicts, ushering in a world of harmony. According to info-society guru and leading advocate Masuda Yoneji, through the application of computer technologies, “human relations will ... be transformed and instead of competing with and restricting others, better relationships will be established through synergetic voluntary cooperation.” The result would be “a societal transformation just as great or even greater than the industrial revolution.” And most importantly, this would involve a society without conflict, where “the dominant form of maintenance of public order replacing resort to the law will be the autonomous restraints exercised by the citizens themselves” requiring new ethics of restraint and service.¹¹ No longer would citizens find it necessary to resort to SEMs or the courts, as in Minamata and the Big Four, embarrassing and costly for the government and its industrial partners. The information age of light industry was to be marked by self-imposed public order and restraint. As noted by Morris-Suzuki, the ‘neo-conservative Utopia’ of an information society was

the image of a world in which material abundance and spiritual fulfilment will be achieved, not through the painful restructuring of the social order, but through the spontaneous evolution of the existing system itself: an image of a transformed society in which, nevertheless, the fundamental structures of power will be preserved and strengthened.¹²

This was more than a government or industry response to changing international conditions, but an orchestrated effort to determine the path of technological and social development in order to re-centralise national wealth and authority while addressing pressing social pressures.

¹¹ Quoted in Morris-Suzuki, *Beyond Computopia* 15.

¹² Morris-Suzuki, *Beyond Computopia* 22.

Rationalisation

The 'new' post-crisis political-economy was focused on information-added production, and through that, the promises of social quiescence, national affluence and international ascension. To this end, total national resources were re-channelled towards re-legitimised national productivism. The attention placed on the manufacturing of new technologies in part reflected Japan's success by the mid-1970s of having caught up or surpassed its international competitors, and no longer able to acquire cheap technology from abroad.¹³ More importantly, it reflected a concerted government-industry effort to develop 'next-generation technologies' in pursuit of a 'next-generation' Japan.¹⁴ This was directly related to the social-environmental crisis that brought the '1955 System' to a close.

Yet, to maintain tripartite rule while the 'next-generation Japan' was constructed, Japan was reliant on the constant techno-industrial transformations and production that marked the '1955 System,' and more immediately, continue to produce and sell globally the very heavy industries that spawned protest and crisis. Accordingly, the shift to light industries was necessarily a two stage transition, each dependent upon the other. The first stage, which emerged during the period of crisis, was a *partial* transition in the rationalisation of heavy-industries through new light technologies. This promised to address the offences of heavy-industry production, and provide the necessary flex-room to manoeuvre while providing a ready market for the development of new light technologies and products. The second stage, which necessarily overlapped the first, but

¹³ For extensive references to sources on the Japanese system of innovation see Leonard H. Lynn, "Japan's System of Innovation: A Framework for Theory Guided Research," *Research in International Business and International Relations*, ed. Manuel G. Serapio Jr. 6 (1994) 162.

¹⁴ Morris-Suzuki, *Beyond Computopia* 37.

came into its own in the 1980s, was the solidification of a *total* light techno-industrial regime centring upon advanced research and development, new advanced materials and consumptive desires.

The push to rationalise heavy-industry production followed government sponsored efforts closely, and was a necessary first step in over-coming popular suspicion and anger over tripartite productivism. As previously noted, the launching of the 1970 'Pollution Diet' was accompanied by a flurry of government initiatives to spur rationalisation, and new regulations to demand stricter compliance by industries of social and environmental standards. With the political and economic wealth and control of Japan dependent upon massive heavy-industry production, the original thrust was to make the production more efficient, less costly in capital and material, and more appealing to the environmental and QOL demands of its citizens.

Maintaining wealth and production within the hands of the core *keiretsu*, heavy-industry factories were not replaced, so much as retooled, with advanced information-added machinery and techniques, and converted to advance machinery production. It was an effort to consolidate production through the application of new light industry techniques, thus simplifying production while requiring fewer material and labour inputs, and creating less pollution. It was similarly an attempt to integrate industrial production with the broader social transformations that were being cultivated, most importantly, the proliferation of a mass culture of micro-fashion-identities and consumption. It was a shift in the manufacturing and marketing of products to maximise efficiency and profit, rather than a shift in the products themselves. As set out in the Industrial Structure Council's vision for the 'informationisation' of Japan (1980):

in order to meet increasingly diversified human needs, a major issue for the continued growth of industry will be the discarding of the old format of mass producing standardised goods, and the development of technologies for the automatic production of small batches of varied products. For this purpose it will be necessary to integrate information management and to create total systems controlling everything from the receipt of orders, through the planning and production processes, to the delivery of goods.¹⁵

The government, most notably MITI, was central to these efforts. MITI-led initiatives to overcome domestic and international crisis through the promotion of selected industries as engines of total economic growth, continued the corporate-governing relations of the '1955 System.' By the end of the 1960s, as well-publicised cases of industrial pollution and SEMs proliferated, government support for technological solutions took off.¹⁶ In 1971, near the height of social contestations, MITI's Industrial Structure Council's interim report focused on transforming traditional heavy industries into knowledge intensive industries. This was supported with the 1971 *Electronic Machinery Law (Kidenhō)* (1971-1978), in which government bodies provided U.S.\$400 million in low interest loans to facilitate the development and manufacturing of high-tech electronic machinery, such as industrial robots, in order to rationalise machinery production through the application of microelectronics technologies. This was replaced in 1978 with the *Machine Information Law (Kijōhō)*¹⁷, with 62 different development plans that emphasised the rationalisation of production techniques through new computer-info-microelectronic technology.¹⁸ As a result of corporate and government

¹⁵ Quoted by Morris-Suzuki. *Beyond Computopia* 11.

¹⁶ Between 1964 and 1969, government funding for research and development doubled. *Japan Economic Yearbook 1970* (Tokyo: Oriental Economist, 1970) 78.

¹⁷ The Special Machine Industry Promotion Temporary Measures Law

¹⁸ Morris-Suzuki. *Beyond Computopia* 28-30. Edgington explains that MITI has consistently attempted to facilitate the development of new sectors through the rationalisation of old with light industry/services. Edgington 111.

efforts to fuse the promises of light technology with their continued dependence upon heavy industry production, between 1977 and 1982, numerically controlled machinery in Japanese factories rose by 76,000, and industrial robots rose by 90,000. In roughly the same period (1977-81), computers used in industry rose by more than 47,500.¹⁹

R&D

While national resources were channelled into corporate efforts to 'rationalise' production and regain profits while quashing popular contestations, greater attention was focused on the research and development of new technologies. Japan could only rationalise, and more ambitiously, fully leave behind the image and degradations of the high-growth years by a total shift to the post-modern, in the form of light and information technologies. To this end, massive government investments in corporate projects of light industry transformation were made. The orchestrated shift to information-based industries, brought about through government and industry sponsored reports and projects, was seen to be the convergent solution, solving the ills of heavy-industry degradation, and propelling Japan into a new economic and socio-cultural age.

Recognised as the key sector around which light industry hopes revolved, the government and corporations targeted the development of computer-related industries. Japanese elite interest in information technology stretched back to the first un-veiling of computers in the U.S. (1946). Ten years later MITI and the automobile industry launched the Electronic Computer Investigation Committee,²⁰ which brought together industry, academia and public research labs. This interest was maintained throughout the

¹⁹ Morris-Suzuki, *Beyond Computopia* 91.

²⁰ *Denshi Keisanki Chosa linkai*.

1960s and 1970s, with corporations and MITI playing an active role in forcing the pace of computer technology and usage. Some early examples of MITI's involvement in promoting the domestic computer industry include the establishment of the Japan Electronic Computer Corporation (JECC) in 1961, spending over U.S.\$7 billion to purchase Japanese computers in bulk to encourage domestic production. From 1971 to 1977, MITI offered up to 50% of development costs for new computer production, providing an explicit cushion until Japanese firms could compete with IBM in Japan and Southeast Asia. And, in 1972, MITI consolidated semi-conductor R&D, and corporate leadership in bringing the top five Japanese computer companies together to develop 64 Ram 'superchips' by the end of the decade.²¹ Accordingly, when the contradictions of heavy-industry threatened continued tripartite rule, the springboard for an orchestrated jump to light industry was already in place.

Through the 1970s and into the 1980s, the government continued to actively promote the social networks of high-technology development, in an attempt to fabricate the corporate linkages that had developed 'naturally' in the 1950s and 1960s around heavy industries.²² In this MITI was pivotal. Following up on the 1972 'Superchip' project, MITI initiated such corporate-government projects as the Very Large Scale Integration Project 1976-1980,²³ the Next-Generation Computer Basic Technology Project 1979-1983,²⁴ the Next Generation Basic Technology Project 1981-1990,²⁵ the

²¹ Fujitsu, Hitachi, Mitsubishi, NEC, Toshiba. Imai 142-3; Morris-Suzuki, *Beyond Computopia: Technological Transformation*.

²² Morris-Suzuki, *Technological Transformation* 212.

²³ Imai notes the success of the VLSI project and the VLSI Technology Research Association that brought MITI and Japan's 5 major semiconductor developers (Fujitsu, Hitachi, Mitsubishi, NEC, Toshiba) together for 4 years, spending 74 Billion yen, 40% government, and resulting in 1000 patents. Imai 144.

²⁴ MITI provided US\$117 million to sponsored software and language-processing technology. Morris-Suzuki, *Beyond Computopia* 38.

Fifth-Generation Computer Project 1982-1992, the Supercomputer Project 1982-1992, and the 1985 establishment of the Key Technology Promotion Centre, set up jointly with corporate partners to provide up to 70% of the funding for business-led technology research initiatives, concentrating primary on microelectronics, biotechnology and new materials.²⁶

Cultivating the social networks for shared technology projects was one strategy amongst a multitude of initiatives and incentives that bound corporations and government together; including special R&D funding, accelerated depreciation allowances, tax benefits, preferential loans, the cultivation of inter-firm economies of scale, guidance towards future market conditions, government procurements through government agencies, universities and affiliated institutions to spur domestic computer development, and the active promotion of computers and the information society to the general public.²⁷ Together, government support for science and technology ballooned throughout the seventies, growing by over 300%.²⁸ The vast majority of this money was directed to corporations, in support of *new* research and development: new science, new technologies, new material and products.²⁹

Imai stresses that high technology may be considered MITI's most successful foray into industrial policy, and substantially due to the public relations efforts, 'softly' encouraging firms to move in particular directions, and the priming of domestic

²⁵ The most ambitious of the government sponsored plans to spur next generation technological progress, allocating some ¥100 billion (@US\$500 million) for development of technology in new synthetic materials, biotechnology and microelectronics. Morris-Suzuki, *Beyond Computopia* 37.

²⁶ KeyTEC, *Kiban Gijutsu Kenkyu Sokushin Senta*; Morris-Suzuki, *Technological Transformation* 217.

²⁷ On MITI's role in Japanese Industrial Policy, see Edgington; Imai; Morris-Suzuki, *Technological Transformation*; Patrick.

²⁸ *Japan Economic Yearbook 1975-1976* 59; *Japan Economic Yearbook 1980/1981* (Tokyo: Oriental Economist, 1981) 60.

demands.³⁰ As suggested, this was a two-prong strategy of rationalisation and R&D. Together, they presented a virtuous circle, with rationalisation providing a ready market for R&D, which in turn enabled further rationalisation and the gradual transition from heavy to light industry. In the mean time, it preserved profit and power for the ruling elite, while securing popular quiescence through the varied promises of socio-cultural transformations covered above. Both strategies, rationalisation and R&D, depended upon a shared corporate-government commitment to sponsor indigenous techno-industrial innovations, justifying massive government funds and the greater centralisation of authority. Resulting from a combination of government reports, legislation and projects with key corporate players, and the marshalling of national popular support through a package of ideological and consumptive promises and gains, Japan's tripartite elite successfully orchestrated a recovery from the social and material contradictions of heavy-industry productivism, and propelled Japan onto the world stage as a pre-imminent economy and culture.

As a result, from 1976-1981, when the commitment to an information revolution was still relatively young, Japanese investments in R&D increased faster than any other nation.³¹ Once apparent that the shift to light industry offered the convergent solution, R&D continued to explode. From 1980 to 1987, Japanese corporate R&D spending more than doubled, and by 1986-7, exceeded actual capital expenditures.³² In this, MITI was very involved as witnessed in various, high-powered and ambitious government-industry

²⁹ *Japan Economic Yearbook 1980/1981* 61.

³⁰ Imai 164.

³¹ Morris-Suzuki, *Beyond Computopia* 35.

³² Morris-Suzuki, *Techological Transformation* 223.

collaborative projects that succeeded in forever changing the national and global technoproductivist paradigm.

As suggested by Imai, the transition to 'light' technology may be considered the governing elite's greatest success at industrial policy. In 1970, over 50% of Japanese companies were considered 'very hard' or heavy, with over 80% of total input derived from material goods. Yet changes were already underway. At the same time, 20.8% of Japanese firms were already classified by the Ministry of Finance as 'soft' industries.³³ Through committed corporate and government efforts, this continued to grow. By 1980, light or 'soft' industries already exceeded 'hard' industries: 31.5% to 27.3%.³⁴ In manufactured product, the changes were even greater. Between 1978-1981, Japanese computer industry output grew 61%, while information processing industries grew 75%. By 1983, 24.8% of corporations surveyed in major metropolitan areas were using industrial robots, and 66.5% already using office computers. This had predictable results in employment structures, with the growth of 'white-collar' jobs. While soft industries jumped in numbers from 20.8% to 31.5%, white collar jobs rose from 35.1% to 44.4% of the work force. Even greater change was witnessed in those industries most involved with 'soft' technologies. Industries cut back on jobs, while emphasising new productive technologies and new skills.³⁵

³³ 'soft' industries defined as those that require productive input of at least 40% non-materials (R&D, marketing, etc)

³⁴ As calculated by the Ministry of Finance. Morris-Suzuki, *Sources of Conflict* 79; Tessa Morris-Suzuki, "Robots and Capitalism," *Cutting Edge: Technology, Information Capitalism and Social Revolution*, ed. Jim Davis, Thomas A. Hirschl and Michael Stack (London: Verso, 1997) 20.

³⁵ For example, in 1970 the Toshiba Electrical Company, had a 60.7-39.3% blue-white split amongst its 74,000 employees. By 1980, total employees numbers had shrunk to 64,000 and of those left, only 40.8% were blue collar. To which Morris-Suzuki concludes that "the emerging information society in Japan, rather than representing the flowering of intellectual creativity, appears to be creating a system in which growing material productivity and technological potential area accompanied by alienation and insecurity of employment." Morris-Suzuki, *Sources of Conflict* 79-80.

Political-Economic Re-Centralisation

Promoted in orchestrated corporate-government efforts as the convergent solution to Japan's social, political, economic and environmental problems, the shift to light industry confirmed MNT's attention to crises and contestations as the springboard of further uneven development. The turn to light and information industries placated popular unrest while further concentrating productive, political and social power within the interests and institutions of Tokyo. While Japan's corporate-governing elite promised greater regional development and the creation of holistic, democratic local-based communities, the reality was of (re)constructed satellites bereft of status or control, held tighter by bonds of high-tech infrastructure and social, political and economic relations that concentrated all wealth and authority within a narrow, centralised elite.

By 1980, the Tōkaidō Belt had re-emerged as the un-disputed engine of Japanese economic growth and power, accounting for 95% of steel production, 95% of oil-refining, 100% of petrochemical output, and 80% of wholesale industry. And rather than the gradual turning away from these heavy industry stalwarts diminishing the concentration of wealth and authority, it actually increased it. 82% of large corporate headquarters were concentrated in the Tōkaidō Belt, near absolute concentrations of media and entertainment (Tokyo alone accounting for 90%), and virtually all major higher education, and research facilities. The centralisation was even more profound in the narrower scope of Tokyo, which emerged with near total power. Between 1975 and 1985, 60% of new assembly and processing plants were established in the greater Tokyo area, producing 40% of the nation's industrial robots, 52% of computers and related equipment, 59% of optical fibres and fibre optics communications equipment, and 37%

of electronic medical equipment. This was echoed in the increasing shift to information-production as well, with Tokyo the terminus and originator of the majority of scientific and commercial research and development, institutes of higher learning, media, and information flows. The same was to be said of business services, with over 50% of national sales and employees in business-related services located in Tokyo. By the mid-1980s, Tokyo was the centre of *all* industries: heavy and light manufacturing, information, services and finance coming together into “one-point convergence” thrown-up over Tokyo bay and surroundings.³⁶ As mapped out by Hill and Fujita,

Japan's current global restructuring is expressed in the vast spatial tapestry of industries centering upon Tokyo. Corporate headquarters are at the core; research and development activities are spread out in a fifty-kilometer radius; production facilities line freeway corridors reaching out as far as three hundred kilometers; the whole urban mosaic is supported by high-speed information and transportation infrastructure, including door-to-door delivery systems.³⁷

The advances in speed, efficiency and co-ordination central to the shift to light industry was expressed in greater socio-spatial centralisation, in which faster, cheaper, more profitable production was etched around the magnetic hub of Tokyo. Yet, the physical (re)constructions of Tokyo commensurate with hyper-centralisation, necessarily evoked the same contradictions that marred the high-growth period. Centralisation of wealth and production led to even greater centralisation, but confronted the limits of space and skyrocketing land values.³⁸ The solution, allowing the continued centralisation fundamental to uninterrupted ‘information capitalism,’ was the production of new space, new land, necessitating greater centralisation to co-ordinate, plan, and implement. Thus

³⁶ All the figures in this paragraph can be found in Miyamoto 57-68.

³⁷ Richard Child Hill and Kuniko Fujita. “Global Interdependence and Urban Restructuring in Japan.” *Japanese Cities in the World Economy*, ed. Fujita Kuniko and Richard Child Hill (Philadelphia: Temple University Press, 1993) 286.

³⁸ As explored by Douglass.

the same pattern of co-ordinated light industry production that concentrated the might of Tōkaidō production upon Tokyo was replicated through-out the regions, as small, medium and large regional cities, technopolises and (re)constructed ‘wilderness,’ were connected by unending infrastructure projects, providing high-speed transportation and communication in a web of centralised production and control.

While the Japanese archipelago was universalised through the dissemination of productive techniques, greater-Tokyo was solidified as the undisputed hub. Flush with the vast majority of corporate headquarters, high-level management and decision-making positions, R&D, services, information flows, and small batch and customised manufacturing, Tokyo became the ‘seedbed’ (*nayedoko*) of new (differentiated) industrial and consumptive trends, that if successful, were downloaded (universalised) to the regions for mass production overseen by lower-level management posts and dis-empowered communities.³⁹ This ‘hollowing-out’ of productive power, and manufacturing processes to the regions provided constantly (re)constructed ‘space’ within the core Tokyo production zone for further developments. In this way, the regions, ‘re-discovered’ and ‘empowered,’ absorbed light industrial productive capacities, but could not succeed in developing independently from or in rivalry to the core, called into being merely as the extension of Tokyo productive needs and contradictions.⁴⁰ The result was the construction of light industry manufacturing sites in regional communities increasingly ensnared within the decision-making of corporate-governing elites in Tokyo. Regional factories, dominated by centralised headquarters were not regionally connected, had little need for skilled labour, and were only really

³⁹ Obayashi 128. As desired by corporate leaders, and supported by government plans. Morris-Suzuki, *Beyond Computopia* 167-9.

possible when the regions were conceptualised as enter-changeable space-material-labour to be universally (undifferentiatedly) exploited. By 1985, it was apparent that 'regionalisation' of high-tech manufacturing was a losing battle against the hollowing out of industry, depression of the regions and greater polarisation of wealth and industry with the core.⁴¹ The shift to light industry had succeeded in transplanting the '1955 System' while maintaining the political-economic relations and elites.

The restructuring of central Japan as an extension of Tokyo-centric 'flexible' production, and greater Japan into an eviscerated echo of the same, was equally the production and centralisation of political power. Rather than localities becoming more democratised and empowered through the promises of light industry technologies, the result was the greater solidification of centralised control, made more effective through the advances of light industry-information technology. As theorised within MNT, and reflecting the challenge of SEMs, techno-industrial development and centralised political control develop hand in hand. As the production and application of light industry became increasingly sophisticated and dependent upon national co-ordination, Tokyo's political grip over the social and material conditions of production grew.

The (re)structuring of national space witnessed in the further concentration of productive wealth and power in Tokyo, and the development of peripheral regions interconnected with ambitious infrastructure projects, was the result of centralised corporate decision making and actions, in concert with co-ordinated government assistance. The result was the extension of centralised political power over the Japanese archipelago, co-

⁴⁰ Obayashi 130.

⁴¹ Obayashi 127.

ordinating the productive conditions of regional peripheries to the demands of Tokyo-bound elites. Whether the productivist projects were made physical in Tokyo, the southern islands of Okinawa, or northern territories of Hokkaido, it was dependent upon the enmeshing of political power and action to the dictates of Tokyo, bringing together the active involvement of local, prefectural and national governments behind corporate objectives.⁴²

For all intents and purposes, local and regional governments, 're-discovered' and 'empowered' as repositories of essential Japanese characteristics and harmony with nature, became increasingly subordinate to the central government. And in this, elite bureaucracies once more emerged as the dominant players, protecting and serving centralised interests. Similar to the '1955 System,' elite bureaucracies were relied upon to channel total national resources behind centralised plans of production and control. As noted by Mouer and Sugimoto, by the mid-1980s, "Japan's technoprofessional elites [had] taken full control of debate about Japan,"⁴³ enforcing "unification, homogenisation, and assimilation."⁴⁴ Rather than liberate the peripheries, technology made it easier to subjugate them, and citizens, from afar. This was given popular expression in a growing identification with a *Kanri Shakai*, or 'controlled society,' in which the government was seen to be intensifying the centralisation of authority and control using vast information bases on citizens and consumers afforded by information and communication advances.⁴⁵

Tellingly, even local budgets remained dependent upon central approval, and mechanisms existed allowing federal ministries to remove elected governors and mayors

⁴² Hill and Fujita 288.

⁴³ Mouer and Sugimoto 262.

⁴⁴ Mouer and Sugimoto 240-1.

⁴⁵ Morris-Suzuki. *Beyond Computopia* 154.

that countered central demands. So, while the federal government acted to off-load responsibility to the local and prefectural level to address pollution and popular demands, these bodies remain dependent and hamstrung by Tokyo, prohibited from any actions significantly at odds with centralised interests. As such, with the shift to light industry it became increasingly appropriate to consider regions and localities as internal colonies, dependent upon central funds and authorities, with surplus wealth continuing to flow to imperial Tokyo. Reflecting this, many prefectures and major cities established embassy like offices in Tokyo to maintain close contacts and to influence the 'colonial' policies that dominated them.⁴⁶

By the mid-1980s, Japan's corporate-governing elite were solidifying the transition to 'total' light industry, in which productive inputs, techniques, and total social relations centred upon information, increasingly divorced from material production. Through-out Japan, heavy industry was being transformed into 'light' industries with the exploration and application of R&D, and new hybrid sites of industrial and information production were formed. Constructing 'clean' industry technopolises, integrated circuitry facilities, theme parks and resorts where steel and ships were once built and launched, the shift to an 'information society' was actively promoted to the general population as solving social-environmental threats, while ensuring continued prosperity and an unending stream of new commodities. In the process, social unrest was co-opted into renewed productivism, and the further entrenchment of centralised political-economic control. Consistent with the socio-cultural and political-economic transformations covered above, this necessitated the wholesale (re)construction of the physical landscape.

⁴⁶ McCargo 85.

Chapter Ten: (Re)Constructing the Social-Environment

It is with the physical (re)constructions of the Japanese landmass that the various threads in the transformation from heavy to light industry, and the socio-cultural and political-economic transformations necessary to support it, are brought together. The great strength of the 'convergent solution,' was the corporate-government sponsored belief that material and social relations were being brought together in a just and sustainable fashion; that 'nature' as the repository of national characteristics and history, and the 'environment,' constantly degraded and (re)constructed resources and landscapes, were compatible, and preserved through technological advances. The reality was a renewed dualism between a nature preserved in popular imagination as the source of national distinctiveness and global ascendance, and one constantly (re)constructed and degraded according to productive needs. Although responding to the challenge of SEMs to the unsustainable and unjust relations of high-growth, the shift to light industry was the even deeper transformation of the environment and further centralisation of productive wealth and power as cemented in the '1955 System.'

With the transition to light and information industries, a new landscape was required that fed both the material and social conditions of production. While the problematic heavy-industries that required raw resources and pollution were being rationalised and phased out, a new Japanese nature of refined landscapes suitable for high-tech industry and lifestyles was required, and constructed. This was exemplified by the ambitious plans for networked technopolises able to draw on traditional Japanese social and environmental attributes while creating the latest in post-modern techniques

and products, and, the associated (re)construction of Japan into pre-packaged sites of identity-consumption that offered neo-traditional mythologies of a homogenous and ascendant race in 'post-modern' resorts and theme parks. The establishment of high-tech R&D facilities-communities and refined landscapes of leisure-consumption requiring and connected by massive infrastructure projects, point to the (re)construction of Japan's physical landscape necessary to maintain the unsustainable practices of productivism, furthering tripartite interests through the solidification of (relative) political stability and profits, centralisation and exploitation. While successfully reinstating the social, political, economic and environmental conditions for centralised(ing) productivism and control, the results were further social and environmental degradation. Locating Japanese social-environmental relations in the re-solidification of the political-economic relations of the '1955 System' in response to diverse social movements confirms the analytical and political value of expanding MNT to the understandings and importance of SEMs.

Technopolises

SEMs responded to and encouraged popular outrage over industry-related pollution, the centralisation of productive and political power, and the loss of regional community bonds and sustenance. As initial elite efforts to squirm out from beneath this hostile public gaze proved ineffective, the demands of more environmentally sensitive production, enhanced quality of life and radical citizen-led democracy were making inroads into municipal, prefectural, and increasingly national politics. The resulting crisis threatened corporate-governing control over national production and power; risking the loss of LDP rule, bureaucratic governance, and the collapse of centralised(ing) industrial production. Responding to this crisis, Japan's corporate-governing elite shifted energy

and resources behind a technology-driven project of light and information industry, promising the convergent solution to popular unrest, and elite interests.

Ironically, the shift to a harmonious information society based on traditional Japanese attributes as located in the 'pure' nature and pre-Confucian norms of the regions, demanded the creation of a new Japanese nature of refined landscapes suitable for high-tech industry and lifestyles. The apolitical nature of raw resources and pollution that dominated the '1955 System' was to give way to a harmonious and sustaining nature constantly (re)constructed through unending production and consumption. This was made possible through the construction of new technologically advanced communities – technopolises. Technopolises were (re)constructed localities designed to bring together R&D, light industry and a community of 'intelligent' workers held together by 'traditional' notions of social-cohesion, hard work, and harmony with nature.

It was apparent throughout the 1970s that Japan's corporate-governing elite would continue to look to further regional development schemes to overcome the contradictions of heavily-centralised high-growth. While this strategy failed public scrutiny in 1972 with PM Tanaka's ill-fated 'plan to spread pollution through out Japan,'¹ it was echoed in the *Third Zensō*: the 1977 Comprehensive National Development Plan. Hinting at the forthcoming policies of light industry technopolises, the 1977 *Zensō*, was designed to subdue public pressures through the inclusion of environmental, urban and various associated QOL issues in the massive (re)construction of the Japanese archipelago according to the high-growth developmental ideology of government and corporate

¹ As PM Tanaka's 1972 'Building a New Japan' plan was referred to by SEM participants. McKean 182.

mandarins.² It was a small leap from this heavy-industry era regional development plan, to information-age technopolises.

Designed to encourage the shift to light and information technologies while relieving core urban pressures on land, labour and clean water, and popular demands for greater regional wealth and stature, the idea of regional high-tech hotbeds akin to Silicon Valley was sponsored by Japan's bureaucratic elites. Finally realised in 1983 with the *High-Tech Industry Concentration Regional Development Promotion Law*, MITI promoted the construction of twenty-five high-tech cities in partnership with corporate-Japan, through special infrastructure and research funds. It was a utopian vision to combine high-tech innovation with the cultures, traditions and natural resources of peripheral regions, creating a lifestyle of techno-local harmony and development. According to Imai: "it is a plan to form new cities integrating industry, education, and housing near existing focal cities and utilising the surrounding social resources to create regional centers for industrial development focusing on high technology."³ To this end, government ministries and corporations partnered the neo-traditional with the hyper-modern, attempting to (re)construct the Japanese landscape, physical and cultural communities as high-tech hotbeds on par with Silicon Valley and the North Carolina Research Triangle.⁴ As a top-down community engineering scheme, it was a dismal failure.

The *High-Tech Industry Concentration Regional Development Promotion Law* was a 10 year regional development plan promoting a synergy of education, research and manufacturing through the support of high-tech industry satellite cities of around 50,000

² McCormack 55.

³ Imai 153.

Tsukuba, is the fabricated 'science city' just 50km. north-east of Tokyo that was designed to ease some of the expensive over-crowding of research and development in Tokyo-proper. Involving 67 private companies, with MITI and private industry laboratories, Tsukuba was initiated in the mid-70s, but really developed in the wake of the 1981 *Next Generation Basic Industrial Technology Research and Development Project*, which dedicated up to US\$500 million over 10 years to promote technological development in new materials, biotechnology and microelectronics. It was, according to Morris-Suzuki, part of "the most ambitious" efforts by government and industry to determine the pace and direction of technological change.⁸ And significantly, it was a deliberate MITI effort to concentrate high-tech innovation in the Tokyo metropolitan area, while encouraging sympathetic developments throughout Japan⁹ Once Tsukuba, heavily supported by the government, was established, concentrating research, production and academia within an artificial community, it became the model for developing technopolises across Japan serving centralised research projects.¹⁰ The 'success' of Tsukuba, and the subsequent attempts to re-fabricate its social and material networks through-out the regions,¹¹ highlighted how the Technopolis and similar schemes of regional development, were the continuation of the heavily centralised productivist projects that were fundamental to the social and environmental degradations of heavy-industry. Yet, while the environment was socially and politically silent in the '1955 System', in the shift to light industry it was

⁷ Tsukuba Science City Homepage: <<http://www.info-tsukuba.org/english/index.html>>

⁸ Morris-Suzuki. *Beyond Computopia* 37.

⁹ Morris-Suzuki. *Beyond Computopia* 168.

¹⁰ Imai 154.

¹¹ Such as 'Silicon Island,' the southern island of Kyūshū as it developed into a centre of integrated circuit production, or 'Silicon Road' to describe the concentration of high-tech companies along highway systems connecting the north-eastern regions of Tōhoku and Hokuriku.

intimately integrated through a interwoven fabric of political-economic, socio-cultural and physical (re)constructions and ideologies of harmony and affluence.

Leisure Japan

The integration of technological developments, communal acquiescence and the cultural attributes seen to be consistent with high-tech intelligence and harmony with nature, necessarily called forth a broader (re)construction of the landscape than captured in successive technopolis schemes. The shift to light industry was a total social transformation in which every aspect of life was to express and support the new-found connections between the production of 'light, thin, short and small' and the personal exploration of 'beauty, sensitivity, play and creativity.' As seen in the discussion of social (re)constructions, this took the form of ideological constructs and consumption trends that promoted a resurgent identification of traditional social-environmental harmony in the re-discovery of the regions. The result was the massive (re)construction of the Japanese landscape along a pre-packaged continuum, from the traditional through the futuristic with the proliferation of resorts, theme parks, golf courses and similar projects that promised community with nature and 'post-modern' identity consumption. While often quite literally draped in verdure, this called forth massive and environmentally disturbing projects equal to and connected with the proliferation of technopolises.

Explicitly premised on the promises of environmental sustainability and the benefits to consumers of personal-environmental communion, the development unleashed with the leisure lifestyle of resort-Japan advanced behind a wall of government initiatives, including tax breaks, financial incentives, streamlined regulations, and the

weakening and/or abandoning of national park, mountain and coastal protection legislation and regulations in favour of a 'Human Green Plan.'¹² The result was the massive transformation of Japan into an integrated high-tech development project and recreation playground planned in Tokyo and (re)constructed across the country.¹³ By the end of the 1980s, the leisure market accounted for around 70 trillion yen in revenues, while some 20% of the total Japanese land area was designated for resort development.¹⁴ In a landmass with less than 20% flat area, this is astounding. On the main southern island of Kyushu alone, there were plans for 135 resorts, representing 26.7% of land area, with 100 golf courses,¹⁵ and ten theme parks. Going even further away from Tokyo to the southern chain of Okinawa, all 70 of the islands were classified as tropical resorts. Other developments such as golf courses, resorts and ski hills encroached on national park space, caused massive erosion and the further siltification of the waterways.¹⁶

The Construction State

As the regions were re-conceptualised as pristine nature and the repository of homogenous racial characteristics, and (re)constructed into technopolises and resorts

¹² McCormack 88.

¹³ For a further reflection on the links between Japanese mass-consumption and (re)constructions of the social-environment, particularly in Tokyo, see Al Vachon, "Horkheimer and Adorno go to Japan," *Alternative Routes* 17 (2001): 43-53.

¹⁴ 7.5 million hectares vs. 5.5 for agriculture. McCormack 80, 88.

¹⁵ Because of the dramatic re-shaping of areas' topographies and intensive use of chemicals, golf courses have particularly drastic effects on landscapes and their social-environmental sustainability.

¹⁶ McCormack 96. There are unsettling parallels between the government sponsored proliferation of theme-resorts, advanced technologies and the solving of environmental crisis, and the government sponsored designs for space. As quoted from the Japanese National Space Development Agency (NASDA, formed in 1969): "We can help to solve resource problems by using observations from space to discover new resources on earth, and by developing the resources of the moon. If we could create self-sufficient cities on the moon, this would also help to relieve population problems." .. and that "even if life on spaceship earth were to come to an end, humans would probably be able to find new worlds somewhere in space." This has been backed up by huge expenditures on space-related research throughout the 70s and 80s, placing Japan behind only the US in such budgets. Morris-Suzuki, *Technological Transformation* 236.

promoting the manufacture and consumption of information-added products and identity, there was a necessary resumption of the centrally planned and orchestrated infrastructure projects to connect, develop and exploit the core-urban centres and the 'rural' peripheries. In many ways the unfolding of light industry schemes, and the commensurate (re)constructions of the Japanese landmass through these massive infrastructure projects, can be located in P.M. Tanaka's 1972 plan for '*Building a New Japan*,' in which he called forth "in almost Biblical terms for the levelling of mountains and the raising of valleys, reshaping Japan's recalcitrant terrain to provide space for networks of highways and express rail routes, for vast industrial estates and for new cities of hundreds of thousands of inhabitants."¹⁷

As previously noted, the promises of heavy industry productivism, with its ideologies of production, cohesion and consumption, were rolled out in times of crisis in which the future direction of Japan's political and economic development was in question. Tanaka's plans for '*Building a New Japan*' was very much in the same tradition. Unveiled at the height of SEM protest, this strategy proved initially unpalatable as it failed to address the nature of the social protests, namely the attention to social-environmental degradation and the centralisation of wealth and authority to the detriment of communities, their environments and QOL. Popularly rejected in 1972 as the continuation of tripartite schemes to enrich corporate and government coffers through lucrative construction contracts while offsetting the costs on dependent peripheries, it nevertheless set the tone for the future strategies successfully draped in the obfuscating cloaks of light industry. Although initially rejected, it was echoed with greater success in 1977 with the *Comprehensive National Development Plan (Third Zensō)* and the

¹⁷ Morris-Suzuki. *Beyond Computopia* 26

pivotal 1983 *High-Tech Industry Concentration Regional Development Promotion Law* that legislated the construction of technopolises. Relying on the further exploitation of the peripheral regions to overcome the contradictions of uneven development, Tanaka's *Plan* set the basic understandings and objectives of political-economic rule for the next 20 years.¹⁸

The greater speed, efficiency, and the transformation of peripheral regions, for the manufacturing of the new technologies and re-creation of necessary social resources in the form of techopolises and resorts, was possible only with massive government expenditures channelled through the private construction companies that in-turn maintained LDP coffers. Hiding behind the rhetoric of futuristic communities of 'traditional' sustainability and communal harmony, the entire Japanese landmass was (re)constructed through new high-speed train connections, greatly expanded high-way systems, waterways, harbours, airports, etc., gaining Japan the pejorative label of *Doken Koka* – 'the Construction State.' The steady (re)construction of the Japanese archipelago, called forth by the logic and demands for light industry technopolises and consumptive recreation, was, as strongly articulated by Gavan McCormack, all part and parcel of, and incidental to "the reproduction of power and the distribution of profit."¹⁹

Continuing upon the norms established during the '1955 System,' An unending procession of ambitious (re)construction projects ensured that national resources remained focused behind further techno-industrial developments facilitating the greater exploitation of peripheral resources by centralised interests. As government expenditures grew to absorb up to one-third of total GNP by 1980, the 'construction state' maintained

¹⁸ McCargo 110.

¹⁹ McCormack 33.

corporate and government interests while savagely (re)constructing the physical landscape behind the utopian rhetoric of sustainable and just change.²⁰ While the ideologies of a middle-mass society and information-consumption promised freedom from industrial labour and norms, by the end of the 80s, Japan's construction economy employed more people than the entire manufacturing sector, accounting for more public money than the American military budget at the height of the cold war.²¹

The blurred distinction between the shift to light industry and the political and economic interests behind unceasing physical (re)constructions, was on occasion graphically illustrated within the bounded social and spatial scapes of a single industrial area. Edgington points to industrial-projects where the 'rationalisation' of traditional industries was directly accompanied with the sponsoring of new 'light'-economy initiatives. For example, Japan's largest steel manufacturer, Nippon Steel Corporation (NSC), established a large software company in Muroran, Hokkaido, at the same time as it was phasing out steel manufacturing on the same site. This initiative was complimented by the central government's decision to target Muroran for extensive infrastructure development, in the form of waterfront development, bridges, etc. In partnership with local, regional and federal bodies, the NSC pursued similar plans in Yawata, Kita-Kyushu, where the closing of a blast-furnace was combined with the opening of a 'Space World' theme park on the same site. Similar to developments in Muroran, Yawata benefited from government largesse channelled through MITI, and the Construction Ministry in the form of new infrastructure projects.²² The same pattern was played out in other heavy-industry sectors, such as shipbuilding. The city of Aioi, in

²⁰ Patrick 14.

²¹ McCormack 32-3.

central Hyogo-ken, once boasted the launching of the greatest shipping volume in the world. In the wake of the light industry restructuring, it was re-invented as a major resort zone.²³

With the turn to light industry, there was an explosion of similar theme-resort projects sponsored by heavy industry giants. Notable for pure comic honesty, was a park by Nissan in which the theme was to “enjoy nature by car.” In a similar venture by Honda, comic in a nation of middle-mass inertia clouded by consumptive lethargy – “Mobility World.”²⁴ In Miyazaki Kyushu, Mitsubishi Heavy Industries shifted from the production of ships and armaments to the opening of Sea Gaia’s Ocean Dome. Neatly encapsulating the light-industry shift in understandings and relations with the environment, the theme park resort included an artificial tropical beach, palm trees, fake 2.5 metre waves, chlorinated water, an artificial volcano, and a ‘perfectly’ regulated environment.²⁵ Shapiro notes that MITI was a major advocate and financial backer of the shift from heavy-industry production to the light industry and leisure-identity consumption of (re)constructed nature. Local and prefectural governments, and their wallets, were dragged along.²⁶ The social-environmental results were predictable.

Social-Environmental Degradation

Promoted by the insatiable demand for capital and power circulating amongst the government and its corporate-construction backers, the turn to light technological development, production, and popular consumption, was socially, environmentally and

²² Edgington 115-6; Shapiro.

²³ Edgington 117.

²⁴ Shapiro 245.

²⁵ McCormack 99.

²⁶ Shapiro 245.

political-economically dire. As noted by McCormick, “[a]s the Tokyo money spread over the countryside, it infected the whole country with the vices of speculation and inflation, exacting as heavy a price on the social and moral values of local Japanese communities as did (in many cases) the resorts themselves of the physical environment.”²⁷ The social-environmental degradation that accompanied the turn to light industry resulted from both the toxic production processes of light industry, and the necessary physical transformation of regions into technopolises, resorts and inter-connecting infrastructure. While heavy-industry was de-legitimised because of the gross pollution of production sites and their surrounding environs, light industry was likewise heavily dependent upon extensive use of toxic chemicals and massive quantities of clean water. The predictable results included the pollution of aquifers, leaking of underground chemical storage tanks, toxic sewage, and a high volume of air-born pollution.²⁸

While the toxic consequences of light industry production continue to accumulate, the effects of associated infrastructure and recreation projects was immediate and profound. An illustrative example is provided with golf courses, the famously exclusive playgrounds of the rich and powerful that proliferated across the country with the turn to light and information industry. Each course required approximately 100 hectares of relatively flat and arable land. However, since such large undeveloped areas did not exist in Japan, the answer was the massive destruction of forested areas at the base of hills and mountains, resulting in greater soil loss and siltification of waterways. Yet, eroded soil might be the least of the problems associated with the golf-boom. Each year golf courses

²⁷ McCormack 92.

²⁸ On the dire environmental consequences, specially of water supplies, of high-tech manufacturing concentrating, see Lenny Siegel and John Markoff, *The High Cost of High Tech: The Dark Side of the Chip*. (NY: Harper and Row, 1985). especially chapter 8, “The Toxic Time Bomb” 161-178.

account for three to four tonnes of herbicides, pesticides, colouring agents, organic chlorine and fertilisers. This lethal cocktail in turn drains into the rivers, streams, ponds, lakes, etc. By the end of the 1980s, still relatively early in the development of resorts, the Ministry of Health identified 950 water sources contaminated by golf course development.²⁹ Similar effects resulted from the clearing of forested mountains, and development of 'parks' for ski resorts, theme parks and other developments leading to further erosion of hillsides and into waterways, causing siltification, death of aquatic life, etc. Of Okinawa, a total resort stretching over 70 islands, over 80% of coral have died and fish stocks destroyed.³⁰

As much as light industry and its associated developments rendered water inhospitable to aquatic life and the communities that depend upon the water and its bounty, it also called forth the further (re)construction of Japan's already massively 'developed' waterways. In a crowded country of scant developable land, technopolises, resorts, theme parks, communities and the like, demanded fresh supplies of space, clean water and electricity. The result was the expanded (re)construction of waterways and coastal areas. By 1984, while less than 20% of the total land area was developable, 54% of the total coastline of the four main islands was developed; 40% of the total national tidelands lost. In the peripheral region of Okinawa, in order to address the projected water needs of resort-ifying the entire island chain, plans were made to dam every river.³¹ Already all but one of the rivers on the main Japanese island of Honshu had been (re)constructed.

²⁹ McCormack 96.

³⁰ McCormack 97.

³¹ McCormack 97.

This further (re)construction of waterways and the encroachment of productive facilities and urban sprawl onto the sea was even more pronounced in the core urban areas. By the end of the decade, 5,600 hectares of Osaka Bay had been reclaimed, leaving a negligible 2% of the coastline undeveloped.³² The (re)construction of Tokyo's coastline was equally profound. The reclamation and development of Tokyo Bay and connected waterways took off with truly large scale and integrated (re)construction with the turn to light industry and recreation-identity consumption. In 1982 the Metropolitan Waterfront Subcenter Project was unveiled, as an attempt to overcome the problems of Tokyo over-development through greater development and (re)construction of nature. This *relatively* modest plan for 're-claiming' 448.4 hectares of waterfront as a vibrant residential and recreational space soon morphed into more ambitious and business-serving plans: the Tokyo Teleport Town. At one and a half times the size of the core Tokyo ward of Shinjuku, this project was to stretch into Tokyo Bay, creating space for 3.6 million inhabitants, with residential, commercial, business and cultural spaces. This was just the beginning. By the end of the decade some 40 major (re)construction projects were underway around Tokyo Bay.³³ As a result zero natural coastline remained in the entire prefecture, with neighbouring prefectures of Kanagawa and Chiba boasting only 6 and 2.9 km respectively.³⁴

At the same time as development was threatening to cover or contain the ocean, plans were being made to 'reclaim' the underground, with 50 metres of living, working, recreation and transportation facilities planned under Tokyo, at the same time as plans

³² McCormack 49-50.

³³ Including the Trans-Bay Highway, a 9.8 km tunnel under the Bay, the new Haneda airport, the Minato Mirai 21 Port City complex at Yokohama, the Makuhari New City (Makuhari Messe) and the new Research and Development City, Kazuza

proliferated by industry and governments to ease height restrictions and develop the sky. As summarised by Douglass, “[t]hese schemes to transform the sea, sky, and subterranean space of the metropolis claim a mission to remold the drab, jumbled landscape of Tokyo into a high-tech world city in which all citizens will at last realize the promise of the good life commensurate with Japan’s economic achievements.”³⁵

By 1985, core urban scapes, regional communities, shorelines, waterways, mountains and forests were (re)constructed in accordance with the demands of centralised productive and political needs in response to the threat of SEMs and widespread popular dissatisfaction. The de-legitimised heavy-industry ‘nature’ of raw materials and a sink for unabated industrial pollution, gave way to a refined landscape preserving the ‘pure’ nature of social-environmental harmony and national identity, epitomised in the constantly (re)constructed environment of technopolises, theme parks, post-modern urban scapes and sprawling infrastructure projects. While the promises of social-environmental harmony, re-discovered regions, shared affluence, intelligence and international ascendance succeeded in placating growing unrest, the result confirms MNT’s attention to crises as the springboard of further uneven development, exploitation and degradation. Behind the eco-utopian promises of techno-industrial developments, productive and political power was further concentrated and reflected in the deepening transformation and exploitation of the environment. Urban centres became larger, more expensive and less hospitable, communities transformed into satellite factories of centralised demands, shore lines and riverbeds reclaimed or remade in concrete and

³⁴ McCormack 59-63.

³⁵ Douglass 101.

polluted with toxic industrial and municipal wastes, beaches despoiled, coral reefs destroyed, parks encroached upon and forests and hills flattened for golf courses, theme parks and resorts connected by expensive and destructive infrastructure projects.

Chapter Eleven: Conclusion

After a decade of national and international recessions, successive oil shocks, the revaluation of the yen, urban congestion, low quality of life, severe industrial and associated pollution, and popular unrest, Japan re-emerged with renewed growth, economic, political and social stability, re-discovered and developing peripheries and an environment seemingly recovering from the world's worst cases of industrial pollution. The shift to light industry was the convergent solution, and policymakers, politicians and corporations looked towards further techno-industrial advances and an ascendant future in which Japan assumed its proper place amongst the world's advanced economies, societies and civilisations. Fundamental to this shift was a (re)construction of dominant understandings and relations with the environment.

From an apolitical source of raw materials to be exploited and polluted according to industrial demands, Japanese 'nature' became both the repository of essential national characteristics stretching back to Japan's mythical past of forest-dwelling hunter-gathers, and the constantly (re)constructed product and pre-condition of further techno-industrial advances. It was a virtuous circle in which each became the pre-condition and product of the other: traditional 'nature' assured the pre-conditions of light-industry success that in-turn depended upon and promised (re)constructed eco-utopian communities and landscapes preserving sustainable and harmonious nature. By 1985, the congested urban-scapes and polluted regions had been transformed into renewed cities of post-modern production, identity and lifestyle, advanced technopolises located in the 'pure' nature of pre-packaged resorts and theme parks, interconnected and empowered with high-speed transportation and communication links.

Yet, in spite of the rhetoric of a sustainable and just Japan (re)constructed through the promises of light industry and an information society, the results have been the further concentration of political, economic, socio-cultural and productive capacity in major metropolitan centres, and the commensurate exploitation and degradation of peripheral regions. In this, the shift to light industry mirrored the processes of centralisation and exploitation suggested by Marxian Nature Theory, yet reflecting the pivotal role of diverse social-environmental movements. Taken together, the critical attention of MNT to the political-economy of social-environmental relations, contestations and control, combined with the experiences, insights and importance of SEMs offers a rigorous and effective tool in understanding and contesting Japanese social-environmental relations.

Situating this investigation from the launch of the '1955 System,' MNT's attention to the political-economy of social-environmental relations and crisis is supported. Responding to the uncertainty and challenges of the immediate post-war era, Japan's corporate-elite orchestrated state control and the channelling of total national resources behind a project of high-growth productivism supported by perpetual technological innovation, popular ideologies and mass consumption. In keeping with the mutually constituting political, economic, social and environmental relations as theorised by MNT, the productive relations of the '1955 System' were dependent upon commensurate understandings and relations with the environment. Japan's landscape and environment necessarily reflected the political-economic relations of uneven development at the heart of high-growth productivism: centralisation, exploitation and degradation.

As captured by MNT, Japan's social-environment was (re)constructed to reflect and serve the hyper-concentration of production and power within core urban spheres, and the unsustainable exploitation and degradation of the peripheries. To enable the progressive centralisation of production and power within the Tokyo-centred Tōkaidō Belt, Japan's peripheral regions were developed and exploited, fuelling even greater feats of 'urban' development, and 'rural' exploitation and degradation. It was a double movement in which the Tōkaidō Belt absorbed a massive concentration of production and urbanisation, and the regions were exploited as the raw materials and space for centralised demands. In both cases the result confirmed MNT's attention to the inherently unsustainable exploitation and degradation of the environment.

MNT directs our attention to the contradictions at the heart of capitalist relations in which the insatiable demand for 'more' destroys the very conditions of production. Responding to a crisis of social and material conditions, capitalism looks to further techno-industrial developments and the further exploitation of the peripheries to maintain growth and profits. The environment is thus revealed as the expression of capitalist production, in a steady progression of exploitation, degradation, and further development. However, attention to the experiences and demands of social-environmental movements suggest that social relations with the environment extend beyond the means and relations of production, to a rich and fluid tapestry of cultural-historical, experiential, emotive and biological bonds. Drawing on this well of embedded meanings and attachments, individuals and communities responded to the dire consequences of high-growth productivism and forcibly affected the direction and scope of total social relations: productive, political, social and environmental. In this way, in attempting to understand

and contest social-environmental relations, we must look beyond MNT's narrow pre-occupation with production and labour to the full scope of social-environmental relations and the integral role of diverse social struggles and social movements.

Attention to the role of social-environmental movements as pivotal in processes of political, economic, social and environmental change challenges MNT's faith in production and labour as the privileged analytical focus and agent of change. Rooted in traditional Marxian political-economy, MNT posits an aggregated working-class represented by organised labour as the privileged focus and actor in a teleological process of socialist emancipation. Yet, the Japanese case confirms that social-environmental relations extend beyond the narrow scope of production, at the same time as diverse non-labour, non-partisan social movements reveal the limitations of class politics. Rooted in their immediate and localised experiences of degradation and dis-empowerment, SEMs departed from the ineffective traditions of 'radical' protest, as they struggled for recognition, redress and change. Gaining widespread popular support, SEMs presented the greatest challenge to Japan's corporate, bureaucratic and political elites, demanding the de-centralisation of productive and political power in favour of sustainable and democratic social relations.

Having successfully co-opted or marginalised organised labour and Marxian political parties, Japan's ruling elite was confronted with a new and profound threat in the proliferation and popularity of SEMs. With the revelation and de-legitimisation of the political, economic, social and environmental foundations of the '1955 System,' the corporate-governing elite were forced to engage in a process of profound change. The techno-industrial transformations, complete with shifts in social ideologies and relations,

and (re)constructions of dominant understandings and relations with the environment, challenge MNT's dismissal of social movements as insignificant, lacking in economic logic, parochial, patriarchal, local, etc.¹

Responding to the unsustainable and undemocratic relations manifested in the '1955 System,' SEMs demanded a fundamental re-alignment of national goals and relations. Placating these demands while re-centralising productive and political power behind a project of renewed productivism and development, Japan's ruling elite orchestrated the shift to light industry and information society. The shift from heavy to light industry offered the convergent solution with promises of social-environmental harmony, re-discovered and empowered regions, shared affluence, consumption and homogenous characteristics of post-modern identity, intelligence and international ascendance. It was a shift in total social relations confirming MNT's attention to crises and contestations as the springboard of uneven development.

Having solidified popular support in a renewed social contract of neo-traditional myths and ideologies, Japan's political-economic elite were united in the development and application of advanced technologies and the re-centralisation of productive and political power. Through orchestrated efforts in the rationalisation of heavy-industries and the research and development of new light and information technologies, Japan's ruling tripartite addressed popular concerns while giving birth to a rejuvenated post-modern Japan. Consistent with MNT, Japan's political-economic elite emerged with greater control, further concentrating productive and political power in Tokyo-centred interests and institutions, while promising local development and empowerment.

¹ See O'Connor 274; Smith, *Uneven Development* 164.

The attention of MNT and the importance of SEMs are brought full circle in the (re)constructions of the Japanese social-environment that accompanied the shift to light industry. The expression of uneven political-economic relations and reflecting the concerns and importance of SEMs, Japan's landscape and environment was transformed from the raw resources and pollution sink of heavy-industry, into the repository of socio-cultural identity, belonging, sustenance, intelligence and ascendance. This was realised in further development projects targeting the regions as 'pure' nature essential for and protected by technological advances created in empowered and environmentally-friendly technopolises, and the pre-packaged landscapes of leisure and identity-consumption resorts and theme parks interconnected by massive infrastructure projects. The shift in dominant understandings and relations with the environment echoed the relations of uneven development underlying the shift to light industries, and revealed in social, political and economic (re)constructions. The result was the further subjugation of peripheral concerns to the demands of centralised interests and institutions; the further exploitation and degradation of the environment.

By the mid-80s, the shift to an information society, complete with transformed techno-industrial processes, cultural-political understandings and relations, and physical (re)constructions was firmly established as Japan's 'new' guiding ideology. Social-environmental movements were dwindling in numbers and effect, corporate-governing production and power renewed, and light industry giving way to a more thorough 'information' economy, further (re)constructing the understandings and relations with nature relatively safe from disrupting contestations. The continuing shift to an information society furthered the already extreme rural and urban divide, the

concentration of power and high-tech industry in Tokyo, while exacerbating environmental degradation nation-wide. Through massive infrastructure projects based on the 'new' technologies and vision of Japan, and local-federal efforts at developing resorts, theme parks, technopolises, new media communities, and *teletopias*,² the concentration of political, economic and productive capacity in major metropolitan centres, specifically within the Tōkaidō Belt was only enhanced. It was the corporate-governing elite's success at transforming Japan's techno-industrial base, without jeopardising its political-economic system that ushered in an age of 'Asian' ascension, allowing Japan to challenge the US as the leading world economy.³

In a sense this questions the attention given SEMs. If the crisis of industrial pollution and social protests resulted in the further entrenchment and advancement of the very relations that depended upon unsustainable and unjust centralisation, exploitation and degradation, how much significance can SEMs be accredited? By the mid-1980s, SEMs had pretty-much run their course, and dissipated in the face of tripartite co-option, references to Minamata and other cases of industrial pollution were being deleted from textbooks, and new privacy legislation was making it more difficult for concerned citizens and organisations to gain necessary but incriminating information.⁴ This has led some commentators to make light of the long-term importance of SEMs, diminishing them as 'wind chimes in winter:' "irritating and irrelevant," snuffed out by "token

² *teletopias* – 'telecommunication utopias:' technopolises designed specifically with telecommunications industry in mind

³ Japan's ascendancy in Asia was integral to the shift to light industry, as the worse polluting industries were exported to countries throughout East and Southeast Asia. While MNT's understanding of uneven development, and attention to SEMs points to this dynamic, it remains beyond the scope of this study.

⁴ Smith, *Democracy Derailed* 165-166.

measures and a change of LDP rhetoric.”⁵ Yet, as this study demonstrates, that SEMs were eventually co-opted and marginalised into centralised political-economic projects, does not discount their significance in motivating and helping shape the direction and scope of those projects. Japanese social-environmental understandings and relations, landscape and environment, techno-industrial relations, political-economic priorities and practices, dominant social ideologies and relations, are all directly related to the experiences, insights and challenges of social-environmental movements. Further, SEMs contribute(d) to a shift in citizen perceptions, attitudes and actions that continues to threaten ‘business as usual’ through the advocacy of diverse protest movements as they collectively struggle for real democracy: environmental conservation and protection, urban and quality of life, anti-nuclear and pacifist, women’s rights, the *Burakumin*, Koreans, etc.

To conclude, in combining the political-economic attention of MNT with the experiences and importance of SEMs, we gain a thorough and convincing understanding of Japanese social-environmental relations, the relationship between crisis and techno-industrial change, between techno-industrial change and the environment, and the possibilities and limitations of citizen-based movements. It suggests that the environment is properly understood as the constructed expression of total social relations dominated by the centralised demands of production and power, in organic relation with social and material crises and contestations. In particular, SEMs emerge as an important tool of understanding and agent of change. In this way, perpetual techno-industrial change and (re)constructions of the environment are recognised as intimately related in processes of

⁵ Reviewed by McCargo 150.

uneven development in which corporate-governing interests act to maintain the necessary conditions of production while placating popular unrest and challenges. While this challenges MNT's faith in organised labour as the favoured agent in a teleological process of socialist emancipation, it also warns of the limitations of diverse social movements. While central to processes of political-economic, techno-industrial, socio-cultural and social-environmental change, SEMs remain vulnerable to the eco-utopian promises of technological change that mask the re-centralisation of production and power.

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